

# **Appropriate Assessment**

for

Ipswich Borough Council  
Proposed Submission Core Strategy and  
Policies

**1 September 2009**

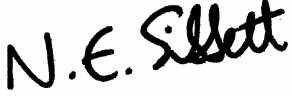



## Quality control

Appropriate Assessment

for

Ipswich Borough Council  
Core Strategy and Policies

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## Summary

This document is the Appropriate Assessment of Ipswich Borough Council's Proposed Submission Core Strategy and Policies dated July 2009, as required by the Conservation (Natural Habitats &c.) Regulations 1994 as amended by the Conservation (Natural Habitats &c.) (Amendment) Regulations 2007. These regulations are often abbreviated to, simply, the 'Habitats Regulations'. The Appropriate Assessment specifically looks at the implications of the Core Strategy and Policies for nature conservation sites with a European nature conservation designation, including Special Areas of Conservation, Special Protection Areas, and Ramsar sites of global importance.

All the policies were considered in detail, and it was possible to ascertain that the following policies will not adversely affect the integrity of any European site

- CS13 The number of jobs to be planned for
- CS16 Green infrastructure, sport and recreation
- CS18 Strategic flood defence
- CS20 East-west transport capacity
- DC4 Development and flood risk
- DC15 Travel demand management
- Policy DC32 Conserving Local Nature Conservation and Geology Interest

There are three policies which together set the locations and amounts of housing growth for Ipswich. These policies are Policy CS7 'The amount of housing required', Policy CS9 'Previously developed land target', and Policy CS10 'Ipswich northern fringe'. It could not be ascertained that there would be no adverse affect upon the integrity of Alde-Ore Estuary SPA, Alde-Ore and Butley SAC, Deben Estuary SPA, Minsmere - Walberswick Heaths and Marshes SAC, Minsmere – Walberswick SPA, Sandlings SPA, and Stour and Orwell Estuaries SPA. The impact included an affect in combination with development in Suffolk Coastal District.

Many of those European sites are open to the public as nature reserves, recreation sites or through a network of rights of way. The potential harmful impact of housing growth is due to an increase of visitors to all those European sites, in addition to a predicted increase to Bridge Wood and Nacton Picnic Site. The biggest impact of increased visitors to the European sites would be disturbance to birds such that population size could not be sustained. Wintering wetland birds in the Orwell estuary adjacent to Bridge Wood, or nesting woodlark on the Sandlings forest, are examples of birds that could suffer from increased disturbance. Furthermore, some areas of shingle vegetation on beaches that are Special areas of Conservation are currently being harmed by excessive trampling, and an increased number of beach visitors would make the problem worse.

There are a number of measures that would mitigate for harm, by providing alternative places for recreation, so that people would have better choices and spend more time enjoying the countryside away from sensitive European sites. These mitigation measures are

- improving Orwell Country Park so people might decide to enjoy other areas than the estuary edge
- improving the River Gipping riverside walk so that Ipswich residents have the choice of a good countryside walk close to their homes
- development of a new Country Park on the north-eastern fringe of Ipswich to provide a good alternative countryside experience
- contributing to visitor management plans on the most vulnerable European sites

A slight strengthening of Policy CS16 'Green Infrastructure, Sport and Recreation' is advised, so that there is good confidence that the proposed mitigation is carried out. With this in place, it is possible to ascertain that the Proposed Submission Core Strategy and Policies dated July 2009 will have no adverse affect upon any European site.

***Part 1: text***



# 1 Introduction

## 1.1 The plan being assessed

- 1.1.1 In November 2007, Ipswich Borough Council published its Preferred Options for its Local Development Framework Core Strategy and Policies. The preferred options document set out an approach to providing a strategic vision and objectives to guide the development of Ipswich, it promoted a strategic approach to the development of the town, and provided an indication of the likely coverage of a suite of policies to control, manage and guide development.
- 1.1.2 The Core Strategy and Policies document is intended to be consistent with the East of England Plan (the Regional Spatial Strategy), a revision of which was published on 12 May 2008.
- 1.1.3 In July 2009 the Proposed Submission Core Strategy and Policies was published. This assessment began using earlier drafts of the Core Strategies and Policies but now is a complete assessment of the Proposed Submission Core Strategy and Policies.
- 1.1.4 The Suffolk Coastal District Council Core Strategy and Development Management Policies are at a similar stage to the Ipswich Borough Council Core Strategy and Policies. It is considered that this may have effects in combination and consequently both plans were considered together in a joint project, although separate reports were produced for each Local Authority. The respective plan of Babergh District Council was not included in this assessment as it is at an earlier stage, though current planning applications were taken into account.

## 1.2 Appropriate Assessment requirement

- 1.2.1 The Appropriate Assessment process is required under the Conservation (Natural Habitats &c.) Regulations 1994 as amended by the Conservation (Natural Habitats &c.) (Amendment) Regulations 2007. These regulations are often abbreviated to, simply, the 'Habitats Regulations'.
- 1.2.2 Regulation 85B states that
- (1) Where a land use plan—
    - (a) is likely to have a significant effect on a European site in Great Britain or a European offshore marine site (either alone or in combination with other plans or projects), and
    - (b) is not directly connected with or necessary to the management of the site,the plan-making authority for that plan shall, before the plan is given effect, make an appropriate assessment of the implications for the site in view of that site's conservation objectives.
  - (2) The plan-making authority shall for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.
  - (3) They shall also, if they consider it appropriate, take the opinion of the general public, and if they do so, they shall take such steps for that purpose as they consider appropriate.
  - (4) In the light of the conclusions of the assessment, and subject to regulation 85C (considerations of overriding public interest), the plan-making authority or, in the case of a regional spatial strategy, the Secretary of State shall give effect to the land use plan only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).
  - (5) A plan-making authority shall provide such information as the Secretary of State or the Welsh Ministers may reasonably require for the purposes of the discharge of the obligations of the Secretary of State or the Welsh Ministers under this Part.
  - (6) This regulation does not apply in relation to a site which is—

- (a) a European site by reason of regulation 10(1)(c); or
- (b) a European offshore marine site by reason of regulation 15(c) of the 2007 Regulations

- 1.2.3 The plan-making authority, as defined under the Regulations, is Ipswich Borough Council.
- 1.2.4 The Appropriate Assessment in this report is carried out on behalf of Ipswich Borough Council to allow them to decide whether to give effect to the plan. The Proposed Submission Core Strategy and Policies is likely to be subject to an Examination in Public, and this Appropriate Assessment will also be open to scrutiny at that Examination.

### 1.3 Appropriate Assessment process

- 1.3.1 The process to complete the Appropriate Assessment involves a number of steps.
- Likely significant effect***
- 1.3.2 The Council, in consultation with Natural England should decide whether or not the plan is likely to have a significant effect on any European site. This is a 'coarse filter' and any effect, large or small, positive or negative, should be considered.
- Connected to management of the site***
- 1.3.3 The Council should decide whether the plan is connected to the nature conservation management of the European sites. Invariably, for this type of plan, this is not the case.
- Screening***
- 1.3.4 The combination of decisions on likely significant effect and connections to management is often called 'screening'. If the plan is likely to have a significant effect, and is not connected to the management of the site, an Appropriate Assessment is required.
- Scoping***
- 1.3.5 The whole plan must be assessed, but a 'scoping' exercise helps decide which parts of the plan have the significant effects and therefore where assessment should be prioritised. Natural England is an important consultee in this process. The implementation of both screening and scoping process is described in Section 3 below.
- Consultations***
- 1.3.6 Natural England is a statutory consultee so should be consulted at draft stage. The public may also be consulted if it is considered appropriate, for example if the assessment is likely to result in significant changes to the plan.
- 1.3.7 Consultation with Natural England is described in Section 4.1 below.
- Iterations and revision***
- 1.3.8 The process is iterative; the conclusions of the first assessment may result in changes to the plan, and so a revision of the assessment would be required. If the revised assessment suggests further plan changes, the iteration will continue.
- 1.3.9 It is normally expected that iterative revisions will continue until it can be ascertained that the plan will not have an adverse affect on the integrity of any European site.
- 1.3.10 Iterations and revision are described in Section 4.1 below.

### 1.4 European sites

- 1.4.1 European sites, often known as Natura 2000 sites across Europe, are those legally registered as Special Protection Areas (for bird sites) and Special Areas of Conservation (for species except birds, and habitats). These are usually abbreviated as SPA and SAC respectively. Wetlands of

International Importance, designated under the Ramsar Convention, are usually abbreviated as Ramsar sites.

- 1.4.2 Although the Appropriate Assessment process only legally applies to European sites, Government Policy in PPS9<sup>1</sup> is to apply the same protection to Ramsar sites.
- 1.4.3 As the Ramsar sites largely are similar to SPA and / or SAC designations, both geographically and ecologically, the assessment below for clarity does not always repeat Ramsar site names. The assessment does however consider Ramsar sites fully, and if an assessment would vary for a Ramsar site compared to the respective SPA / SAC, this would be identified.

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<sup>1</sup> Planning Policy Statement 9 Biodiversity and Geological Conservation. Office of the Deputy Prime Minister, 2005.

## 2 European sites potentially affected

### 2.1 Sites within the Core Strategy and Policies area

- 2.1.1 All European sites (including Ramsar sites) within the Core Strategy and Policies area, which includes the whole Borough of Ipswich, are potentially affected. The main potential effect arises from increased disturbance of wildlife caused by an increased number of people using European sites for recreation.
- 2.1.2 The only European site within Ipswich Borough is part of the Stour and Orwell Estuaries SPA, which is also designated as Stour and Orwell Estuaries Ramsar site. Ipswich is geographically a small Borough, so the scale of growth is more relevant than the exact location of growth, because nowhere is far from the European site.

### 2.2 Sites outside the Core Strategy and Policies area

- 2.2.1 European sites in neighbouring Districts / Boroughs are also potentially affected by increased disturbance of wildlife caused by an increased number of people travelling to European sites for recreation. These neighbouring Districts/Boroughs are Suffolk Coastal District, Waveney District and Babergh District. European sites in Tendring District may also be potentially affected. It is considered that the European sites in Mid Suffolk District are sufficiently far from Ipswich for no effect to be present.
- 2.2.2 These European sites are large and can overlap Local Authority boundaries, so are listed below without reference to specific District / Borough. The European sites potentially affected are
- Minsmere – Walberswick Ramsar site
  - Minsmere-Walberswick Heaths and Marshes SAC
  - Minsmere – Walberswick SPA
  - Sandlings SPA
  - Alde-Ore Estuary SPA
  - Alde-Ore and Butley Estuaries SAC
  - Alde-Ore Estuary Ramsar site
  - Staverton Park and the Thicks SAC
  - Deben Estuary SPA
  - Deben Estuary Ramsar site
  - Stour and Orwell Estuaries Ramsar site
  - Stour and Orwell Estuaries SPA
  - Hamford Water SPA
  - Hamford Water Ramsar site
  - Colne Estuary (Mid Essex Coast phase 2) SPA
  - Essex Estuaries SAC
  - Colne Estuary (Mid Essex Coast phase 2) Ramsar site
  - The Broads SAC
  - Benacre to Easton Bavents Lagoons SAC
  - Dews Ponds SAC
  - Broadland SPA
  - Broadland Ramsar site

- Benacre to Easton Bavents SPA

2.2.3 Sites with similar names largely overlap, for example the boundaries of Minsmere – Walberswick Ramsar site, Minsmere – Walberswick Heaths and Marshes SAC, and Minsmere – Walberswick SPA are largely the same. The European sites are composed of one or more Sites of Special Scientific Interest as shown in Table 1.

Table 1. Component SSSIs of each European site

European site name	Component Sites of Special Scientific Interest in Ipswich Borough / Suffolk Coastal District or within a zone of influence
Minsmere - Walberswick Ramsar site, Minsmere - Walberswick Heaths and Marshes SAC, Minsmere – Walberswick SPA	Minsmere – Walberswick Heaths and Marshes SSSI
Sandlings SPA	Sandlings Forest SSSI Tunstall Heath SSSI Blaxhall Heath SSSI Snape Warren SSSI Sutton and Hollesley Heaths SSSI Leiston – Aldeburgh SSSI
Alde-Ore Estuary SPA, Alde-Ore and Butley Estuaries SAC, Alde-Ore Estuary Ramsar site, Orfordness – Shingle Street SAC	Alde-Ore Estuary SSSI
Staverton Park and the Thicks SAC	Staverton Park and the Thicks SSSI
Deben Estuary SPA, Deben Estuary Ramsar site	Deben Estuary SSSI
Stour and Orwell Estuaries SPA, Stour and Orwell Estuaries Ramsar site	Stour Estuary SSSI Orwell Estuary SSSI
Hamford Water SPA, Hamford Water Ramsar site	Hamford Water SSSI
Colne Estuary (Mid Essex Coast phase 2) SPA, Colne Estuary (Mid Essex Coast phase 2) Ramsar site	Colne Estuary SSSI
Essex Estuaries SAC	Colne Estuary SSSI
The Broads SAC, Broadland SPA, Broadland Ramsar	Sprat's Water and Marshes, Carlton Colville SSSI, Barnby Broad and Marshes SSSI, Stanley & Alder Carrs, Aldeby SSSI
Benacre to Easton Bavents lagoons SAC, Benacre to Easton Bavents SPA	Pakefield to Easton Bavents SSSI
Dews Ponds SAC	Dews Ponds SSSI

- 2.2.4 The above European sites are shown on Figure 1 and information on their interest features are given in Appendix 1.
- 2.2.5 The Conservation Objectives for these sites, where available from Natural England, are given in Appendix 2.

### **2.3 Other relevant plans or projects affecting these sites**

- 2.3.1 In addition to a potential effect from the Ipswich Borough Council Core Strategy and Policies, the European sites are also effected by a number of plans or projects, including the Local Development Framework documents of neighbouring Local Authorities, the Regional Spatial Strategy, existing developments and proposed developments, management carried out by land managers with the consent of Natural England and third party effects such as recreation, etc.
- 2.3.2 In the context of this Appropriate Assessment, the most relevant other plans or projects to be considered are
- The Suffolk Coastal District Council Core Strategy and Development Management Policies
  - Babergh District Council Local Plan
  - Tendring District Council Local Plan
  - East of England Plan (the Regional Spatial Strategy)
- 2.3.3 These plans are considered in the Appropriate Assessment of Ipswich Borough Council's Proposed Submission Core Strategy and Policies.

### **3 Likely significant effects**

#### **3.1 Process**

- 3.1.1 Ipswich Borough Council consulted Natural England on 13<sup>th</sup> May 2009 to ask if an Appropriate Assessment was required (scoping) and suggesting a set of policies from the Preferred Options report which were likely to have a significant effect (screening). Although the Preferred Options contained policy approaches rather than detailed policies, those approaches gave an indication of some areas of potential impact, such as housing growth.
- 3.1.2 As soon as a draft Core Strategy was available in June 2009, a set of draft policies was suggested to Natural England and Suffolk Wildlife Trust, in a scoping exercise on 1<sup>st</sup> July 2009. This set of draft policies is contained in Appendix 4.

#### **3.2 Results**

- 3.2.1 Natural England confirmed on 20<sup>th</sup> May 2009 that an Appropriate Assessment would be required and agreed that those policies suggested at that time by Ipswich Borough Council were considered likely to have a significant effect.
- 3.2.2 On 8<sup>th</sup> July 2009 Natural England advised that the revised set of policies suggested to them on 1<sup>st</sup> July 2009 were agreed, subject to looking at the wider impacts of recreational pressure that increases in population will bring on other designated sites further away, alone and in combination with other Local Authorities' Core Strategy policies, and any granted planning permissions. Natural England advised that Policy NE14 Nature Conservation (from the adopted Ipswich Local Plan) should also be included, as did the Suffolk Wildlife Trust by email on 1<sup>st</sup> July 2009.
- 3.2.3 The policies to be assessed in most detail are listed in Section 4 below, which are a subset of the Proposed Submission Core Strategy and Policies as submitted to, and revised according to advice from, Natural England and Suffolk Wildlife Trust.

## 4 Policies to be assessed

### 4.1 Introduction

- 4.1.1 The policy areas in the Core Strategy and Policies report, Preferred Options November 2007 were re-numbered in the Proposed Submission Core Strategy and Policies of July 2009. The main change to the Proposed Submission stage was that detailed policy wording was provided and there was a change to the timing of development potentially starting on greenfield land to the north of Ipswich. Policy numbering below refers to the published Proposed Submission Core Strategy and Policies which is assessed here.
- 4.1.2 Natural England was consulted on a draft assessment of a draft Core Strategy on 22 July 2009. Useful comments were received from Natural England, which were used to revise this assessment.
- 4.1.3 Consultation with the public at draft stage was not considered necessary bearing in mind the conclusions of the draft assessment and the opportunity for public consultation at the Submission stage of the Core Strategy.
- 4.1.4 As the draft assessment and final assessment were being written, discussions were held with Ipswich Borough Council staff, in particular the Planning Policy Team and the Team Leader Draining and Flooding. These discussions included an element of iteration and revision to this assessment, such as the inclusion of a Country Park into policy CS16. A further check at that stage resulted in further recommendations for detailed wording of policy CS16 to ensure that the mitigation set out in this assessment will be carried out.

### 4.2 Policy CS7. The amount of housing required

- 4.2.1 Ipswich Borough Council and Natural England agreed in May 2009 that "*The Core strategy sets out how it intends to provide over 11,500 [dwelling] units between 2007 and 2021. Some of the sites allocated lie in proximity to the Stour and Orwell Estuaries SPA and RAMSAR, and therefore should be assessed as part of the appropriate assessment for the Site Allocation and Policies document and IP-One Area Action Plan [in due course].*"
- 4.2.2 This agreement is correct as to the immediate impact upon the nearest part of the European site to Ipswich, which may potentially be the greatest impact. However, the wider impact, of a greater number of day trips to European sites elsewhere in the vicinity, must also be considered.
- 4.2.3 Subsequently the housing provision was updated in the Proposed Submission Core Strategy and Policies to reflect the known housing supply at April 2009. It also took into account the Strategic Housing Land Availability Assessment which identified sites within the Borough that are capable of delivering the housing requirement. After considering houses completed, under construction, given permission or with a resolution to give permission, at April 2009 there was a need for 4,983 new allocations to 2021.
- 4.2.4 In particular, the wider impact of housing must consider the impact of a number of developments in combination, as impact from each development may be small but the cumulative impact might be significant. The impact of overall scale of housing development proposed in the Ipswich Borough Proposed Submission Core Strategy and Policies and the Suffolk Coastal District Core Strategy and Development Management Policies have been assessed here.
- 4.2.5 This was numbered as CS8 in the June 2009 agreed list of policies to be assessed, and subsequently re-numbered.

### 4.3 Policy CS9. Previously developed land target

- 4.3.1 Although agreed on May 2009 that this policy would not be likely to have a significant effect on any European site, it was agreed with Natural England in July 2009 that the policy may have an impact on the Stour and Orwell Estuaries SPA and Ramsar site, as the population growth is to



be focussed in the central area of Ipswich which could lead to an increase of visitors to the Orwell Estuary.

- 4.3.2 This was numbered as CS10 in the June 2009 agreed list of policies to be assessed, and subsequently re-numbered.

#### **4.4 Policy CS 10. Ipswich Northern Fringe**

- 4.4.1 Ipswich Borough Council and Natural England agreed in May 2009 that *"The Core strategy sets out how it intends to provide over 11,500 [dwelling] units between 2007 and 2021. Some of the sites allocated lie in proximity to the Stour and Orwell Estuaries SPA and RAMSAR, and therefore should be assessed as part of the appropriate assessment for the Site Allocation and Policies document and IP-One Area Action Plan [in due course]."*
- 4.4.2 Subsequently, to meet the requirements of PPS3 to identify broad locations and specific sites for at least fifteen years from adoption, Policy CS10 was introduced to allow for further growth on greenfield land north of Ipswich post 2021 or when town centre brownfield availability falls short of requirements.
- 4.4.3 The policy does not include a figure for the number of houses to be allocated, but the housing supply requirement given in the text of Policy CS7 suggests a requirement of 3320 dwellings from 2021 - 2025.
- 4.4.4 Policy CS10 was not included in the list of policies agreed by Natural England to be assessed, because at that time the draft Core Strategy included housing numbers post-2021 in the Ipswich Northern Fringe within Policy CS7. The housing numbers were subsequently removed from Policy CS7 (although referred to in supporting text Table 2). To assess a policy for housing growth post 2021, it was considered that Policy CS10 should be included in the list of policies to assess.

#### **4.5 Policy CS 13. Planning for jobs growth**

- 4.5.1 Ipswich Borough Council and Natural England agreed in May 2009 that *"It is suggested that Ipswich should plan for a net addition of 18,000 jobs between 2001 and 2021. Some of the sites allocated lie in proximity to the Stour and Orwell Estuaries SPA and RAMSAR site, and therefore should be assessed as part of the appropriate assessment for the Site Allocation and Policies document and IP-One Area Action Plan."*
- 4.5.2 A strategic site is identified, on Nacton Road, Ipswich. Impacts may include construction disturbance, and operational disturbance from the workforce visiting the Stour and Orwell Estuaries SPA / Ramsar site in connection with their employment, for example at lunchtimes for brief recreation.
- 4.5.3 This was numbered as CS14 in the June 2009 agreed list of policies to be assessed, and subsequently re-numbered. The June 2009 Policy CS16 (Strategic Employment sites) also included part of this policy wording although the number CS16 was subsequently re-used for Green Infrastructure, sport and recreation.

#### **4.6 Policy CS16. Green infrastructure, sport and recreation**

- 4.6.1 Ipswich Borough Council and Natural England agreed in May 2009 that there may be *"Possibly some impact. The Council's approach to green corridors should be continued and the Site Allocations and Policies should identify corridors and policies relevant to them. The approach should be extended to create and protect green spaces on the edge of town with a view to creating a rim of spaces around the town. The Stour and Orwell Estuaries SPA and RAMSAR site lies on the southern edge of the Borough and therefore should be assessed whether it should form part of the green rim, for its habitat /biodiversity."*
- 4.6.2 The impact could be positive, with the green rim absorbing recreational visits and buffering other developments, but the impact could be negative if it encourages new recreation close to the Stour and Orwell Estuaries SPA / Ramsar site which causes disturbance..

- 4.6.3 This was numbered as CS19 in the June 2009 agreed list of policies to be assessed, and subsequently re-numbered

#### **4.7 Policy CS18. Strategic flood defence**

- 4.7.1 Ipswich Borough Council and Natural England agreed in May 2009 that *"The Ipswich [Flood] Defence Strategy is central to the Core Strategy. Although the tidal surge barrier is unlikely to take place for a number of years, the Council will work with the Environment Agency to ensure it is implemented as soon as possible. IP-One AAP will need to have particular regard to the flooding issues and need to phase some developments to relate to the delivery of the tidal surge barrier. The tidal barrier should be considered in regard to its potential impact on the Stour and Orwell Estuaries SPA and RAMSAR site, as it could affect the river flow."*
- 4.7.2 Construction effects, river flows and operational impacts on the SPA and Ramsar site need to be assessed. However, much of the works are not authorised by Ipswich Borough Council, so the Council is not a competent authority and the provisions of the Habitats Regulations do not apply to those parts of the works. However, the project as a whole is assessed below, for completeness and transparency.
- 4.7.3 This was numbered as CS21 in the June 2009 agreed list of policies to be assessed, and subsequently re-numbered.

#### **4.8 Policy CS20. East-west transport capacity**

- 4.8.1 Ipswich Borough Council and Natural England agreed in May 2009 that *"The Council is committed [to] supporting provision of a significant alternative east/west capacity. This could take the form of a Wet Dock Crossing or a northern bypass. In addition to significantly change the Star Lane area, for example by reducing both Star Lane and College Street from two lane to a single lane. Public Transport is an important part of the transport package and support should continue for the Ipswich: Transport Fit for the 21st Century scheme. The Wet Dock crossing should be considered for potential impact on the Stour and Orwell Estuaries SPA and RAMSAR site."*
- 4.8.2 The northern bypass option, changes to traffic flow on existing roads, and public transport options are not likely to have a significant effect upon the Stour and Orwell Estuaries SPA / Ramsar site. The Wet Dock crossing needs further consideration and will be appropriately assessed below.
- 4.8.3 This was numbered as CS23 in the June 2009 in the agreed list of policies to be assessed, and subsequently re-numbered

#### **4.9 Policy DC4. Development and flood risk**

- 4.9.1 Ipswich Borough Council and Natural England agreed in May 2009 that *"Strategic Flood Risk Assessments are required to identify relevant issues and developments within the floodplain and to address them. All development should be required to minimise their impacts on the town's drainage system by a range of means of sustainable urban drainage systems where they are appropriate. This policy may have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site."*
- 4.9.2 The effect of new development on the town's drainage, and the subsequent impact upon the Stour and Orwell Estuaries SPA / Ramsar site, require assessment.

#### **4.10 Policy DC15. Travel demand management**

- 4.10.1 Ipswich Borough Council and Natural England agreed in May 2009 that there may be *"Some possible impact due to air quality. Develop an approach which requires the submission of a travel assessment of all major developments and should deal with key issues set out in para 10.103 [of the Preferred options document]. One criteria being an assessment of air quality impact of the development with appropriate mitigation measures as necessary. It is necessary to consider whether this will mitigate any potential impact on the Stour and Orwell Estuaries SPA and RAMSAR site."*

- 4.10.2 The main pollutant potentially effecting the Stour and Orwell Estuaries SPA / Ramsar site is likely to be nitrogen deposition. Staverton Park and the Thicks SAC is vulnerable to air pollution but is at sufficient distance that the development in Ipswich is not likely to have a significant effect.
- 4.10.3 In July 2009 Natural England agreed that this policy is not likely to have a significant effect upon any European site. However, an assessment is included for completeness and transparency.

#### **4.11 Policy DC32 Conserving local natural and geological interest**

- 4.11.1 A new policy for the Proposed Submission Core Strategy and Policies, not included in the Preferred Options report, was advised by Natural England and Suffolk Wildlife Trust in July 2009 to be likely to have a significant effect on the Stour and Orwell Estuaries.
- 4.11.2 This policy is the protection of County Wildlife Sites and Local Wildlife Sites. The protection of European sites and Sites of Special Scientific Interest is not included in this policy, consistent with advice in the Governments Planning Policy Statement 9, as these sites are already protected by legislation.

#### **4.12 Other policies**

- 4.12.1 New policies in the draft Submission Core Strategy and Policies, not included in the Preferred Options report, were agreed by Natural England in July 2009 to be likely to have a significant effect on the Stour and Orwell Estuaries SPA and require appropriate assessment. These policies were
- RL4 Development proposals including changes of use on sites which abut or relate closely to the banks of a river or waterway will be required to provide for the improvement of public access including appropriate landscaping works along the length of the site boundary fronting or relating to the river or waterway.
  - T1 Development proposals will be assessed in terms of their effect upon the environment and transport systems. Where, as a result of development proposals environmental and transport infrastructure improvements are considered to be necessary, developers will be expected to make appropriate contributions (need to amend to fit with standard charge).
  - T8 Development proposals will be expected to take account of pedestrian accessibility to the site as well as the wider effects of the development upon pedestrian movement. The line of existing and proposed pedestrian routes should be respected and development generating high levels of pedestrian flows will be expected to provide or contribute towards the improvement of pedestrian facilities.
  - T20 Each development proposal will be assessed in terms of its impact on the road network in respect of traffic capacity, safety and environmental impact of generated traffic. The Council will require mitigating measures to be provided to the satisfaction of the highway authority where necessary.
- 4.12.2 Subsequently, T20 became incorporated into Policy DC17 Transport and Access in New Developments, and RL4 became part of the justification for that policy. Policy DC17 Transport and Access in New Developments relates to the effect of new developments on traffic, public transport and rights of way, and has no nature conservation significance. It is considered that Policy DC17 is not likely to have a significant effect upon any European site so does not need to be further assessed.
- 4.12.3 T1 and T8 were omitted from the published Proposed Submission Core Strategy and Policies and so an assessment is not required.

## **5 Methods of assessing European site visitor increases from an increased human population**

### **5.1 Introduction**

- 5.1.1 This Section discusses the increased population arising from proposed housing in both Ipswich Borough and Suffolk Coastal District.
- 5.1.2 Assessment of the impact on European sites of proposed new housing some distance away is not straightforward; for example there are no generic guidelines on impacts, distance thresholds, etc. The potential impacts of housing at a distance are briefly introduced in Section 4 above. In this Section, the methods of assessing an increased human population near European sites are discussed.
- 5.1.3 The existing human population can cause impacts on European sites through disturbance of birds and other fauna, trampling damage to habitat, litter, fires, interference with management works (e.g. theft of equipment or causing a reluctance to graze when people have free access). Natural England currently monitors the Sites of Special Scientific Interest which form the European sites. If human impacts are currently adverse we would expect those sites, or parts of those sites, to be consequently recorded as being in unfavourable condition even if the cause of the unfavourable condition is not known. Existing condition assessments are discussed in Section 5.2 below.
- 5.1.4 There are three typologies of visitors to European sites. The first typology is the use of European greenspace by tourists staying overnight in the area, for example on short breaks or longer holidays. It is considered that the holiday use of Ipswich is not altered greatly by the Proposed Submission Core Strategy and Policies, as no major increase in tourist facilities is proposed, and assuming that housing development will not increase or decrease tourist use of European sites.
- 5.1.5 The second typology is the 'day trip' to European sites, often including visits to towns or other tourist facilities within the day. European sites might be visited for the enjoyment of nature (e.g. visitors to Walberswick National Nature Reserve), used as recreational sites (e.g. the shingle beaches within SACs) or simply as a backdrop to walks within a beautiful landscape. 'Day trips' can include people travelling from substantial distances away.
- 5.1.6 There is a limited amount of data regarding the quantity of visitors to European sites. A survey within the Suffolk Coast and Heaths AONB in 2004 provides the best data currently available, and can be used to predict increases in visitor numbers from new housing. The impacts of these extra visitors are hard to predict. One study, however, has looked at the impact of recreational disturbance on birds in the Stour and Orwell Estuaries SPA, which gives good evidence of impacts. This is discussed in Section 5.3 below, which concentrates on 'day trips' only.
- 5.1.7 The third typology is the use by people of European sites close to their homes for recreation or other activities. These visits tend to treat the European sites simply as local greenspace without particular regard to the European interest features. An example might be someone living near an estuary walking or driving a short distance to take a dog for a walk. This is discussed in section 5.4 below, regarding specific sites close to areas of new development.
- 5.1.8 The managers of European sites, for example those sites managed as nature reserves, have a significant amount of knowledge about the impacts of visitors on their sites. Often this knowledge is anecdotal, but it can be used to gain an extra understanding of visitor impacts across the wider area. This is discussed in Section 5.5.

### **5.2 Existing condition assessments of European sites**

- 5.2.1 Natural England has a programme of monitoring Sites of Special Scientific Interest (SSSIs) to assess their condition against objectives for each site. The condition of the European sites is therefore referable to the condition of the component SSSIs. As some sites are very large, they

are divided into 'units' for monitoring; units may vary in interest feature and/or management from other units on the site.

- 5.2.2 The condition assessments for the relevant component SSSIs (Section 2 above) were downloaded from Natural England's website<sup>2</sup> on 28<sup>th</sup> May 2009, and these are tabulated in Appendix 3. The nineteen SSSIs are divided into around 400 units, each of which has been monitored at least once.
- 5.2.3 The outcome of monitoring is a judgement of unit condition into one of a number of categories, such as favourable, unfavourable recovering, unfavourable no change, unfavourable declining or destroyed. Favourable or unfavourable recovering conditions mean that its habitats and species are being conserved. If a unit is found to be in an unfavourable condition, this means there is a current lack of appropriate management, or that there are damaging impacts (which may be outside of the control of the owner) which need to be addressed<sup>3</sup>.
- 5.2.4 Of the 400 or so units, nine are assessed as unfavourable for reasons of public disturbance. Eight of these units are within Minsmere – Walberswick Heaths and Marshes SSSI, (units 84, 85, 86, 87, 104, 105) and one is within Pakefield to Easton Bavents SSSI (unit 7). These units are all shingle beaches where human impacts on vegetation is monitored. Trampling by people (Minsmere – Walberswick Heaths and Marshes) and vehicles (Pakefield to Easton Bavents) are recorded as having damaged shingle vegetation.
- 5.2.5 The shingle vegetation is an interest feature of Minsmere – Walberswick Heaths and Marshes SAC and Little Terns, which breed on shingle vegetation, are an interest feature of the Minsmere – Walberswick SPA. Little Terns are also an interest feature of the Benacre to Easton Bavents SPA. The unfavourable condition to the nine SSSI units is therefore considered to be an existing adverse affect on the integrity of the respective European sites.
- 5.2.6 It is interesting to note that there are no estuary or coastal SSSIs where disturbance to birds from human recreation is recorded as a reason for unfavourable no change or unfavourable declining condition. However, the condition assessment for unit 3 of the Orwell Estuary SSSI comments that there is 'some disturbance at Bridge Wood which might become an issue in the future'.
- 5.2.7 Most units on the Stour Estuary SSSI are recorded as unfavourable because of 'coastal squeeze', although the comments suggest that there is a 'possible contribution from recreational disturbance'. Coastal squeeze occurs where the normal processes of coastal erosion are interrupted; the normal erosion of the seaward side of saltmarsh and mudflat continues but the normal erosion of dry land to form new saltmarsh and mudflat is prevented; the natural landward progression of saltmarsh and mudflat therefore does not occur and instead the areas of these habitats shrink. However, research shows that the amount of disturbance on the Stour Estuary SSSI from visitors is significantly less than that in the Orwell Estuary SSSI<sup>4</sup>, and disturbance is not mentioned except for unit 3 (see para above) in the Orwell Estuary SSSI. There is therefore some inconsistency in the possible perceptions of disturbance on the two estuaries, although the condition assessments themselves are consistent with respect to human disturbance.

### **5.3 Visitor surveys to predict additional visitors to European sites across the Suffolk Coast and Heaths AONB.**

- 5.3.1 This section looks at the group of people classified as 'day visitors' in the typology in section 5.1 above.
- 5.3.2 There is little information available regarding the destinations of Ipswich residents for their recreation. However, in 2004 the Suffolk Coast and Heaths Unit commissioned East of England

<sup>2</sup> [www.naturalengland.org.uk](http://www.naturalengland.org.uk)

<sup>3</sup> Natural England (2009) SSSI condition assessment A guide for owners and occupiers

<sup>4</sup> Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit.

Tourist Board to carry out a visitor survey of the AONB (EETB 2004<sup>5</sup>). A snap-shot survey was carried out in summer 2004 by questionnaires of visitors across the AONB.

- 5.3.3 The survey found that 55% of visitors to the AONB were day visitors (page 9 of the research). The exact number of people visiting the AONB was not measured, but the proportion of visitors from each location of origin can be identified. The raw data has been obtained from East of England Tourism. A GIS analysis on those 430 day visitors who provided a postcode identified the proportion of those who originated from various places as listed in Table 2 below.
- 5.3.4 It is considered that only 'day visitors' are people living near the AONB; these people are unlikely to book a significant amount of overnight accommodation. 'Day visitors' is therefore the best measure of potential impact to sites.
- 5.3.5 Many of the sites in the AONB involved in the visitor study were European sites, so the study is relevant to this Appropriate Assessment.

Table 2. Proportion of day visitors to Suffolk Coast and Heaths AONB from location of origin (data from EETB 2004 as re-analysed)

<b>Origin of day visitors to AONB</b>	<b>Number of day visitors</b> (total day visitors in survey = 430)	<b>percentage of total AONB day visitors (estimate)</b>
Ipswich Borough, plus adjoining Pinewood ward (Babergh district)	50	11.6%
Ipswich policy area, wholly within Suffolk Coastal District (Rushmere, Kesgrave and Martlesham wards)	29	6.7%
Felixstowe, including Trimleys with Kirton	19	4%
Remainder of Suffolk Coastal District	114	26.5%
Shotley	1	0.2%
<b>Total of these origins</b>	<b>213</b>	<b>49.5%</b>

- 5.3.6 The increase in population is related to the increase in housing available. For Ipswich, the projections in population growth suggest that there will be an average of 1.38 net additional people per new dwelling (Ipswich Borough Council pers comm.). This seems low, but is realistic considering the proportion of flats planned, an increase in the student population, and taking into account the continued decline in people per household in Ipswich, and ongoing national decline. There will be people moving between occupancy of existing and new dwellings (in both directions) within the plan period, as well as people moving in and out of the Borough, and births and deaths, but the 'net additional people' are a consequence of the housing growth being available for occupancy.

<sup>5</sup> EETB (2004) Suffolk Coast and Heaths Area of Outstanding Natural Beauty. Visitor Research 2004. Available from <http://www.suffolkcoastandheaths.org/uploads/SCH%20AONB%20Visitor%20Research%20Report%202004.pdf>

- 5.3.7 Suffolk County Council has published an updated population projection based on the Regional Spatial Strategy allocations being built<sup>6</sup>. It suggests that for 9,400 new households in the period 2001 – 2021 that the population will rise by 8,500 people, which is a net increase of 0.9 people per new house. This reflects the currently ageing population (older people tend to live singly or in pairs, rather than as families with children present) and an increase in second homes / holiday homes. The decline in the number of people per household is an important factor to take into account.
- 5.3.8 The proportionate growth in population in new housing development in Ipswich and elsewhere, can be calculated by looking at the existing population, the predicted net increase in people, and therefore the proportionate increase.
- 5.3.9 Table 3 shows the projected increase in population for each of the study areas under consideration.

Table 3. The estimated numerical increase in population for new housing.

Town / area	proposed new housing units	Estimated increase in people*
Ipswich Borough	11,511 <sup>7</sup>	15,885
Ipswich policy area, wholly within Suffolk Coastal District (Rushmere, Kesgrave and Martlesham wards)	2,640 <sup>8</sup>	2376
Felixstowe, including Trimleys with Kirton	1,410 <sup>9</sup>	1269
Remainder of Suffolk Coastal District	3,660 <sup>10</sup>	3294
Shotley	404 <sup>11</sup>	606
<b>Totals</b>	<b>19,630</b>	<b>23,430</b>

\* based on population projections (see above paragraphs 5.3.6 and 5.3.7)

- 5.3.10 Table 4 shows the proportionate increase in population for these areas of new housing. It is important to look at the increases of each development in combination, as well as individually, as each impact might be individually too small to give rise to a significant impact, but in combination could have an adverse affect.

<sup>6</sup> Suffolk County Council (2009) Projected changes in the population. Downloadable from web page <http://www.suffolk.gov.uk/Environment/FactsAndFigures/PopulationFigures.htm>

<sup>7</sup> Comprises 2572 dwellings with planning permission but not constructed at April 2009, 636 dwellings with a resolution to grant planning permission at April 2008, 4983 new allocations to 2021 and 3320 new allocations 2021 – 2025 (IBC Core Strategy and Policies)

<sup>8</sup> SCDC Core strategy – 420 outstanding planning permissions at 2008, 220 dwellings urban potential, 2000 new allocations to 2025

<sup>9</sup> SCDC Core strategy – 160 outstanding planning permissions at 2008, 250 dwellings urban potential, 1000 new allocations

<sup>10</sup> SCDC Core strategy – Market towns; 670 outstanding planning permissions at 2008, 150 existing Local Plan allocations, 400 dwellings urban potential, 870 new allocations, and Key/local service centres 530 outstanding planning permissions at 2008, 120 existing Local Plan allocations, 170 dwellings urban potential, 210 new allocations. 540 windfall sites (could be anywhere in the District).

<sup>11</sup> 404 dwelling retirement community planned – see

<http://www.babergh.gov.uk/Babergh/Home/Planning+and+Building+Control/Planning+Information/HMS+Ganges+-+Revision/>.

Assumption 1.5 people per dwelling.

Table 4. The proportionate increase in population for areas of new housing.

Town / area	Existing population size	Estimated increase in people (table 3)	estimated % increase in people (estimated increase / existing)
Ipswich Borough, plus adjoining Pinewood ward (Babergh district)	132,013 <sup>12</sup>	15,885	12.0%
Ipswich policy area, wholly within Suffolk Coastal District (Rushmere, Kesgrave and Martlesham wards)	20,014 <sup>13</sup>	2376	11.9%
Felixstowe, including Trimleys with Kirton	33,735 <sup>14</sup>	1269	3.7%
Remainder of Suffolk Coastal District	68,251 <sup>15</sup>	3294	4.8%
Shotley	2483 <sup>16</sup>	606	24.4%
<b>Totals</b>	<b>256,496</b>	<b>23,430</b>	<b>9.1%</b>

5.3.11 The data in Tables 3 and 4 above can be used to calculate the extra number of people visiting European sites within the Suffolk Coast and Heaths AONB, subject to the following assumptions

- the pattern of day visits to sites by the new residents is similar to that of the existing population;
- the pattern of visits to sites by day visitors and overnight visitors remains as that identified in the 2004 visitor survey;
- an increase in visits to sites is not constrained by other factors e.g. lack of public transport, or car parks reaching capacity;
- the balance between day visitors and overnight visitors does not change; and
- the summer snapshot survey is typical of visitors all year round.

5.3.12 The percentage increase of total visitors to European sites in the AONB is calculated, rather than a numeric increase, because the total number of visitors is not known. The percentage increase in total visitors to European sites takes into account the ratio of day visitors to overnight visitors (i.e. holiday makers), the proportion of visitors from each point of origin, and the increase of people in each point of origin. This can be expressed by the calculation (%day visitors) x (%from point of origin) x (%increase at point of origin).

5.3.13 Table 5 below calculates the increase in total visitors to the AONB based on the calculation above, for each point of origin and for the total. For clarity of calculation, percentages are given as a proportion of 1 e.g. 55% is shown as 0.55. To reduce rounding errors, the total for column D is calculated from the totals for columns B and C.

<sup>12</sup> <http://neighbourhood.statistics.gov.uk> – 2001 census data for Pinewood (4013 people) plus 128,000 people for Ipswich (IBC core Strategy)

<sup>13</sup> <http://neighbourhood.statistics.gov.uk> – 2001 census data

<sup>14</sup> <http://neighbourhood.statistics.gov.uk> – 2001 census data

<sup>15</sup> Whole district population 2006 is 122,000 (Core strategy preferred options p11) Deduct figures for Ipswich policy area and Felixstowe.

<sup>16</sup> <http://neighbourhood.statistics.gov.uk> – 2001 census data



Table 5. Predicted increase in total visitors to Suffolk Coast and Heath AONB.

<b>Origin of day visitors to AONB</b>	<b>(A) proportion of total AONB day visitors (estimate) from table 2 expressed as a fraction of 1</b>	<b>(B) proportion of total AONB visitors (A x 0.55)<sup>17</sup></b>	<b>(C) % increase in people at place of origin from table 4 expressed as a fraction of 1</b>	<b>(D) The proportionate increase in total visitors to the AONB (B) x (C)</b>
Ipswich Borough, plus adjoining Pinewood ward (Babergh district)	0.116	0.064	0.120	0.008
Ipswich policy area, wholly within Suffolk Coastal District (Rushmere, Kesgrave and Martlesham wards)	0.067	0.037	0.119	0.004
Felixstowe, including Trimleys with Kirton	0.04	0.022	0.037	0.001
Remainder of Suffolk Coastal District	0.265	0.146	0.048	0.007
Shotley	0.002	0.001	0.244	0.0002
<b>Totals</b>	<b>0.495</b>	<b>0.272</b>	<b>0.091</b>	<b>0.0248</b>

5.3.14 To help interpret Table 5 above, Table 6 below shows the Table 5 column D data alone, expressed as a percentage increase in total visitors.

<sup>17</sup> only 55% of AONB visitors are day visitors; an increase in housing does not change the amount of holiday makers

Table 6. The predicted percentage increase in total visitors to the Suffolk Coast and Heaths AONB resulting from proposed growth in Ipswich Borough and Suffolk Coastal

Place of origin	The predicted proportionate increase in visitors to the AONB from each place of origin
Ipswich Borough, plus adjoining Pinewood ward (Babergh district)	0.8%
Ipswich policy area, wholly within Suffolk Coastal District (Rushmere, Kesgrave and Martlesham wards)	0.4%
Felixstowe, including Trimleys with Kirton	0.1%
Remainder of Suffolk Coastal District	0.7%
Shotley	0.02%
<b>Totals</b>	<b>2.48%</b>

- 5.3.15 Table 6 shows that the increase in visitors to the Suffolk Coast and Heaths AONB, as a result of the proposed developments is predicted to be 2.48%.
- 5.3.16 There are limitations to this approach, from the snapshot visitor survey in 2004 to the many assumptions used for the calculations. For example, the August visitor survey would have picked up a greater number of visitors than a winter survey might have done, but a winter survey may well have found a higher proportion of day visitors compared to overnight visitors. The result is that the 2.48% figure is not considered to be precise, but an estimate. Assumptions and precautions mean that the true figure could be higher or lower than 2.48%, but the extent of the difference is not clear.
- 5.3.17 **It would therefore be reasonable to assume that the increase in visitors to European sites in the Suffolk Coast and Heaths AONB could be in the range of 2% - 5%** as a result of the Ipswich Borough Council and Suffolk Coastal District Council Core Strategy proposals.
- 5.3.18 Not all the European sites under assessment are within the Suffolk Coast and Heaths AONB, specifically the sites in Tendring District which are Hamford Water SPA, Hamford Water Ramsar site, Colne Estuary (Mid Essex Coast phase 2) SPA, Colne Estuary (Mid Essex Coast phase 2) Ramsar site, and Essex Estuaries SAC. The amount of visits to these sites from Suffolk Coastal District and Ipswich Borough are not known. It is considered that the greater distances to these sites from Ipswich / Suffolk Coastal, compared to sites with the Suffolk Coast and Heaths AONB, means that the expected number of visits from Ipswich / Suffolk Coastal to the Essex sites is likely to be much less than to sites in Suffolk. The Essex sites are closer to other towns such as Harwich and Colchester, and the influence of those towns is considered to be much more dominant.
- 5.3.19 The method of predicting changes in visitor pressure across the wider area is insensitive to scenarios where housing growth is changed. For example, if the allocation to the Ipswich policy area (Figure 2) was increased by 1000 dwellings and allocations elsewhere were reduced by a similar amount, the prediction for all developments and existing allocations combined would not differ. This is because the day visitors to the European sites in the AONB might travel to those

sites from any of the allocated housing areas; the total numbers allocated has more impact than the exact location of the growth.

## 5.4 Impact on specific sites

- 5.4.1 This section discusses the third typology in Section 5.1 above, which is the use by people of European sites close to their homes for recreation or other activities. The predicted general increase of visitors to European sites across the area is not necessarily a uniform increase to all sites. It is likely that European sites close to new development (i.e. (within walking distance or a short cycle ride, bus trip or drive away) is likely to be used as local greenspace, with activities such as recreational dog walking or play undertaken.
- 5.4.2 Studies in Dorset, which were carried out to investigate the impact of development on European sites there<sup>18</sup>, 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. This indicates that housing development is likely to result in people living in that 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. Car parks were necessary to provide for those people arriving by car.
- 5.4.3 The new housing provisions within Ipswich Borough or Suffolk Coastal District are therefore likely to result in an increase in visitor recreation on European sites within 1km (for people walking) and 8km (for people driving). This would be a greater increase than that increase on visits 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 growth, and assess whether any increase in visitors is likely to occur there. To assess if an increase in visitors is likely to occur, the proportionate increase in population in those distance bands can be looked at, the provision of alternative sites for recreation needs to be taken into account, and the availability of the European sites for access needs to be identified.
- 5.4.4 The cumulative impact of several developments is considered in Section 5.3 above, 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. Distance bands are in reality the distance that people travel, rather than straight-line distances. Obstructions to travel, such as railways or rivers with no crossing points therefore reduce the straight-line distance from which people will not travel to a European site.
- 5.4.5 The Ipswich Proposed Submission Core Strategy and Policies indicates that greenfield land north of Ipswich may be allocated for development mainly after 2021. Before that date, development will be focussed into the town centre, Ipswich Village and Waterfront, with densities in some places exceeding 165 dwellings per hectare. The effect of developments on specific European sites within 1km and 8km radii should be considered in combination with the additional visitors expected across the whole suite of European sites.

## 5.5 Survey of site managers opinion of impacts of additional visitors

- 5.5.1 As noted above, the managers of European sites, for example of those managed as nature reserves, have a significant amount of knowledge about the impacts of visitors on their sites. Often this knowledge is anecdotal, but it can be used to gain an extra understanding of visitor impacts across the wider area. Land managers from organisations responsible for various European sites were asked for their views on the current impacts of visitors on the European

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<sup>18</sup> Clarke, R., Liley, D., Underhill-Day, J. & Rose, R. 2005. Visitor Access patterns on the Dorset heathlands. *English Nature Research Reports*, No. 683

sites they managed. The organisations with land managers asked for views, via a survey form, are listed below in Table 7.

Table 7. Organisations where land managers were asked for views on visitor impacts

Organisation	Number of land managers asked for views	European site (s)
Suffolk Wildlife Trust	3	Sandlings SPA, Stour and Orwell Estuaries SPA,
Suffolk Coast and Heaths AONB Unit	1	AONB-wide remit
Natural England	2	Colne Estuary (Mid Essex Coast phase 2) SPA Essex Estuaries SAC Minsmere – Walberswick SPA and SAC
Royal Society for Protection of Birds	3	Sandlings SPA, Minsmere – Walberswick SPA and SAC, Stour and Orwell Estuaries SPA
Management Committee	1	Colne Estuary (Mid Essex Coast phase 2) SPA Essex Estuaries SAC
Forestry Commission	1	Sandlings SPA

- 5.5.2 The request of views, using a form for response, was not designed to provide quantitative results. In most cases, it was considered that visitor surveys and precise impacts have never been measured. Land managers may not have had the time, particularly in June which is often a busy month, to carry out studies or even prolonged thought about the issues, so it is accepted that the replies may not be precise in all cases. With this in mind, each land manager was able to request that their reply would not be published, and all land managers were informed that replies would not commit themselves or their organisation to any particular view or course of action.
- 5.5.3 The quality of the replies needs to be considered in this light, treating them as a good indication of views, on an anecdotal basis, rather than as a comprehensive scientific study. It is considered that the qualitative evidence is of use in this assessment.
- 5.5.4 Four replies were received using the survey form. Two respondents were happy for their replies to be made public (given in Appendix 5), whilst two others preferred their responses to be not made public due to the provisional nature of the information. Further information was received by email in a free format from a fifth site manager of an estuarine site.
- 5.5.5 All respondents understood the SAC and SPA designations on their land but there was little detailed knowledge of visitor numbers; the 2004 Suffolk Coast and Heaths report was referred to on a number of occasions.
- 5.5.6 All respondents highlighted disturbance to birds and other species as being the main impact of visitors. Dogs in particular were reported as the biggest source of disturbance, especially dogs off leads which were rarely under control. Visitors were also reported to destroy interpretation signs, cut fences, leave litter and leave gates open so that livestock escape. Visitors, or at least some of them, were believed to ignore signs requesting certain behaviours such as dog control or remaining on paths. On one estuarine site, disturbance to birds from boats was thought to be the biggest problem.

- 5.5.7 Three out of the four respondents who filled in the survey form reported that they thought that a 1% increase in visitors to their sites would cause harm to SPA / SAC features. The fourth respondent thought that a 10% increase would cause harm.
- 5.5.8 All the site managers who filled in the survey form agreed that additional money could help to reduce or remove the impact of additional visitors, for example by moving or upgrading footpaths, providing additional wardening, moving or upgrading car parks, providing leaflets and signage, etc. Three of the respondents, unprompted by the design of the survey form, suggested that alternative recreation facilities should be provided close to new developments, with new Country Parks being mentioned twice.
- 5.5.9 One site manager thought that the emphasis on recreation such as dog walking, was not appropriate for his site and that traditional coastal recreation such as wildfowling, fishing and clay pigeon shooting were normally not considered during studies of recreational harm to wildlife sites.
- 5.5.10 The results of this survey are considered to be indicative rather than a conclusive evidence base. The results are however consistent with research on heathlands showing that increased visitor numbers have an impact on heathland birds and that high numbers of people disturb estuary birds so that populations decrease (see references in Section 6.2). The results therefore are helpful as indicative that other robust evidence of human impacts on wildlife can be referable to European sites in the Suffolk Coast and Heaths.

## 6 Assessment of each policy

### 6.1 Introduction to the assessment of each policy

- 6.1.1 In this Section, each policy is individually assessed in relationship to each European site mentioned in Sections 2.1 and 2.2 above. Policies and the justification of them can be found in the Policy document.
- 6.1.2 It is assumed that the policy document is available to the reader of this Appropriate Assessment and large amounts of text are not repeated here.

### 6.2 Policy CS7, The amount of housing required, Policy CS9, Previously developed land target, and Policy CS10 Ipswich Northern Fringe.

#### *Policy overview*

- 6.2.1 Policy CS7 sets the amount of housing to be allocated in Ipswich Borough over the period to 2025. Policy is

#### **Policy CS7 The Amount of New Housing**

**The Council will allocate land to provide for at least an additional 4,983 dwellings net to be provided in the Borough by 2021. Sites will be identified through the IP-One Area Action Plan and the Site Allocations and Policies Development Plan Document in accordance with the spatial strategy in this Core Strategy. Housing allocations will be made and released in three phases:**

**Phase 1: 2010 to 2015 (5 years)**

**Phase 2: 2015 to 2021 (6 years)**

- 6.2.2 Policy CS9 describes that the allocations to 2021 will be within existing urban areas of Ipswich, including the town centre, Ipswich Village (the area around the Ipswich Town Football Club stadium and the Suffolk County Council offices) and the Waterfront (the once industrial dock area). The allocations after 2021 are likely to be on greenfield land north of the town. Policy CS9 is

#### **Policy CS9 Previously Developed Land Target**

**From 2010 to 2021, at least 70% of development will take place on previously developed land. This reflects the locational strategy set out in Policy CS2, which focuses development primarily into central Ipswich. It will in turn be reflected in site allocations made in the IP-One Area Action Plan and Site Allocations and Policies development plan document.**

- 6.2.3 Policy CS10 describes the development of Ipswich Northern Fringe, with some development likely between 2016 and 2021 but the remainder only after 2021. Policy CS10 is

#### **Policy CS10 Ipswich Northern Fringe**

**Land at the Northern Fringe of Ipswich, north of Valley Road/Colchester Road and between Henley Road in the west and Tuddenham Road in the east, will form the main source of supply of housing land in Ipswich after 2021. The precise number of dwellings required will be determined by the review of the Regional Spatial Strategy.**

**However, due to the limited availability of previously developed land in the rest of the town, the delivery of up to 1,000 of those dwellings will be expected to commence during the plan's second phase on land to the east of Henley Road and south of the railway line. The Site will be identified through the Site Allocations and Policies document. The new Regional Spatial Strategy that will allocate housing numbers to 2031 will have an impact on the scale of any required development in the Northern Fringe. A prerequisite for any development being granted planning permission in the Northern Fringe will be**

**the prior adoption by the Council of a supplementary planning document providing a development brief to:**

- a. guide the development of the whole area; and**
- b. identify the infrastructure that developments will need to deliver alongside new housing, and**
- c. set out a schedule of infrastructure charges.**

**The Borough Council will start to prepare the supplementary planning document after the new Regional Spatial Strategy is adopted, as it will only be then when there will be clarity around the number of houses to be planned for in the Northern Fringe area.**

**Any development will maintain an appropriate physical separation of Westerfield Village from Ipswich and include green walking and cycling links to Westerfield Station.**

**Should housing delivery on previously developed land sites at 2015 be falling significantly short of requirements, the Council would at that time need to consider allowing additional land in the Northern Fringe to be released for development prior to 2021.**

- 6.2.4 All three policies together set the amount and location of housing growth, and are considered together within this assessment. The main areas for growth are shown on the Key Diagram, as shown in Appendix 6. This assessment considers the impact of increases in recreational visits to European sites, firstly to those sites across the Suffolk Coast and Heaths AONB as a result of the Ipswich Core Strategy alone, secondly in combination with the Suffolk Coastal District Core Strategy, and thirdly on particular sites close to Ipswich which might have a disproportionate increase in visitors.
- Impact on European sites in the wider area – Ipswich Core Strategy existing permissions and allocations – recreational visitors*
- 6.2.5 It is estimated (Section 5.3 above) that there will be a general 0.8% increase in visitors to the European sites within Suffolk Coast and Heaths AONB, as a result of existing permissions since 2009 being constructed, and new housing allocation to 2025, in Ipswich Borough.
- 6.2.6 A general increase in visitors of 0.8% seems small as it is equivalent to just one extra person for every 125 existing visitors. The impact depends on the accessibility of sites to visitors, which varies from site to site.
- 6.2.7 The European sites in Essex are further away and considered to be less often visited from Ipswich and Suffolk Coastal<sup>19</sup>, than the European sites in the Suffolk Coast and Heaths, and so the increase in visits is considered to be less than the average for the whole AONB. It is ascertained to have no adverse affect on the European sites in Essex listed in Section 2.2 above.
- 6.2.8 Staverton Park and the Thicks SAC is not open to public access. There is a public footpath running through part and alongside the SAC, but there is little car parking availability nearby and the right-of-way is not well used. It is considered that a small increase in use of the public footpath will have no impact, so it is ascertained that there will be no adverse affect upon the integrity of the Staverton Park and The Thicks SAC.
- 6.2.9 Dews Ponds SAC is not open to public access. There will be no increase in visitor pressure, so it is ascertained that there will be no adverse affect upon the integrity of the Dews Ponds SAC.
- 6.2.10 The Broads SAC and Broadland SPA are considered to be at sufficient distance from proposed new development that the amount of housing in Ipswich and Suffolk Coastal would have little impact on those sites. The proximity of the sites to Norwich and Great Yarmouth, the high

<sup>19</sup> Based on the assumption that the Suffolk Coast and Heaths AONB is the obvious destination for people in these areas as it is closest;

number of visitors<sup>20</sup>, and the great proportion of visitors from across the UK and beyond, indicates that the contribution of the Ipswich Policy Area and Felixstowe to visitor pressure is likely to be relatively small. It is considered that there will be no impact from the proposed Submission Core Strategy and so it can be ascertained that there will be no adverse affect upon the integrity of the Broads SAC and Broadland SPA.

- 6.2.11 Benacre to Easton Bavents Lagoons SAC and Benacre to Easton Bavents SPA are the furthest European sites from Ipswich in the Suffolk Coast and Heaths AONB. It is not thought that the lagoons are harmed by visitor pressure, as visitors tend to avoid entering the lagoons, which contain brackish water, and Natural England does not record it as a current reason for unfavourable condition. One part of the shingle beach vegetation, close to a holiday camp, is in unfavourable condition from unauthorised vehicle driving. The proximity of the beach to the holiday camp is such that the relative impact of any visitors from Ipswich is thought to be insignificant. It is considered unlikely that there will be an impact from the proposed Submission Core Strategy and so it can be ascertained that there will be no adverse affect upon the integrity of the Benacre to Easton Bavents Lagoons SAC and Benacre to Easton Bavents SPA.
- 6.2.12 However, there is a possibility that other European sites may be affected by a small increase in visitors. Some parts of European sites have good visitor management, such as Minsmere nature reserve and Walberswick National Nature Reserve, both within Minsmere – Walberswick SPA and SAC. However, 64.07ha of this site is unfavourable and declining condition (Section 5.2 and Appendix 3) due to shingle beach trampling, consequent damage to vegetation and disturbance to Little Tern breeding colonies over the whole shingle beach SAC feature. The vast majority of this trampling is believed to be caused by visitors to the European site.
- 6.2.13 The Sandlings SPA is wholly in favourable or unfavourable recovering condition according to Natural England (Section 5.2 and Appendix 3), although it is known that visitors, especially those with dogs, can disturb nightjar and woodlark on heaths<sup>21</sup>. The condition assessments by Natural England are evidence that the Sandlings SPA is not currently harmed by recreational activities i.e. the existing activity is below a threshold where harm would be caused.
- 6.2.14 There is visitor access to a varying degree across all estuarine / coastal European sites within the Suffolk Coast and Heaths AONB, particularly the Alde-Ore Estuary SPA, Alde-Ore and Butley SAC, Deben Estuary SPA and Stour and Orwell Estuaries SPA. Visitors are known to disturb birds and trample saltmarsh<sup>22</sup> through various mechanisms and at various times of year. However, none of these sites are recorded by Natural England as being in unfavourable condition.
- 6.2.15 The limited results of the Site Managers' survey indicated that the majority of respondents believed that even a 1% increase in visitors would be harmful, but the questionnaire did not ask for views about a lower increase such as 0.8%. The organisations which employ the site managers continue to promote visits to their sites, for example through leaflets or web-based advertising<sup>23</sup>. Visitor management across European sites is partly driven by encouragement of visitors to visit designated places, such as the car park beside the Orwell Estuary at Nacton, to relieve pressure at other more remote undisturbed parts of European sites. This is a legitimate management approach, but when the recreation at designated sites starts to cause damage to the European site in question, further management is required to reduce impacts.
- 6.2.16 Overall, apart from Site Managers' views, there is no primary data to show that a 0.8% increase in visitors over the wider AONB will have an impact on any European sites in the wider AONB

<sup>20</sup> <http://www.broads-authority.gov.uk/managing/recreation.html>

<sup>21</sup> for example, Liley D and Clarke RT (2003) The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation*, 114, 219 – 230, and Mallord JW, Dolman PM, Brown AF and Sutherland WJ (2006) Linking recreational disturbance to population size in a ground-nesting passerine. *Journal of Applied Ecology*, 44, 185 – 195.

<sup>22</sup> Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit.

<sup>23</sup> see, for example, <http://www.suffolkcoastandheaths.org/downloads.asp?PageId=2>



(but see below) so for this part of the assessment it is considered that it can be ascertained that there will be no adverse affect upon the integrity of European sites across the Suffolk Coast and Heaths AONB and beyond from the Ipswich Borough Council Proposed Submission Core Strategy and Policies acting alone.

*Impact on European sites in the wider area from the combination of all existing permissions and housing growth in Ipswich Borough and Suffolk Coastal District – recreational visitors*

- 6.2.17 It is estimated (Section 5.3 above) that there will be a general increase in visitors to the European sites within Suffolk Coast and Heaths AONB of around 2 – 5 %, as a result of existing permissions since 2008 and new housing growth, in the Ipswich Borough Proposed Submission Core Strategy and Policies in combination with the Suffolk Coastal District Core Strategy and Development Management Policies.
- 6.2.18 A general increase in visitors of 2 – 5 % is equivalent to one extra person for every 20 - 50 existing visitors. This increase may have varying impacts on the European sites in the study area.
- 6.2.19 For the reasons explained above for the Ipswich proposed Submission Core Strategy acting alone, it is considered that there will be no impact from the Ipswich proposed Submission Core Strategy acting in combination with the Suffolk Coastal District Core Strategy and Development Management Policies and so it can be ascertained that there will be no adverse affect for the following sites
- the European sites in Essex listed in Section 2.2 above;
  - Staverton Park and the Thicks SAC;
  - Dews Ponds SAC;
  - The Broads SAC and Broadland SPA; and
  - Benacre to Easton Bavents Lagoons SAC and Benacre to Easton Bavents SPA.
- 6.2.20 However, there is a possibility that other European sites may be affected by a small increase in visitors resulting from the Ipswich proposed Submission Core Strategy acting in combination with the Suffolk Coastal District Core Strategy and Development Management Policies. Some parts of European sites have good visitor management, such as Minsmere nature reserve and Walberswick National Nature Reserve, both within Minsmere – Walberswick SPA and SAC. However, 64.07ha of this site is unfavourable and declining condition (Section 5.2 and Appendix 3) due to shingle beach trampling damage to vegetation and disturbance to Little Tern breeding colonies over the whole shingle beach SAC feature. The vast majority of this trampling is believed to be caused by visitors to the European site.
- 6.2.21 The Sandlings SPA is wholly in favourable or unfavourable recovering condition according to Natural England (Section 5.2 and Appendix 3), although it is known that visitors, especially those with dogs, can disturb nightjar and woodlark on the heaths<sup>24</sup>. The condition assessments by Natural England are evidence that the Sandlings SPA is not currently harmed by recreational activities i.e. the existing activity is below a threshold where harm would be caused. However, anecdotal evidence from land managers in the survey (Section 5.4) is that current visitor levels are causing harm from the amount of recreational activity, and with dogs off leads having the greatest impact. A 2 – 5% predicted increase in visitors is not an insignificant amount. A threshold value at which visitor numbers switch from being benign to harmful is not known. It is possible that a simple threshold does not exist, but disturbance may be proportional to visitor activity over a wide range of activity levels. A 2 – 5% increase in visitors may mean a 2 – 5% increase in disturbance, which could result in the loss of one or more breeding woodlark or

<sup>24</sup> for example, Liley D and Clarke RT (2003) The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation*, 114, 219 – 230, and Mallord JW, Dolman PM, Brown AF and Sutherland WJ (2006) Linking recreational disturbance to population size in a ground-nesting passerine. *Journal of Applied Ecology*, 44, 185 – 195.

nightjar, depending upon the distribution of these extra visitors through the component parts of the SPA.

- 6.2.22 It is consequently not possible to ascertain that there will be no adverse affect upon the integrity of the Sandlings SPA from the combination of all existing permissions and housing growth in Ipswich Borough and Suffolk Coastal District.
- 6.2.23 There is visitor access to a varying degree across all estuarine / coastal European sites within the Suffolk Coast and Heaths AONB, particularly the Alde-Ore Estuary SPA, Alde-Ore and Butley SAC, Deben Estuary SPA, Minsmere - Walberswick Heaths and Marshes SAC, Minsmere – Walberswick SPA and Stour and Orwell Estuaries SPA. Visitors are known to disturb birds and trample saltmarsh<sup>25</sup> through various mechanisms and at various times of year. However, none of these sites are currently recorded by Natural England as being in unfavourable condition.
- 6.2.24 The limited results of the Site Managers' survey indicated that the majority of respondents believed that even a 1% increase in visitors would be harmful.
- 6.2.25 A 2 – 5% increase in visitors may exacerbate trampling damage to shingle vegetation on Minsmere – Walberswick (para 6.2.23 above) and decrease the likelihood of successful Little Tern breeding on the affected units or nearby. The increase in visitors may increase disturbance to birds which form part of the qualifying interest of SPAs, such as overwintering waders and wildfowl on the estuaries. Well-managed (in terms of visitor management) parts of SPAs are likely to deal with visitors so that they are not disturbing. However, other parts of the SPAs do not manage visitors in the sense that numbers are restricted or visitors are offered alternatives to sensitive areas. An example of 'unmanaged' access would be public rights of way alongside estuaries, which remain open all year round to as many people as would like to use them.
- 6.2.26 At the present state of knowledge it is not possible to be sure that the increase of visitors would not result in an increase of disturbance to qualifying features on estuarine / coastal sites. It is consequently not possible to ascertain that there will be no adverse affect upon the integrity of the Alde-Ore Estuary SPA, Alde-Ore and Butley SAC, Deben Estuary SPA, Minsmere - Walberswick Heaths and Marshes SAC, Minsmere – Walberswick SPA and Stour and Orwell Estuaries SPA from the combination of all existing permissions and housing growth in Ipswich Borough and Suffolk Coastal District.

*Impact on specific nearby European sites from the proposed Submission Core Strategy and Policy alone*

- 6.2.27 Within an 8km radius of central Ipswich, there is one SPA. This is the Stour and Orwell Estuaries SPA, and the closest and most relevant component site is the Orwell Estuary SSSI. It is likely that parts of this estuary may be visited by a proportion of the new residents from permitted but yet to be built housing and potential new allocations, in central Ipswich and elsewhere in the Borough. Bridge Wood is within Suffolk Coastal District, but owned and managed by Ipswich Borough.
- 6.2.28 In a study of recreational disturbance of birds on the Stour and Orwell Estuaries by Ravenscroft, Parker, Vonk and Wright (2007)<sup>26</sup> the most visited parts of both estuaries were at Nacton, Pin Mill and Bridge Wood, part of Orwell Country Park. It is considered that the distance of Pin Mill from Ipswich suggests that visitors here are 'day visitors' and so are included in the assessment of European sites in the wider area, above. However, Bridge Wood is about 2km from central Ipswich where much housing will be allocated, so it is considered that Bridge Wood is especially likely to receive a substantial increase in visitors. The increase in visitors could be up to 13%, in line with the 13% increase in the population of Ipswich (see above). Nacton Picnic Site is popular with visitors from Ipswich (anecdotal only) and is also likely to receive an increase of

<sup>25</sup> Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit.

<sup>26</sup> Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit.

visitors larger than the 2% - 5% predicted for the AONB only, possibly up to the 13% increase predicted for Bridge Wood.

6.2.29 It is considered that Orwell Country Park is primarily a local attraction for Ipswich residents and the use by residents in neighbouring Districts is likely to be low, although some residents within the wider Ipswich Policy Area, such as from Kesgrave may use the site. An increase of the population of Suffolk Coastal District, for example, is unlikely to significantly change visitor numbers to Orwell Country Park.

6.2.30 Ravenscroft et al (2007) also found that the estuary birds, which are qualifying species for the SPA designation, were more disturbed at Bridge Wood than at any other place in the whole SPA. There was also a lower, but still high compared to elsewhere in the SPA, disturbance from visitors at Pond Ooze, adjacent to Bridge Wood. Interestingly, Pipers Vale, also part of Orwell County Park, was reported as a place where little or no disturbance was caused to birds because there was no recreational access to the foreshore.

6.2.31 The Orwell Estuary SSSI is monitored by Natural England, with monitoring unit 3 adjacent to Bridge Wood and Pond Ooze. The current condition is 'favourable', but Natural England comments '*Some disturbance at bridgewood which might become an issue in the future*'. This comment dated from 2002, before the results of the Ravenswood et al (2007) study, and it is possible that a new condition assessment might use the study to assess the disturbance as causing a loss of condition to unfavourable. The monitoring unit 7, adjacent to Nacton Picnic site, is currently recorded as favourable and there are no comments, such as at unit 3, regarding the possibility of disturbance being a potential issue.

6.2.32 The Stour and Orwell Estuaries SPA has up to 25,000 birds at any one time, with numbers usually peaking in the winter. This reflects the use of the estuaries by birds from further north, such as Scandinavia, which come south to the UK for the relatively warmer winter climate and extensive mudflats for feeding. Data obtained from the British Trust for Ornithology, based on monthly counts by volunteers, is available for the years 2002/03 to 2006/07, and is shown in the table below.

Year	Peak Monthly Total	Autumn Peak	Winter Peak	Spring Peak
02/03	18067 (JAN)	17852	23709	6270
03/04	24208 (FEB)	20286	29037	6159
04/05	14917 (DEC)	16354	18008	7717
05/06	19552 (AUG)	23886	21221	10508
06/07	23933 (FEB)	21679	27656	7777
MEAN		20011	23926	7686

6.2.33 A more detailed breakdown of bird numbers by species for the whole SPA is given in Appendix 9. The bird counts are made by dividing the estuaries into 'count sectors', with counts made for each sector separately.

6.2.34 The count sector of the SPA adjacent to Bridge Wood is called 'count sector 6'. Bird counts for this sector alone are given in the table below.

Year	Peak Monthly Total	Autumn Peak	Winter Peak	Spring Peak
02/03	( )	N/C	N/C	N/C
03/04	396 (MAR)	N/C	396	N/C
04/05	987 (NOV)	N/C	1283	129
05/06	1152 (FEB)	411	1331	N/C
06/07	556 (NOV)	0	580	0
MEAN		206	898	65

6.2.35 This bird data is consistent with that in Ravenscroft et al (2007), with low numbers of birds believed to be related to high levels of visitor disturbance. A more detailed breakdown of bird numbers per month is given in Appendix 10.

6.2.36 The current high level of visitor access, the level of bird disturbance, and an increase of visitors possibly up to 13% as a result of housing growth, suggests that it is not possible to ascertain that there will be no adverse affect on the integrity of the SPA from the Ipswich Proposed Submission Core Strategy and Policies acting alone.

*Summary of initial conclusions*

6.2.37 The Ipswich Proposed Submission Core Strategy and Policies is predicted to result in an increase of visitors to the Orwell Country Park at Bridge Wood and it is not possible to ascertain that there will be no affect upon the integrity of the Stour and Orwell Estuaries SPA.

6.2.38 The Ipswich Proposed Submission Core Strategy and Policies, in combination with the Suffolk Coastal Core Strategy and Development Management Policies, is predicted to result in an increase in visitors to the Alde-Ore Estuary SPA, Alde-Ore and Butley SAC, Deben Estuary SPA, Minsmere - Walberswick Heaths and Marshes SAC, Minsmere – Walberswick SPA, Sandlings SPA, and Stour and Orwell Estuaries SPA and it is not possible to ascertain that there will be no affect upon the integrity of those European sites.

6.2.39 The Ipswich Proposed Submission Core Strategy and Policies, alone or in combination with the Suffolk Coastal Core Strategy and Development Management Policies is predicted to result in little difference, at an insignificant level, in visitor pressure upon Hamford Water SPA, Hamford Water Ramsar site, Colne Estuary (Mid Essex Coast phase 2) SPA, Colne Estuary (Mid Essex Coast phase 2) Ramsar site, Essex Estuaries SAC, Staverton Park and the Thicks SAC, Dews Ponds SAC, The Broads SAC, Broadland SPA, Benacre to Easton Bavents Lagoons SAC and Benacre to Easton Bavents SPA. It is ascertained that there will be no affect upon the integrity of those European sites.

*Comparison with RSS conclusions*

6.2.40 This conclusion differs from the 'Habitats Regulations Assessment' for the Regional Spatial Strategy<sup>27</sup>. That assessment concluded that there was likely to be no significant effect of the housing allocation to Ipswich Borough / Suffolk Coastal District, including the Ipswich Policy Area (Figure 2), because

- *“the [RSS] policies will not result in any development;*
- *the policies make provision for development, but the exact location is to be selected following the consideration of options in lower tier plans (i.e. by local development plans, programmes and strategies);*
- *the policy concentrates the development in urban areas away from Natura 2000 and Ramsar sites;*
- *the policies specifically state that development should avoid any adverse affects on the integrity of Natura 2000 or Ramsar sites; and*
- *Policy ENV3 states that local planning authorities should ‘ensure that.....development does not have adverse affects on the integrity of sites of European or international importance’*
- *Generic provisions have been made within the policies in the RSS (e.g. ENV3) supported by more specific provisions to ensure that the integrity of Natura 2000 and Ramsar sites are not adversely affected by development.”*

6.2.41 The RSS assessment did not specifically consider the increased number of visitors to European sites from an increased population, regardless of the exact location of the housing growth.

<sup>27</sup> Fulton (2006) East of England Regional Spatial Strategy: Habitats Regulations Assessment. ERM, for Government Office for the East of England.

- 6.2.42 A second Appropriate Assessment of the Regional Spatial Strategy<sup>28</sup> assessed housing policies very briefly and concluded that there would be no affect upon the integrity of European sites. An example paragraph, assessing the impact of recreation on the Deben Estuary SPA, simply states *Policy HG1 aims to regenerate the sub-region and provide for major housing growth at the Key Centres of Colchester and Ipswich, providing for 20,000 net additional dwellings in the Ipswich Policy Area. This will lead to increased recreational access to the surrounding area, including to the coast and coastal waters. It is not considered that there is potential for the increased level of recreational access to have an effect on the populations of the wintering Avocet and Dark-bellied Brent Goose that are the European site and Ramsar site international interest. The increase in recreational access is not predicted to be at an intensity or coincide with the locations where adverse effects will occur. We concluded that policy HG1 (and SS3 and H1) would have no adverse effect on the integrity of the Deben Estuary SPA and Ramsar Site bird interest.*
- 6.2.43 It is considered that the Appropriate Assessment of the Regional Spatial Strategy did not assess the effects of its housing provision to the level of detail necessary at the current stage, which is why the conclusions differ.

### 6.3 Policy CS 13. Planning for jobs growth.

#### *Policy overview*

- 6.3.1 Policy CS13 sets the employment land to be allocated in Ipswich Borough over the period to 2025 and has other measures to encourage employment. Policy is

#### **Policy CS13 Planning for Jobs Growth**

**The Council will promote sustainable economic growth in Ipswich. It will encourage the provision of at least 18,000 jobs between 2001 and 2021 and 2025 by:**

- a. Allocating at least 30ha of land for employment development (in Use Classes B1, B2 and B8) through the IP-One Area Action Plan and Site Allocations and Policies development plan documents;**
- b. Protecting for employment uses existing employment areas, which will be identified through the IP-One Area Action Plan and Site Allocations and Policies development plan documents and on the proposals map;**
- c. Allocating land for other employment-generating uses including education development, health development and leisure development through the IP-One Area Action Plan and Site Allocations and Policies documents;**
- d. Allocating 16.7ha of land at the site of the former Cranes factory at Nacton Road as a strategic employment site, with the principal access taken from Ransomes Way. The site will be safeguarded for B1, B2 and B8 uses. Sui generis employment uses will only be permitted if they support Ipswich's regeneration or the growth of key sectors such as the creative arts or ICT;**
- e. Supporting the growth of University Campus Suffolk and Suffolk New College in order to raise skills and qualifications levels in the workforce; and**

<sup>28</sup> RPS (2007) Government Office for the East of England Draft Revision to Regional Spatial Strategy for the East of England: Secretary of State's Proposed Changes and Further Proposed Changes Report of the Habitats Directive Assessment (under the Habitats Regulations)

**f. Working with partners to ensure that coordinated action is taken to encourage sustainable economic growth, including direct intervention where necessary.**

6.3.2 The need for one strategic employment site is identified by CS13d and is allocated at the site of the former Cranes factory at Nacton Road, which covers 16.7ha. The allocation is shown on the Key Diagram, as shown in Appendix 6.

*Impact on European sites*

6.3.3 Policy CS13a and CS13c states that other LDF Development Plan Documents, specifically the IP-One Area Action Plan and the Site Allocations and Policies document, will allocate land for employment development and other commercial development. There is no indication or suggestion that these developments will be allocated in such places that would have an adverse affect upon the integrity of any European site. Furthermore, the Development Plan Documents themselves will be subject to Appropriate Assessment. With no suggestion of a harmful allocation, and further assessment of future allocations required, it is ascertained that policy CS13a will not have an adverse affect on the integrity of any European site.

6.3.4 Policy CS13b maintains existing employment areas. There is no evidence from Natural England condition assessments (see Section 5.2 and Appendix 3) that existing employment areas are having an adverse affect upon the integrity of any European sites. There are no reports which Ipswich Borough Council or their consultants are aware of, and no anecdotal evidence, to suggest that existing employment areas are having an adverse affect upon the integrity of any European sites. It is ascertained that policy CS13b will not have an adverse affect on the integrity of any European site.

6.3.5 Policy CS13d allocates the former Cranes factory in Nacton Road, Ipswich, for employment development. There is no evidence, in Natural England condition assessments or anecdotally, that the former Cranes factory had an adverse affect upon the integrity of any European site, nor evidence that factory closure removed such an affect.

6.3.6 The former factory is approximately 2km from the nearest European site, which is Stour and Orwell Estuaries SPA. There is a significant amount of housing development, for example the Ravenswood development on the former Ipswich airport, and the A14 dual carriageway between the former factory and the SPA. The proximity of housing will prevent any particularly noisy, polluting or other harmful industrial process from being developed. The distance from easily accessible parts of the SPA, such as Bridge Wood, indicates that it is unlikely that a significant increase of visitors to Bridge Wood, for example workers enjoying a lunch break, will result.

6.3.7 It is considered that construction of new employment facilities, and their operation, at such a distance and with the proximity of housing, will have no impact on the Stour and Orwell Estuaries SPA or any other European site. It is ascertained that policy CS13b will not have an adverse affect on the integrity of any European site.

6.3.8 CS13e & f are social and/or aspirational policies and do not authorise or permit development or other new activities. This means that there is no development to assess. It is ascertained that policy CS13e & f will not have an adverse affect on the integrity of any European site.

*Conclusions*

6.3.9 The conclusion is that it is ascertained that Policy CS13 will not have an adverse affect on the integrity of any European site. No mitigation is required.

## **6.4 Policy CS16. Green infrastructure, sport and recreation**

*Policy overview*

6.4.1 Policy CS16 protects, enhances and extends the network of green space and recreation facilities in Ipswich. The policy is

**Policy CS16 Green Infrastructure, Sport and Recreation**

**The Council will protect, enhance and extend the network of green corridors, open spaces, sport and recreation facilities for the benefit of biodiversity, people and the management of local flood risk. It will do this by:**

- a. Requiring all developments to contribute to the provision of open space according to the Borough's standards, identified strategic needs and existing deficits or surpluses in an area;**
- b. Requiring major new developments to include on site green spaces that where possible create a network with existing provision;**
- c. Supporting proposals or activities that protect, enhance or extend open spaces and sport and recreation facilities;**
- d. Working with partners to prepare and implement management plans for green spaces;**
- e. Supporting the Greenways Project in working with communities and volunteers to manage green corridors in Ipswich;**
- f. Working with partners to improve green infrastructure provision and link radial green corridors with a publicly accessible green rim around Ipswich;**
- g. Seeking to work with partners to provide a new country park in the urban fringe of north eastern Ipswich and put in place plans to manage visitors to the countryside close to the Orwell Estuary;**
- h. Promoting improved access to existing facilities where appropriate, e.g. through Building Schools for the Future; and**
- i. Reviewing the town's estate of sports facilities to consider how they can best meet the needs of a growing population**

**The IP-One Area Action Plan and Site Allocations and Policies development plan document will identify open spaces, sport and recreation facilities and green corridors.**

- 6.4.2 No allocations for new green space are made; these allocations will be in the IP-One Area Action Plan and the Site Allocations and Policies development plan document.
- 6.4.3 The strategic green space network, including green corridors, is shown on the Key Diagram, as shown in Appendix 6.
- Impact on European sites in the wider area*
- 6.4.4 The impacts of this policy could potentially positive or negative.
- 6.4.5 The positive impacts of the policy would be to attract visitors for formal recreation, thus reducing visitor pressure on European sites. For example, someone might prefer to take a dog for a walk in a local new green space rather than driving to a heath or estuary for at least some occasions.
- 6.4.6 The standards for green space are set out in Appendix 4 of the Proposed Submission Core Strategy and Policies. These set a minimum size of natural / semi-natural green space of 0.05ha and a quantity standard of 1.4ha per 1000 population, within a 15 minute walk time. There are no standards felt to be appropriate for green corridors.
- 6.4.7 To attract people away from using European sites for their recreation, it is suggested (see Section 5.2) that a 2.2km walk through natural greenspace would be required within easy reach

of new development. New walking alternatives of lesser distance are likely to be perceived less favourably than continuation of use of European sites, by many people.

6.4.8 Policy CS16b requires major new developments to include on site green spaces, to create a network 'where possible' with existing. At a strategic level, it is considered that this is a moderately strong policy to create on-site walks through greenspace for new developments. Following an earlier draft of this appropriate assessment, the need for mitigation for impacts of increased housing (see Section 7) were recognised. An earlier draft of this policy was amended to include, at a strategic level, a considerable amount of mitigation. Policy CS16 paragraphs b, d, f, & g all include elements of mitigation. In particular, the inclusion of the need for a new Country Park and visitor management in the countryside close to the Orwell Estuary is a direct iterative response to issues raised in this assessment. However, 'seeking' to provide does not give full confidence that this will be implemented.

6.4.9 It is considered that the policy when implemented will contribute significantly to mitigation needs but does not give full mitigation as the commitment to implementation is not complete.

*Impact on specific nearby European sites alone or in combination*

6.4.10 The negative impacts of this policy could potentially be the allocation of greenspace for new or intensified recreation on land forming, or close to, a European site. For example, that recreation could disturb birds which contribute to the SPA qualifying interest, or vegetation could be eroded by trampling. Marina development could be considered as a recreation facility, which may have an effect on the Orwell estuary.

6.4.11 However, this Policy does not allocate land for recreational facilities, either as green space for recreation or built developments such as marinas or sports pitches. The allocations are to be made in the IP-One Area Action Plan document and Site Allocations document. This Policy in itself therefore does not give rise to any harmful impacts on any European site, and the IP-One Area Action Plan and the Site Allocations and Policies development plan document will themselves require an Appropriate Assessment. The use for these green spaces is likely to include recreation, but the amount of recreation and the balance between recreation and nature conservation is not prescribed here. The principles of changes to the green space etc in the policy are not in themselves harmful.

6.4.12 No new marinas are suggested in the Preferred Options (November 2007) IP-One Area Action Plan so the Policy CS16 does not refer to any marina proposal. No further assessment of marinas is required for the Proposed Submission Core Strategy and Policy.

*Conclusion*

6.4.13 The conclusion is that it is ascertained that Policy CS16 will not have an adverse affect on the integrity of any European site. It acts as mitigation for impacts of housing.

## 6.5 Policy CS18. Strategic Flood Defence

*Policy overview*

6.5.1 Ipswich is partly in the floodplain of the Orwell Estuary, and the estuary is constrained by walls where it passes through the town. However, there remains a risk of flooding, from existing walls overtopping and in particular when there is a tidal surge (a very high tide in the North Sea entering the estuary, often exacerbated by low air pressure and larger than normal flows down the river). Prevention of flooding is a function of Environment Agency. However, the Proposed Submission Core Strategy seeks to support Environment Agency in their flood defence function.

6.5.2 Policy CS18 is

### **Policy CS18**

**The Council will continue to work with partners to implement the Ipswich Flood Defence Management Strategy as a key piece of infrastructure needed to support regeneration in Ipswich.**



**This policy links closely with policy CS17 as the flood defences are a key piece of strategic infrastructure needed to enable the continued growth and regeneration of the town.**

- 6.5.3 The Ipswich Flood Defence Management Strategy<sup>29</sup> is being promoted by Environment Agency. The key works to be carried out will be raising and refurbishing of estuary walls in their current location, and construction of a tidal surge barrier. The tidal surge barrier is proposed to be located at The New Cut, upstream of the Stour and Orwell Estuaries SPA.
- 6.5.4 The tidal surge barrier as proposed will be a flap which lies flat on the estuary bed until a tidal surge is occurring. At that time, when Ipswich is at risk of flooding, the flap will be raised, which will prevent tidal water from passing upstream. The impact on the SPA potentially could be that mudflats are covered by water for a longer time than they would otherwise be, reducing the mudflat availability for feeding birds. However, the tidal flap will only operate when the tide is very high and the mudflats will be naturally covered, and it will not prevent the tide from going down and exposing the mud. There will be some river water retained when the barrier is up, which would mean that lowering the barrier might release retained water and cause a short delay in exposing mudflats. It is expected that the barrier will be closed for a maximum of nine hours on any one occasion<sup>30</sup>. The impacts on mudflat coverage are low; it is noted that the barrier does not increase levels in the tidal estuary itself. Any impact on mudflats in the SPA is considered at this stage to be insignificant.

*Impact on European sites – Stour and Orwell Estuaries SPA*

- 6.5.5 The tidal surge barrier construction is approximately 2km upstream of the Stour and Orwell Estuaries SPA so there is unlikely to be any disturbance of birds within the SPA itself. However, there is a possibility that there will be limited disturbance of birds which contribute to the SPA qualifying features, but are temporarily upstream of the SPA. This is expected to be small as the estuary is constrained at this point by existing walls and the amount of exposed mudflat, or saltmarsh, is small.
- 6.5.6 Environment Agency is responsible for an Appropriate Assessment for the project, under regulation 48 of the Conservation (Natural Habitats etc) Regulations 1994. As a competent authority under the Regulations, they will not be able to implement the project unless the Appropriate Assessment ascertains no adverse affect upon the integrity of the European site (or that there is over-riding public interest and no alternatives. At the current time (July 2009) Environment Agency is in the process of undertaking their Appropriate Assessment, and it is expected that no adverse affect on integrity will be ascertained. This modelling will look at the construction impacts in more detail, as well as modelling operational impacts on the SPA, for example by looking at water levels with and without operation of the barrier.
- 6.5.7 The tidal surge barrier will require a Transport and Works Act application to Parliament, instead of a planning application to Ipswich Borough. The Proposed Submission Core Strategy and Policies therefore does not allocate land for the tidal surge barrier, and does not provide permission for the barrier.
- 6.5.8 The estuary walls will remain in their same location, so there will be no further restriction of the width of the estuary which would have caused an adverse affect on the integrity of the SPA.

*Conclusions*

- 6.5.9 It is considered unlikely that there will be an adverse affect upon the integrity of the Stour and Orwell Estuaries SPA from the construction and operation of the tidal surge barrier. 'Unlikely' is not strong enough to 'ascertain' no adverse affect so in itself is not adequate to satisfy the requirements of the Habitats Regulations (see Section 1.2 above). However, the requirement for Environment Agency to carry out a project level Appropriate Assessment, and their position

<sup>29</sup> Environment Agency (2005) Ipswich Flood Defence Management Strategy. also see the Ipswich Borough Council Draft Strategic Flood Risk Assessment, November 2007, and Environment Agency (2009) Ipswich Flood Defence Management Strategy: Tidal Barrier Scoping Consultation Document June 2009.

<sup>30</sup> Environment Agency, Ipswich Tidal Barrier Modelling Report April 2009

as a competent authority prevents them from implementing their scheme unless no adverse affect upon the integrity of the Stour and Orwell SPA is ascertained.

- 6.5.10 Given this safeguard, and Policy CS18 not being part of the decision-making process for the tidal surge barrier, it is acceptable to ascertain that Policy CS18 will not have an adverse affect on the integrity of any European site. No mitigation is required.

## 6.6 Policy CS20. East-west transport capacity.

### *Policy overview*

- 6.6.1 There are serious concerns about highway capacity in the town centre particularly within the Star Lane area. These capacity implications are closely linked to issues associated with the wider transport network - including the A14 and the Orwell Bridge. A key objective of the Council is to improve the pedestrian and cycle accessibility between key nodes in the town centre, two of which are the shopping core and the Waterfront. To do this changes are needed to the Star Lane Gyratory to make it less of a barrier to north-south pedestrian movement and enable the proper integration of the Waterfront with the historic core. Furthermore, the Island site in the Wet Dock is a key site in relation to the Waterfront regeneration. However, access to the Island is limited and therefore some form of additional access would be needed to bring the site forward for redevelopment.
- 6.6.2 The policy is

### **Policy CS20 East-West Transport Capacity**

**The Council supports in principle the 'Ipswich: Transport Fit for the 21st Century' scheme. This will improve bus station provision, passenger information, shuttle bus provision and pedestrian links between the Central Shopping Area, the railway station and Waterfront.**

**In the longer term, the Council also supports the provision of significant alternative east-west transport capacity. To this end, it will make a case for a Wet Dock Crossing through a review of the local transport plan, in order to:**

- a. Enable improvements to pedestrian and cycle routes between the Waterfront and the historic core of the town by subsequently reducing capacity on the Star Lane Gyratory;**
- b. Enable the development of the Island Site for which access improvements, but not necessarily a Wet Dock Crossing, would be a prerequisite;**
- c. Enable the linking of high quality walking and cycling routes around the entire Waterfront area; and**
- d. Provide an alternative route for east-west movements to relieve congestion and air quality issues in the Gyratory, which in turn will support the town's economy and health.**

**In addition to this, the Council will actively encourage key partners to investigate the possibility of a northern by pass, to address the issue of central east-west movement, as well as issues associated with the capacity of the A14, particularly around the Orwell Bridge.**

**In the short term the Council will look to close the Waterfront route to general traffic, maintaining access only for pick up/drop off and the shuttle bus.**

- 6.6.3 It was agreed by Natural England (Section 4) that the Wet Dock Crossing would require assessment. The Wet Dock Crossing, which will enable traffic to cross the Orwell Estuary within central Ipswich, is shown on the Key Diagram in Appendix 6.

*Impact on European sites – Stour and Orwell Estuaries SPA*

- 6.6.4 Potential impacts could be construction disturbance and pollution, and post-construction disturbance to birds which form part of the Stour and Orwell Estuaries SPA.
- 6.6.5 The crossing is approximately 2km upstream of the SPA, so it is considered that there will be no disturbance effects from the construction. The possibility of a spill during construction is very low, as contractors generally work to high standards of environmental management, and there are no known unusual features with the construction. It is considered that there will be no harmful impacts from the construction process.
- 6.6.6 The area of the proposed crossing is in an area already receiving significant levels of disturbance, within central Ipswich. No surveys of birds in the area have been carried out, as far as is known, but it is likely that relatively few birds are present. It is considered that traffic using the crossing (pedestrian and / or vehicular) is unlikely to disturb any significant numbers of birds which contribute to the qualifying interest of the Stour and Orwell Estuaries SPA.

*Conclusion*

- 6.6.7 It is ascertained that Policy CS25 will not have an adverse affect on the integrity of any European site. No mitigation is required.

**6.7 Policy DC4. Development and flood risk***Policy overview*

- 6.7.1 The drainage system in Ipswich is close to capacity<sup>31</sup>. Surface water run-off and foul sewage share the same pipes to the sewage works, and when there is heavy rain there is a high risk that sewage works cannot cope and raw sewage may be discharged to the Orwell estuary. In recent years a 25,000m<sup>3</sup> storage facility has been installed beneath Ipswich has increased capacity, so the discharge of untreated sewage will occur less frequently. However, the proposed housing provision will increase the amount of sewage produced.
- 6.7.2 The policy is

**Policy DC4: Development and flood risk**

**Development will only be approved where it can be demonstrated that the proposal satisfies all the following criteria:**

- a. **It reduces the overall risk of flooding in the area through the layout and form of the development and appropriate application of Sustainable Urban Drainage Systems (SUDS);**
- b. **It will be adequately protected from flooding in accordance with adopted standards wherever practicable;**
- c. **It is and will remain safe for people for the life time of the development; and**
- d. **It includes water efficiency measures such as rainwater harvesting, or use of local land drainage water where practicable.**

*Impact on European sites – Stour and Orwell Estuaries SPA*

- 6.7.3 Surface water run-off is not likely to be significantly increased from the proposed housing and employment land provisions. Much of the allocation is on previously developed land, and these areas generally have no SUDS in place. SUDS can be fitted to new developments on brownfield sites, for example flats could have green roofs or underground storage and slow-release tanks, thus reducing rates of run-off. It is likely that there will be no significant increases in untreated surface run-off reaching the Orwell estuary from the proposed new developments.
- 6.7.4 Surface water run-off and foul sewage from possible housing growth in the north of the Borough may be pumped west to the River Gipping, rather than being drained to the south into

<sup>31</sup> Haven Gateway Water Cycle Study Stage 1 Report. Haven Gateway Partnership, 28 May 2008

the Orwell Estuary. It would then be treated and made available for abstraction for potable water.

6.7.5 Raw sewage promotes a localised greater abundance of worms in estuarine mudflats, and this greater abundance of worms is beneficial to wading bird populations<sup>32</sup>. Cliff Quay sewage works in Ipswich provided only crude treatment of sewage before 1995, when it was upgraded to primary treatment. Following the upgrade in treatment, the wading bird population in the Orwell Estuary fell, thought to be a consequence of the removal of raw sewage from the estuary<sup>33,34</sup>.

6.7.6 An increased risk of raw sewage entering the Orwell Estuary would therefore be seen as beneficial to the SPA, as it would enhance feeding opportunities for birds as worm populations respond.

#### *Conclusion*

6.7.7 The conclusion is that it is ascertained that Policy DC4 will not have an adverse affect on the integrity of any European site. No mitigation is required.

## **6.8 Policy DC15. Travel demand management**

### *Policy overview*

6.8.1 The main issue identified with travel would be an increased production of nitrogen oxides, which could have a fertilising effect upon European sites.

6.8.2 The policy is

#### **Policy DC15 Travel Demand Management**

**In proposals for the development of 10 or more dwellings or 1,000 square metres or more of non-residential floorspace, or where more than 50 people will be employed, the Council will require:**

- **A transport assessment to be undertaken including an assessment of the impact on the local highway network with appropriate mitigation measures secured by a planning obligation;**
- **Where likely to have an impact on or be located in an Air Quality Management Area or other sensitive area, an assessment of the air quality impacts of the development with appropriate mitigation measures proposed as necessary;**
- **A travel plan outlining how the development will ensure high levels of cycling and walking together with public transport use;**
- **The minimisation of the use and ownership of the car by providing an integrated solution which could include car clubs, well-designed cycle and pedestrian routes, high quality secure cycle storage and good access to public transport within 200 metres of the development; and**
- **For non-residential developments, high quality shower facilities and lockers to ensure that a modal shift can occur**

#### *Impact on European sites – Stour and Orwell Estuaries SPA*

6.8.3 Natural England advice (Section 4.10) was to develop an approach which requires the submission of a travel assessment of all major developments, and an assessment of air quality

<sup>32</sup> for example, see [www.ukmarinesac.org/activities/water-quality/wq9\\_4.htm](http://www.ukmarinesac.org/activities/water-quality/wq9_4.htm)

<sup>33</sup> Effects of reductions in organic and nutrient loading on bird populations in estuaries and coastal waters of England and Wales. Phase 2 report. English Nature Research Report no 586, 2003.

<sup>34</sup> Burton, Jones, Austin, Watt, Rehfish & Hutchings (2004) Effects of reductions in organic and nutrient loading on bird populations in estuaries and coastal waters of England and Wales. BTO research report no. 326.

impact of the development with appropriate mitigation measures as necessary. It is necessary to consider whether this will mitigate any potential impact on the Stour and Orwell Estuaries SPA and Ramsar site.

- 6.8.4 An increase in population of 13% (Section 5) in Ipswich Borough could be treated crudely as a potential 13% increase in nitrogen dioxides from increased travel. However, much of the new housing in central Ipswich is close to commercial and retail centres, and it is likely that average travel to work and travel to shop distances would be below average for the population of Ipswich as a whole.
- 6.8.5 The Orwell Estuary is not currently in unfavourable condition for reasons of air pollution (Appendix 3), which is consistent with air pollution levels. The Air Pollution Information System ([www.apis.ac.uk](http://www.apis.ac.uk)) was used to generate a simple site-based assessment of the current nitrogen oxide deposition at a point in the Orwell Estuary SSSI close to Ipswich, and compare with the threshold above which damage may occur to saltmarsh, the most appropriate habitat from the choice available. The assessment is a broad indication of the likely pollutant impact, based on national maps of air pollutant exposure and Critical Loads or Critical Levels. Atmospheric deposition is compared with the most relevant critical loads, while air concentrations are compared with critical levels. This process of using nationally available mapped data and habitat specific values is subject to a series of uncertainties. These include:
- Maps of pollutant air concentrations and deposition are generated by a combination of models and measurements. If the queried location is close to known large emission sources, then this tool should be used with caution as it may underestimate deposition or concentrations.
  - Maps of pollutant concentration and deposition are mostly available at a 5km grid resolution. For many pollutants there is real sub-grid variability which is not revealed in 5km averages. The uncertainties are particularly large for the concentrations of primary pollutants e.g. NH<sub>3</sub>, NO<sub>x</sub> and SO<sub>2</sub>.
  - The habitat specific critical loads and levels data are only available for a limited number of habitat types. In this case the most similar habitat is assigned to the habitat being considered. There are, therefore, uncertainties in both the best estimates of the critical loads and levels and in the assignment of habitats.
- 6.8.6 The APIS data (Appendix 7) shows that the Orwell Estuary saltmarsh is well below the critical load for nitrogen deposition, with a modelled deposition of 19.3kg/ha/year, compared to a threshold value of 30 – 40kg/ha/year.
- 6.8.7 A crude 13% uplift in deposition (19.3kg/ha/year x 1.13) would bring the deposition to 21.8kg/ha/year. However, nitrogen deposition is declining in Ipswich, as it is for the UK. The concentration of NO<sub>x</sub> in Ipswich is expected to decline by about 30% from 2001 to 2010, according to the UK Air Quality Archive<sup>35</sup> and demonstrated in Appendix 8.
- 6.8.8 Development within Ipswich may slow the decline in nitrogen deposition, but as it is already below harmful levels, the slowing of decline will not have any impact upon the Stour and Orwell Estuaries SPA.
- 6.8.9 There are no comparable threshold values for mudflats. Signs of nitrogen deposition might include increased algal growth, leading to greater food abundance for invertebrates that eat algae (such as *Hydrobia* snails, which in turn would provide extra food abundance for mudflat birds. Estuaries are generally robust at dealing with air pollution, because the tide twice a day flushes out any deposits.
- Conclusion*
- 6.8.10 The conclusion is that it is ascertained that Policy DC15 will not have an adverse affect on the integrity of any European site. No mitigation is required.

<sup>35</sup> [www.airquality.co.uk](http://www.airquality.co.uk), a UK Government website. Accessed June 2009.

## 6.9 Policy DC32 Conserving Local Natural and Geological Interest

### *Policy overview*

- 6.9.1 This policy protects sites not otherwise protected by legislation, from harmful impacts of development. The policy is

#### **DC 32 Conserving Local Natural and Geological Interest**

**The Council will seek to conserve the nature conservation and geodiversity interest of County Wildlife Sites, Local Wildlife Sites and RIGGS identified on the Proposals Map, and Suffolk Biodiversity Action Plan species and habitats, by controlling the type and intensity of development. The Council will not grant planning permission for development which would be likely to cause net loss after mitigation and compensation of the relevant biodiversity or geodiversity interest, or protected BAP species, in terms of population size or loss of extent of BAP habitat or feature for which the site was designated.**

### *Impact on European sites*

- 6.9.2 This policy does not have any implications for European sites, for example there is no allocation of development in relation to European sites and there is no implication that development will be diverted from a County Wildlife Site, for example, to a European site.

### *Conclusion*

- 6.9.3 The conclusion is that it is ascertained that this policy will not have an adverse affect on the integrity of any European site. No mitigation is required.

## 7 Mitigation measures

### 7.1 Introduction to mitigation

- 7.1.1 The aim of mitigation is to reduce impacts until they no longer have an adverse affect upon the integrity of European sites. The preferred solution is to avoid proposing elements of the plan which would have an adverse affect, followed by a solution to permit the impacts but carry out measures which will reduce the impacts to an acceptable level.
- 7.1.2 The assessment in Section 6 above showed that there was no adverse affect upon the integrity of any European sites for some policies and therefore no mitigation is necessary. These policies are
- CS13 The number of jobs to be planned for
  - CS16 Green infrastructure, sport and recreation
  - CS18 Strategic flood defence
  - CS20 East-west transport capacity
  - DC4 Development and flood risk
  - DC14 Travel demand management
  - Policy DC32 Conserving Local Nature Conservation and Geology Interest
  - Other policies (RL4, T1, T8, T20).
- 7.1.3 There were three policies identified in Section 6 above for which it could not be ascertained that there would be no adverse affect upon the integrity of Alde-Ore Estuary SPA, Alde-Ore and Butley SAC, Deben Estuary SPA, Minsmere - Walberswick Heaths and Marshes SAC, Minsmere – Walberswick SPA, Sandlings SPA, and Stour and Orwell Estuaries SPA. These were Policy CS7 'The amount of housing required', Policy CS9 'Previously developed land target', and Policy CS10 'Ipswich northern fringe'. The impact was due to a predicted increase of visitors to all those European sites, in addition to a predicted increase to Bridge Wood and Nacton Picnic Site. The impact included an affect in combination with development in Suffolk Coastal District.
- 7.1.4 Mitigation for policies CS7, CS9 and CS10 is given in Section 7.2 below.

### 7.2 Mitigation for Policy CS 7, The amount of housing required, CS9, Previously developed land target and CS10 Ipswich northern fringe

- 7.2.1 The principle of mitigation for these policies is to reduce demand for visits to the European sites at risk of impact, and to manage existing sites with a specific high risk to re-distribute visitors from sensitive areas.
- 7.2.2 Detailed aims of such mitigation are
- To prevent an increase in visitor number to all European sites across the Suffolk Coast and Heaths AONB
  - To prevent an increase in visitor numbers to specific parts of European sites likely to be particularly affected – Orwell Estuary at Orwell Country Park
- 7.2.3 Detailed objectives are
- To provide new locations for countryside recreation, especially dog walking, for residents of existing and proposed housing, as a preferred alternative to visiting European sites
  - To improve visitor infrastructure and management, including wardening, on existing sites to reduce the impact of increased visitors
  - To quantify reductions in visitor harm achieved by mitigation projects

*Mitigation for Stour and Orwell Estuaries SPA – Bridge Wood*

- 7.2.4 There are a number of measures which are required to prevent the increase in visitor numbers, and to reduce the impact of existing visitors on the SPA adjacent to Bridge Wood, which is part of Orwell Country Park. These measures are realistic and achievable, and necessary. They include altering management of Bridge Wood, with provision of alternatives so that some people will choose to go elsewhere. Legal issues are also considered.
- 7.2.5 Bridge Wood itself is primarily used to access the estuary, for dog walking, childrens' play, bait digging, social gatherings, etc. Management measures can be implemented to alter the focus of recreational activities, and to help ensure that visitors behave in a manner that reduces impact on estuary birds
- provide a path network that includes a destination point away from the estuary, for example a water feature or sculpture set in a glade, or a raised viewpoint to the estuary, with all-weather seating and children's play facility. For example, a heathland walk could be created under the route of electricity cables, which are shortly to be removed as redundant. This will provide good visitor experiences and mean that some existing visitors and future visitors will not feel a need to visit the estuary shore.
  - Remove the estuary shore from the possibilities of a circular walk, so people who prefer a circular walk will choose to use woodland walks instead.
  - Better integration of Bridge Wood with Piper's Vale, improving footpath links (including signage) on a path north of the A14 so dog walkers can have a long walk away from the estuary. Recent construction of a car park north of the A14 on the access road to Bridge Wood is helpful.
  - Increased wardening on site, possibly with a warden's hut or visitor centre, so that Country Park staff can interact with visitors and encourage appropriate behaviour.
  - Improved interpretation materials, including signage and leaflets, to help visitors understand the impacts they cause and how they can reduce their impacts.
  - Consider using signage to create a psychological barrier to dogs ("all dogs on leads beyond here because...") possibly with a symbolic gateway feature.
  - Creation of a 'coast path', with an easy walking surface, which moves away from the shore at certain points and reduces visibility of people to birds.
- 7.2.6 Natural England have got the power under Section 28 of the Conservation (Natural Habitats etc) Regulations 1994 to make bylaws for prohibiting or restricting the entry into, or movement within, the site of persons, vehicles, boats and animals. If Natural England believes that disturbance is a serious issue at Bridge Wood they could make such bylaws to demonstrate that point. Omission of bylaws to restrict dogs, for example, indicates to the general public that unrestricted dogs are not causing any impact. Although bylaws are unlikely to be actively enforced by Natural England, it provides a strong educational message and emphasises to visitors the reasons for the management activities in the above paragraph.
- 7.2.7 An alternative river access can be provided for, especially, the residents within central Ipswich. At present there is a river valley path from central Ipswich upstream alongside the River Gipping to Needham Market and beyond. This path has been improved over the previous few years but further improvements can be made, in terms of infrastructure, attractiveness, and promotion, to encourage greater use<sup>36</sup>. This will be a recreational facility that is easy to access from central Ipswich and provide a good countryside experience, thus relieving visitor pressure on other sites.
- 7.2.8 The number of visitors at Bridge Wood, should be counted at regular intervals, e.g. on key dates throughout the year, starting as soon as possible. The count design should allow information to be collected regarding total numbers, and the numbers visiting the estuary. This

<sup>36</sup> Ipswich Borough Council Greenways Project, James Baker, pers comm



will allow monitoring of the effectiveness of the mitigation works and allow changes to mitigation if necessary.

*Mitigation for European sites across the AONB*

- 7.2.9 Mitigation for an increase in visitors to European sites across the Suffolk Coast and Heaths AONB is based on providing alternative recreational choices for residents (existing and proposed) of Ipswich Borough and Suffolk Coastal District. Alternative recreation options should be located at convenient points for many users, and offer facilities sufficient to attract some people from European sites.
- 7.2.10 A new Country Park is proposed for a location to the north or north-east of Ipswich as mitigation for future housing development. A new Country Park has been under discussion for some time, and was suggested by the Haven Gateway Green Infrastructure Project<sup>37</sup> independently of this Appropriate Assessment, in order to provide adequate green space for the population of Ipswich, particularly the northern part of the Borough. A suitable location would be in the Martlesham area, accessible from major routes out of Ipswich, Woodbridge, and Felixstowe and therefore providing a facility for people from those towns.
- 7.2.11 The new Country Park should be free to enter, contain areas for dog walking, children's play, and possibly more formal recreation such as orienteering, events such as Country Fairs, and a ranger service. A mixture of habitats including grassland, woodland and open water would make it more attractive and would also provide opportunities for delivery of BAP targets.
- 7.2.12 As the new Country Park is necessary for the 'in-combination' impact of development within Ipswich Borough and Suffolk Coastal, it is appropriate that the arrangements for its implementation are shared equally by Ipswich Borough Council and Suffolk Coastal District Council, and could at least in part be funded by a tariff on new housing.
- 7.2.13 It is expected that the new Country Park will form a substantial part of the mitigation requirements for development within both Ipswich Borough and Suffolk Coastal District. However, evidence from Site Manager's surveys (Section 5.5), the Stour and Orwell Estuaries SPA disturbance report<sup>38</sup> discussed in 6.2 above, and studies of heathland in Dorset (see 6.2 above) indicate that there may still be some residual disturbance of birds, probably caused by local people engaging in low-key recreational activities on European sites near their homes, such as dog-walking. These people would not necessarily always be attracted to Country Parks. This residual disturbance would be an impact referable in particular to the aggregation of smaller provisions across Suffolk Coastal District.
- 7.2.14 Mitigation across European sites within the Suffolk Coast and Heaths AONB requires a programme of
- identifying key sites where visitor pressure is currently, or close to, causing harm
  - identifying the origin of visitors to those identified key sites
  - writing and implementing a visitor management plan for key sites without such a plan, or revising existing plans, to reduce visitor impact. Reduction in visitor impact might mean changes to visitor infrastructure (e.g. car parks, paths), new or revised interpretation, wardening, provision of alternative recreation opportunities in less sensitive locations, etc, bylaws, identification of parts of sites where recreation will not be encouraged, etc.
  - A monitoring programme, to determine visitor numbers and allow the impact of the visitor numbers to be identified, throughout time.
- 7.2.15 The implementation body for this exercise is to be decided. The Suffolk Coast and Heaths Unit would be in a good position to carry this out, as they have an AONB-wide role, but others such as Suffolk County Council (e.g. Rights of Way Improvement Plan, Open Access), Natural England, Suffolk Coastal District Council, and the Sandlings Project would have an important

<sup>37</sup> available at <http://www.suffolkcoastal.gov.uk/yourdistrict/planning/review/evidence/studies/default.htm>

<sup>38</sup> Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit

role. However, it is expected that funding should be directly related to housing provision, and at least in part funded for example by a tariff on new housing.

- 7.2.16 The mitigation proposals are consistent with the Haven Gateway Green Infrastructure Strategy<sup>39</sup>.

### 7.3 Mitigation conclusions

- 7.3.1 It is considered that, if the mitigation in Section 7.2 is implemented to suitable standards, the impacts of additional housing provisions in Policy CS7 / CS9, alone or in combination with provision in the Suffolk Coastal District Core Strategy and Development Management Policies, will be reduced to an insignificant level. It is ascertained that, with the proposed mitigation, Policy CS7 / CS9 will have no adverse affect upon the integrity of any European site.
- 7.3.2 The timing of mitigation should be related to the speed of housing provision. Different parts of the mitigation can be implemented at different speeds; for example improvements to visitor facilities at Bridge Wood and any other parts of Orwell Country Park can be initiated reasonably quickly, whilst it will take a little longer to establish a new Country Park. However, the mitigation will need to be complete by the end of the plan period.
- 7.3.3 There is a reasonable prospect of the mitigation being carried out, because of Policy CS16, which sets out the Council's support, at a strategic level, for appropriate greenspace management and provision. Policy CS16 does not go into detail about how the mitigation will be implemented, but gives confidence that it is being considered fully.
- 7.3.4 To give a firm commitment to implementing the policy, it is recommended that Policy CS16 is revised, to the following

#### **Policy CS16 Green Infrastructure, Sport and Recreation**

**The Council will protect, enhance and extend the network of green corridors, open spaces, sport and recreation facilities for the benefit of biodiversity and people. It will do this by:**

- a. **Requiring all developments to contribute to the provision of open space in accordance with the Borough's standards and identified strategic needs;**
- b. **Requiring major new developments to include on-site public open spaces and wildlife habitat. On-site provision must create a network or corridor with existing green infrastructure where such a network exists beyond the site boundaries;**
- c. **Supporting proposals or activities that protect, enhance or extend open spaces and sport and recreation facilities;**
- d. **Working with partners to prepare and implement management plans for green spaces; including visitor management plans for key parts of European sites within the Suffolk Coast and Heaths AONB to be completed by 2015, and a plan for Orwell Country Park that will result in a reduced impact upon birds in the Orwell Estuary**
- e. **Supporting the Greenways Project in working with communities and volunteers to manage green corridors in Ipswich;**
- f. **Working with partners to implement the recommendations of the Haven Gateway Green Infrastructure Strategy, specifically pursuing the aim of linking radial green corridors with a green rim around Ipswich;**

<sup>39</sup> The Landscape Partnership (2008) Haven Gateway Green Infrastructure Strategy.

- g. Working with partners to ensure the provision of a new country park in the urban fringe of north eastern Ipswich (e.g. within any Northern Fringe development (see Policy CS10);**
- h. Promoting improved access to existing facilities where appropriate, e.g. through Building Schools for the Future; and**
- i. Reviewing the town's estate of sports facilities to consider how they can best meet the needs of a growing population.**

**The IP-One Area Action Plan and Site Allocations and Policies development plan document will identify open spaces, sport and recreation facilities and green corridors.**

**This policy links closely to policy CS20, as part of the standard charge payable in association with new developments will relate to the provision of strategic green infrastructure for the town.**

7.3.5 It is also recommended that the explanatory text paragraph is also updated to clarify the position. Existing paragraph 8.185 says:

"One of the findings of the Appropriate Assessment of the Core Strategy and Policies plan was that the combined growth in Ipswich Borough and Suffolk Coastal District could harm the Special Protection Area in the Orwell Estuary. The report recommended the establishment of alternative destinations to draw visitors away from the Estuary, and the closer management of visitors in the vicinity of the Estuary".

7.3.6 The recommended revised paragraph 8.185 is:

"One of the findings of the Appropriate Assessment of the Core Strategy and Policies plan was that the combined growth in Ipswich Borough and Suffolk Coastal District could harm the Special Protection Area in the Orwell Estuary, and could contribute to harm to European nature conservation sites in the Suffolk Coast and Heaths AONB. Policy CS16, particularly CS16(d) and CS16(g), commit the Borough Council to working with others to ensure the necessary mitigation is provided so that harm is avoided."

## **8 Conclusions of the Appropriate Assessment**

### **8.1 Policy CS7 / CS9 / CS10**

- 8.1.1 It is not possible to ascertain that Proposed Submission Core Strategy and Policies (Policies CS7 / CS9 / CS10) has no adverse affect upon the integrity of a number of European sites, because of increased visitor pressure on those sites arising from the scale and broad location of housing growth.
- 8.1.2 However, it is considered that, if the mitigation in Section 7.2 is implemented to suitable standards, the impacts of additional housing provisions in Policies CS7 / CS9 / CS10, alone or in combination with provision in the Suffolk Coastal District Core Policy and Development Management Strategy, will be reduced to an insignificant level. It is ascertained that, with the proposed mitigation, Policies CS7 / CS9 / CS10 will have no adverse affect upon the integrity of any European site.

### **8.2 Individually assessed policies**

- 8.2.1 The assessment in Section 6 above showed that there was no adverse affect upon the integrity of any European sites for the policies
- CS13 The number of jobs to be planned for
  - CS16 Green infrastructure, sport and recreation
  - CS18 Strategic flood defence
  - CS20 East-west transport capacity
  - DC4 Development and flood risk
  - DC15 Travel demand management
  - Policy DC32 Conserving Local Nature Conservation and Geology Interest

### **8.3 All other policies**

- 8.3.1 All other policies in the Ipswich Borough Council Proposed Submission Core Strategy and Policies are not likely to have a significant effect on any European site.

### **8.4 Interactions between policies in this plan**

- 8.4.1 Policies have generally been assessed individually. It is possible that policies may interact, and a combination of policies may have a greater effect than separately. Interactions between policies have been fully considered and no further assessment or changes to conclusions are required.

### **8.5 In combination with plans from others**

- 8.5.1 It is considered that one plan may have an effect in combination, which is the Suffolk Coastal District Core Strategy and Development Management Policies. All the above conclusions take into account any in combination effects. No other plans are considered to have an effect in combination.

### **8.6 Final conclusion**

- 8.6.1 It is concluded that the Proposed Submission Core Strategy and Policies (Policies CS7 / CS9 / CS10) would be likely to have an adverse affect upon the integrity of a number of European sites, alone and in combination with the Suffolk Coastal District Core Strategy and Development Management Policies. Mitigation is proposed which, if implemented, would reduce the adverse affect to an insignificant level and would enable a conclusion that it can be ascertained that there will be no adverse affect upon the integrity of any European site.

## 9 Limitations to the assessment

### 9.1 The evidence base

- 9.1.1 The evidence base for the amount of visitors to European sites is poor, as data is very sparse. Available data was used but it was a snapshot survey during one summer and did not cover all European sites or take account of seasonal differences.
- 9.1.2 The evidence base for the impact of visitors on bird disturbance, and on population impacts of birds, is poor. There is one good disturbance report for the Stour and Orwell Estuaries SPA, but otherwise the evidence base is limited to studies on Dorset heathland, which is not necessarily completely comparable to the Sandlings heaths.
- 9.1.3 There is inconsistency in interpretation of current levels of disturbance / impact caused by visitors. Site managers who responded to a survey reported that current visitor levels were already causing damaging disturbance, but this was not reflected in current access policy. Natural England condition assessment comments indicate that visitor disturbance is not always taken into account, with comments largely based on vegetation characteristics or land management. Despite a 2007 report indicating damaging disturbance to parts of the Orwell Estuary, the condition assessments for these units have not been updated since the report was published.
- 9.1.4 This assessment is founded on the evidence base which is available but it is considered that a stronger evidence base would result in a more precise assessment, particularly in respect of the impacts of additional housing provision.

### 9.2 Further work needed

- 9.2.1 Understanding the impact of visitors on European sites is not solely an issue for this Appropriate Assessment, as site condition and visitor management would rely on this understanding, even in the absence of housing provision.
- 9.2.2 It is important to be able to identify those European sites where current disturbance is causing a reduction in bird numbers and loss of site condition. This requires a visitor survey, to identify numbers and their use of the site, and detailed work to relate visitor numbers to bird use of sites. The origin of visitors is also needed, to be able to identify uses made of the sites (e.g. local walks versus visitor destination) and determine appropriate mitigation.
- 9.2.3 It is suggested that Natural England is the appropriate lead for further studies, because it is the statutory regulator and adviser for these sites. However, there are a number of other nature conservation and/or recreation providers active in the area who should take an active part in supporting further work, including Suffolk Coast and Heaths Unit, Suffolk County Council (e.g. Rights of Way Improvement Plan, Open Access), Natural England, Suffolk Coastal District Council, the Sandlings Project and third sector nature conservation organisations. The Suffolk Coast and Heaths Unit may be the appropriate body to take forward implementation, particularly for parts of European sites not currently managed as nature reserves, or for off-site alternative provision of access facilities.
- 9.2.4 Representatives of users should be involved in the studies so that there is understanding of the need for mitigation and partnership working. Examples of user representatives might include Parish Councils, local Ramblers Association groups, etc.
- 9.2.5 The time and cost to carry out these studies, and plan implementation, is not to be underestimated.
- 9.2.6 Natural England have the power under Section 28 of the Conservation (Natural Habitats etc) Regulations 1994 to make bylaws for prohibiting or restricting the entry into, or movement within, the site of persons, vehicles, boats and animals. If Natural England believes that disturbance is a serious issue at Bridge Wood on the Orwell Estuary, or any other site within a European site, it should make such bylaws to demonstrate that point. Omission of bylaws to restrict dogs, for example, indicates to the general public that unrestricted dogs are not causing any impact. Although bylaws are unlikely to be actively enforced by Natural England, they

provide a strong educational message and emphasise to visitors the reasons for any management activities or restrictions.

## ***Part 2: Figures***







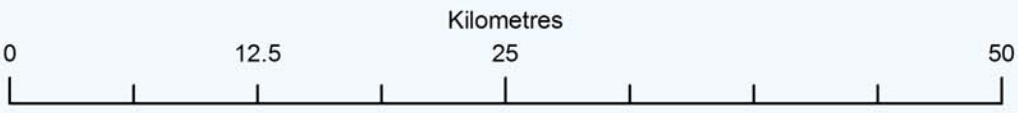
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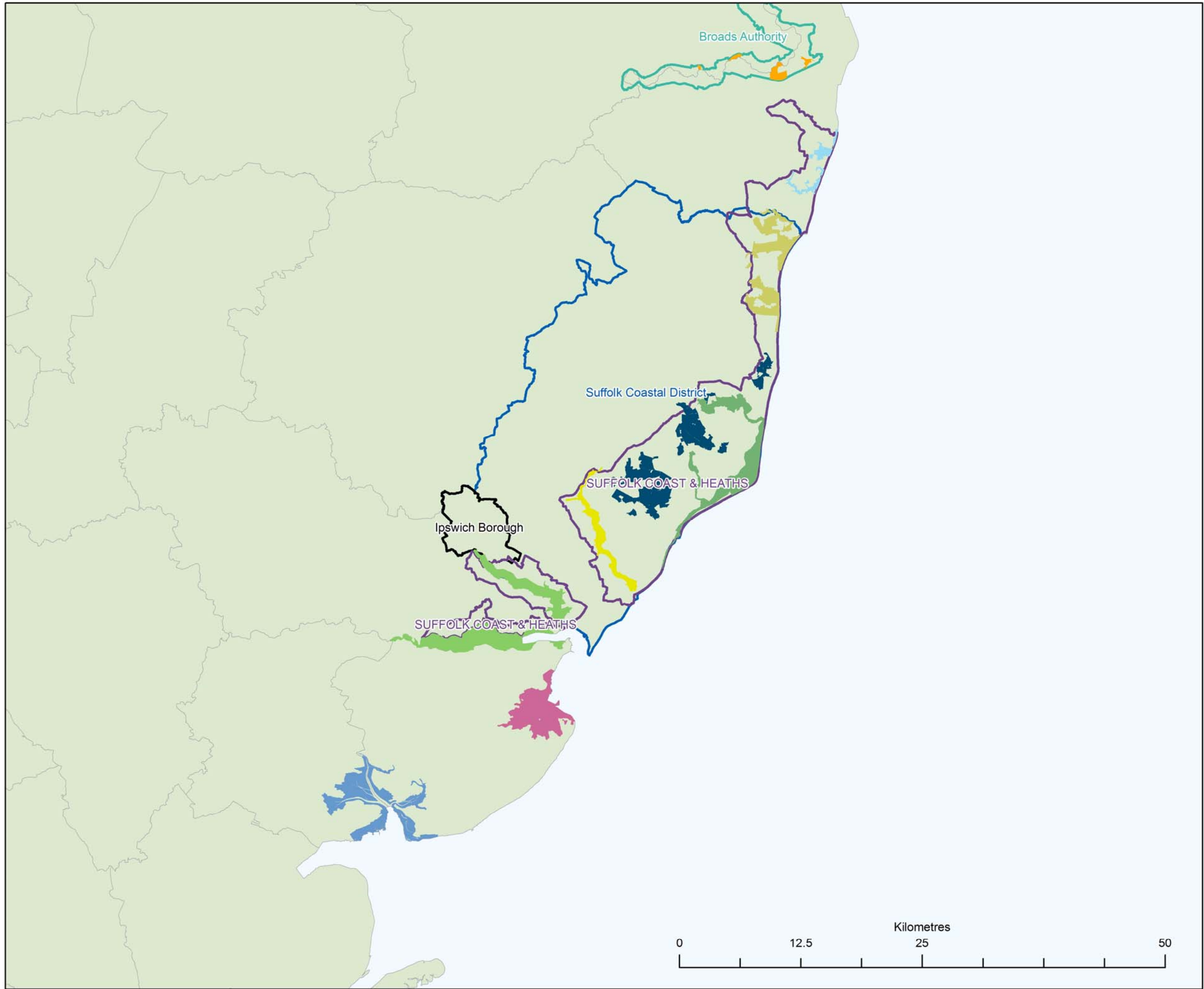
- SAC name:**
- Alde-Ore and Butley Estuaries
  - Benacre to Easton Bavents Lagoons
  - Dew's Ponds
  - Essex Estuaries
  - Minsmere to Walberswick Heaths and Marshes
  - Orfordness-Shingle Street
  - Staverton Park and The Thicks Wantisden
  - The Broads

- 'Other' boundaries:**
- Ipswich Borough
  - Suffolk Coastal
  - Broads Authority
  - SCH AONB

**W09216 Ipswich Borough Council  
Core Strategy and DC Policies  
Appropriate Assessment**

**Figure 1a  
SAC in the study area  
June 2009**





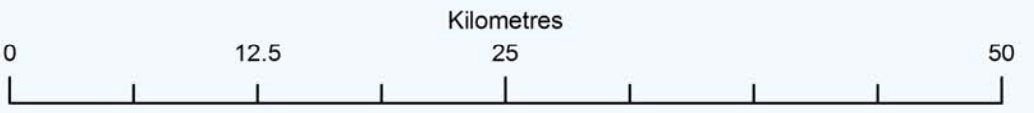
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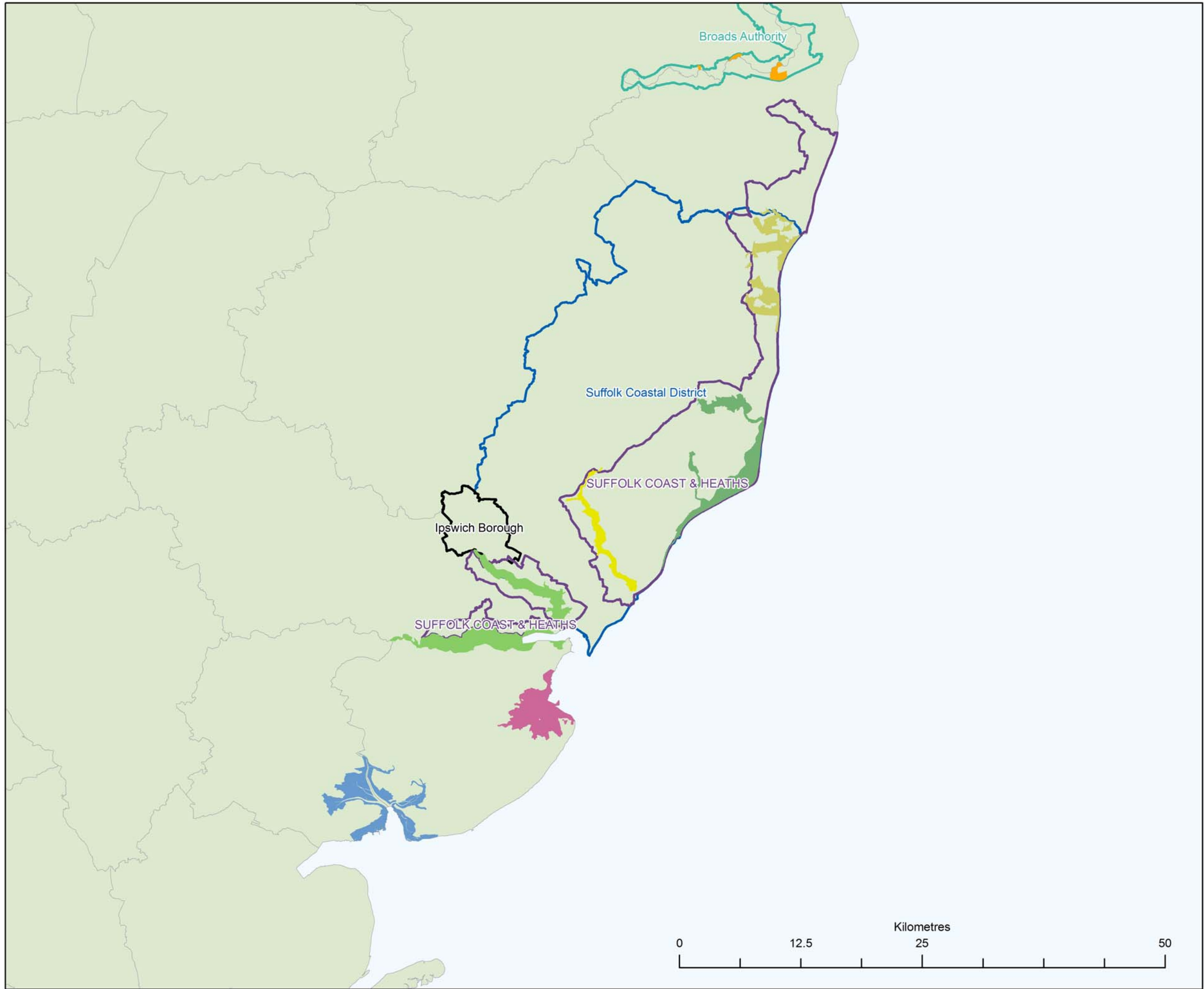
- SPA name:**
- Alde-Ore Estuary
  - Benacre to Easton Bavents
  - Colne Estuary
  - Mid Essex Coast Phase 2
  - Deben Estuary
  - Minsmere/Walberswick
  - Hamford Water
  - Sandlings
  - Stour and Orwell Estuaries
  - Broadland

- 'Other' boundaries:**
- Ipswich Borough
  - Suffolk Coastal
  - Broads Authority
  - SCH AONB

**W09216 Ipswich Borough  
Core Strategy and DC Policies  
Appropriate Assessment**

**Figure 1b  
SPA in the study area  
June 2009**





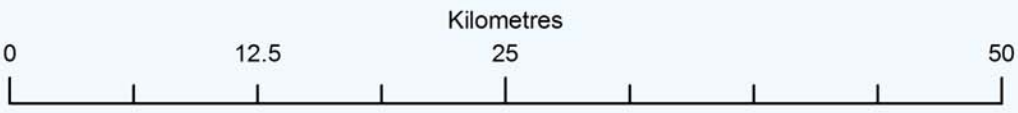
**Key**

- RAMSAR name:**
- Alde-Ore Estuary
  - Colne Estuary
  - Mid Essex Coast Phase 2
  - Deben Estuary
  - Minsmere/Walberswick
  - Hamford Water
  - Stour and Orwell Estuaries
  - Broadland

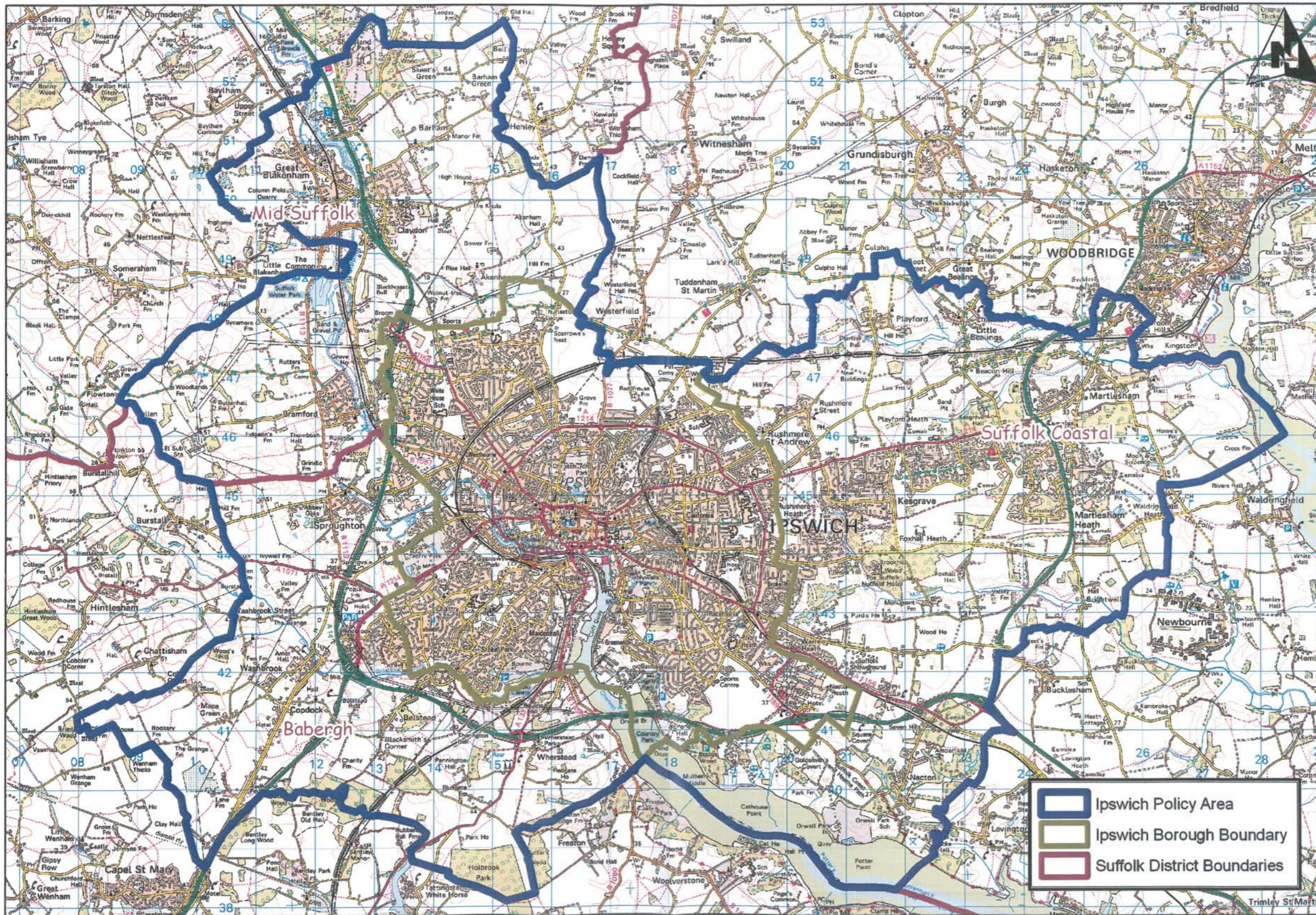
- 'Other' boundaries:**
- Ipswich Borough
  - Suffolk Coastal
  - Broads Authority
  - SCH AONB

**W09216 Ipswich Borough  
Core Strategy and DC Policies  
Appropriate Assessment**

**Figure 1c  
RAMSAR in the study area  
June 2009**







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**Project Name:** 09216 Ipswich Borough Council Core Strategy and Policies appropriate assessment

**Figure:** 02 Ipswich Policy Area

**Scale:** NTS

**Date:** 24/06/2009





## ***Part 3: Appendices***



# ***Appendix 1***





**NATURA 2000****STANDARD DATA FORM**

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

**1. Site identification:**

**1.1 Type**  **1.2 Site code**

**1.3 Compilation date**  **1.4 Update**

**1.5 Relationship with other Natura 2000 sites**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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**1.6 Respondent(s)**

**1.7 Site name**

**1.8 Site indication and designation classification dates**

date site proposed as eligible as SCI	200101
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

**2. Site location:****2.1 Site centre location**

<b>longitude</b>	<b>latitude</b>
01 34 08 E	52 06 06 N

**2.2 Site area (ha)**  **2.3 Site length (km)**

**2.5 Administrative region**

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

**2.6 Biogeographic region**

Alpine
  Atlantic
  Boreal
  Continental
  Macaronesia
  Mediterranean

**3. Ecological information:****3.1 Annex I habitats**

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Sandbanks which are slightly covered by sea water all the time	2	D			

Estuaries	70	B	C	C	<b>B</b>
Mudflats and sandflats not covered by seawater at low tide	40	B	C	B	<b>C</b>
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	25	C	C	C	<b>C</b>

### 3.2 Annex II species

Species name	Population			Site assessment			
	Resident	Migratory		Population	Conservation	Isolation	Global
		Breed	Winter				

## 4. Site description

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	70.0
Salt marshes. Salt pastures. Salt steppes	25.0
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	5.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

<p><b>Soil &amp; geology:</b> Mud, Sand, Shingle</p> <p><b>Geomorphology &amp; landscape:</b> Coastal, Enclosed coast (including embayment), Estuary, Intertidal sediments (including sandflat/mudflat), Islands, Lagoon, Open coast (including bay), Subtidal sediments (including sandbank/mudbank)</p>
---

### 4.2 Quality and importance

<p>Estuaries</p> <ul style="list-style-type: none"> <li>for which this is considered to be one of the best areas in the United Kingdom.</li> </ul> <p>Mudflats and sandflats not covered by seawater at low tide</p> <ul style="list-style-type: none"> <li>for which the area is considered to support a significant presence.</li> </ul> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</p>
--

- for which the area is considered to support a significant presence.

### 4.3 Vulnerability

Past canalisation and erosion together with sea-level rise has resulted in the loss of much of the saltmarsh. There are plans for managed coastal retreat which in the long-term will result in the creation of saltmarsh.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	199601
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 33 41 E	52 04 53 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Coastal lagoons	3	B	C	B	B
Annual vegetation of drift lines	1.1	A	B	A	A

Perennial vegetation of stony banks	60.3	A	B	A	A
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### 3.2 Annex II species

Species name	Population			Site assessment			
	Resident	Migratory		Population	Conservation	Isolation	Global
		Breed	Winter				

## 4. Site description

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	25.0
Salt marshes. Salt pastures. Salt steppes	15.0
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	40.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	18.0
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	2.0
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

<p><b>Soil &amp; geology:</b> Mud, Nutrient-poor, Sand, Shingle</p> <p><b>Geomorphology &amp; landscape:</b> Coastal, Estuary, Intertidal sediments (including sandflat/mudflat), Lagoon, Lowland, Shingle bar</p>
--

### 4.2 Quality and importance

<p>Coastal lagoons</p> <ul style="list-style-type: none"> <li>for which this is considered to be one of the best areas in the United Kingdom.</li> </ul> <p>Annual vegetation of drift lines</p> <ul style="list-style-type: none"> <li>for which this is one of only four known outstanding localities in the United Kingdom.</li> <li>which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 100 hectares.</li> </ul> <p>Perennial vegetation of stony banks</p> <ul style="list-style-type: none"> <li>for which this is considered to be one of the best areas in the United Kingdom.</li> </ul>
---

### 4.3 Vulnerability

Vegetated shingle is a sensitive habitat. The site is managed to limit recreational pressures. Much of the interest is self-sustaining with little need for intervention. Natural coastal processes will lead to changes in the extent of lagoons at Shingle Street over time.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199610
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 33 03 E	52 04 58 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment				
		Resident	Migratory			Population	Conservation	Isolation	Global
Breed	Winter	Stage							
A081	<i>Circus aeruginosus</i>		>3 P			C		B	
A183	<i>Larus fuscus</i>		14070 P			A		C	
A151	<i>Philomachus pugnax</i>			3 I		C		C	
A132	<i>Recurvirostra avosetta</i>			766 I		A		B	
A132	<i>Recurvirostra avosetta</i>		104 P			A		B	
A195	<i>Sterna albifrons</i>		48 P			C		C	
A191	<i>Sterna sandvicensis</i>		170 P			C		C	
A162	<i>Tringa totanus</i>			1919 I		C		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	50.0
Salt marshes. Salt pastures. Salt steppes	20.0
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	25.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	5.0
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

#### Soil & geology:

Mud, Nutrient-rich, Sedimentary, Shingle

#### Geomorphology & landscape:

Coastal, Estuary, Intertidal sediments (including sandflat/mudflat), Lagoon, Lowland, Shingle bar

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

#### During the breeding season the area regularly supports:

*Circus aeruginosus*

at least 1.9% of the GB breeding population  
5 year mean, 1993-1997



<i>Recurvirostra avosetta</i> (Western Europe/Western Mediterranean - breeding)	23.1% of the GB breeding population 5 year mean, 1990-1994
<i>Sterna albifrons</i> (Eastern Atlantic - breeding)	2% of the GB breeding population 5 count mean, 1993-4,1996-8
<i>Sterna sandvicensis</i> (Western Europe/Western Africa)	1.2% of the GB breeding population 5 year mean, 1992-1996
<b>Over winter the area regularly supports:</b>	
<i>Philomachus pugnax</i> (Western Africa - wintering)	0.4% of the GB population 5 year peak mean 1991/92-1995/96
<i>Recurvirostra avosetta</i> (Western Europe/Western Mediterranean - breeding)	60.3% of the GB population 5 year peak mean 1991/92-1995/96

<b>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</b>	
<b>During the breeding season the area regularly supports:</b>	
<i>Larus fuscus</i> (Western Europe/Mediterranean/Western Africa)	11.3% of the breeding population 5 year mean 1994-1998
<b>Over winter the area regularly supports:</b>	
<i>Tringa totanus</i> (Eastern Atlantic - wintering)	1.1% of the population 5 year peak mean 1991/92-1995/96

### 4.3 Vulnerability

The area is vulnerable to sea-level rise and coastal squeeze. These issues are being addressed through The Environment Agency Local Environment Action Plan, the estuary Management Plan and possibly managed retreat. Human disturbance from recreation is minimal as this is a reasonably robust system. Flood defence policy will need to take into account risks to the site from flooding and of flood control alleviation measures. Shooting is controlled through a management plan. A considerable part of the site is managed sympathetically by Suffolk Wildlife Trust, National Trust, Royal Society for the Protection of Birds and English Nature.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	4.5
UK04 (SSSI/ASSI)	100.0

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Designated: 04 October 1996

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## 3. Country:

UK (England)

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## 4. Name of the Ramsar site:

Alde–Ore Estuary

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

### b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

b) **Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

52 04 58 N                      01 33 03 E

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Woodbridge

Alde-Ore Estuary is located on the east coast of Suffolk, east of Woodbridge, stretching between Aldeburgh to the north and Bawdsey to the south.

**Administrative region:** Suffolk

**10. Elevation** (average and/or max. & min.) (metres):    **11. Area** (hectares): 2546.99

Min.	-1
Max.	5
Mean	1

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The site comprises the estuary complex of the rivers Alde, Butley and Ore, including Havergate Island and Orfordness. There are a variety of habitats including, intertidal mudflats, saltmarsh, vegetated shingle (including the second-largest and best-preserved area in Britain at Orfordness), saline lagoons and grazing marsh. The Orfordness/Shingle Street landform is unique within Britain in combining a shingle spit with a cusped foreland. The site supports nationally-scarce plants, British Red Data Book invertebrates, and notable assemblages of breeding and wintering wetland birds.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**2, 3, 6**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 2

The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates.

Ramsar criterion 3

The site supports a notable assemblage of breeding and wintering wetland birds.

**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species regularly supported during the breeding season:**

Lesser black-backed gull , *Larus fuscus graellsii*, 5790 apparently occupied nests, representing an average of 3.9% of the breeding population  
W Europe/Mediterranean/W Africa (Seabird 2000 Census)

**Species with peak counts in winter:**

Pied avocet , *Recurvirostra avosetta*, 1187 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)  
Europe/Northwest Africa

Common redshank , *Tringa totanus totanus*, 2368 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

See Sections 21/22 for details of noteworthy species

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	shingle, mud, nutrient-rich, sedimentary
Geomorphology and landscape	lowland, coastal, shingle bar, intertidal sediments (including sandflat/mudflat), estuary, lagoon
Nutrient status	mesotrophic
pH	no information
Salinity	saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent

Summary of main climatic features	Annual averages (Lowestoft, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html">www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html</a> ) Max. daily temperature: 13.0° C Min. daily temperature: 7.0° C Days of air frost: 27.8 Rainfall: 576.3 mm Hrs. of sunshine: 1535.5
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**General description of the Physical Features:**

This estuary is the only bar-built estuary in the UK with a shingle bar. This bar has been extending rapidly along the coast since 1530, pushing the mouth of the estuary progressively south-westwards. The eastwards-running Alde River originally entered the sea at Aldeburgh, but now turns south along the inner side of the Orfordness shingle spit. It is relatively wide and shallow, with extensive intertidal mudflats on both sides of the channel in its upper reaches and saltmarsh accreting along its fringes. The Alde subsequently becomes the south-west flowing River Ore, which is narrower and deeper with stronger currents. The smaller Butley River, which has extensive areas of saltmarsh and a reedbed community bordering intertidal mudflats, flows into the Ore shortly after the latter divides around Havergate Island. The mouth of the River Ore is still moving south as the Orfordness shingle spit continues to grow through longshore drift from the north.

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The Alde-Ore Estuary comprises the estuarine complex of the rivers Alde, Butley and Ore, including Havergate Island and Orfordness.

This estuary is the only bar-built estuary in the UK with a shingle bar. This bar has been extending rapidly along the coast since 1530, pushing the mouth of the estuary progressively south-westwards. The eastwards-running Alde River originally entered the sea at Aldeburgh, but now turns south along the inner side of the Orfordness shingle spit. It is relatively wide and shallow, with extensive intertidal mudflats on both sides of the channel in its upper reaches and saltmarsh accreting along its fringes. The Alde subsequently becomes the south-west flowing River Ore, which is narrower and deeper with stronger currents. The smaller Butley River, which has extensive areas of saltmarsh and a reedbed community bordering intertidal mudflats, flows into the Ore shortly after the latter divides around Havergate Island. The mouth of the River Ore is still moving south as the Orfordness shingle spit continues to grow through longshore drift from the north.

**18. Hydrological values:**

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces

**19. Wetland types:**

Inland wetland, Marine/coastal wetland

Code	Name	% Area
E	Sand / shingle shores (including dune systems)	33.3
H	Salt marshes	23.6
G	Tidal flats	17.7
M	Rivers / streams / creeks: permanent	9.8
Sp	Saline / brackish marshes: permanent	5.9

Tp	Freshwater marshes / pools: permanent	3.9
U	Peatlands (including peat bogs swamps, fens)	3.8
J	Coastal brackish / saline lagoons	2

## 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The main habitat types of the Alde-Ore Estuary are: intertidal mudflats, saltmarsh, reedswamp, coastal freshwater, brackish lagoons, semi-improved grazing marsh, brackish ditches and vegetated shingle, the second-largest and best-preserved example in Britain.

A unique feature for East Anglian beaches is the abundance on the ground of normally epiphytic lichens.

There is a zonation of shingle vegetation from shifting to more stable areas of grassland and lichen communities.

Areas of saltmarsh succeed to higher saltmarsh and neutral grassland with ditches.

There is a series of brackish lagoons and ditches; and borrow pits.

Ecosystem services

## 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

### Nationally important species occurring on the site.

#### Higher Plants.

A range of nationally scarce plant species characteristic of freshwater, estuarine, and shingle habitats, and their transitions are present. These include: *Althaea officinalis*, *Frankenia laevis*, *Lathyrus japonicus*, *Lepidium latifolium*, *Medicago minima*, *Parapholis incurva*, *Puccinellia fasciculata*, *Ruppia cirrhosa*, *Sarcocornia perennis*, *Sonchus palustris*, *Trifolium suffocatum*, *Vicia lutea* and *Zostera angustifolia*.

## 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

### Birds

#### Species currently occurring at levels of national importance:

#### Species regularly supported during the breeding season:

Eurasian marsh harrier , <i>Circus aeruginosus</i> , Europe	3 pairs, representing an average of 1.9% of the GB population (5 year mean 1993-1997)
Mediterranean gull , <i>Larus melanocephalus</i> , Europe	6 apparently occupied nests, representing an average of 5.5% of the GB population (Seabird 2000 Census)
Sandwich tern , <i>Sterna</i> ( <i>Thalasseus</i> ) <i>sandvicensis sandvicensis</i> , W Europe	169 pairs, representing an average of 1.6% of the GB population (5 year mean 1991-1995)

Little tern , <i>Sterna albifrons albifrons</i> , W Europe	88 apparently occupied nests, representing an average of 4.5% of the GB population (Seabird 2000 Census)
<b>Species with peak counts in spring/autumn:</b>	
Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	283 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	44 individuals, representing an average of 32.3% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	29 individuals, representing an average of 4.8% of the GB population (5 year peak mean 1998/9-2002/3)
<b>Species with peak counts in winter:</b>	
Greater white-fronted goose , <i>Anser albifrons albifrons</i> , NW Europe	186 individuals, representing an average of 3.2% of the GB population (5 year peak mean for 1996/7-2000/01)
Common shelduck , <i>Tadorna tadorna</i> , NW Europe	1398 individuals, representing an average of 1.7% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian wigeon , <i>Anas penelope</i> , NW Europe	6851 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian teal , <i>Anas crecca</i> , NW Europe	2447 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3)
Northern pintail , <i>Anas acuta</i> , NW Europe	556 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)
Northern shoveler , <i>Anas clypeata</i> , NW & C Europe	224 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)

### Species Information

#### Nationally important species occurring on the site.

#### Invertebrates.

The highly specialised invertebrate fauna of the saline lagoons includes *Nematostella vectensis*, and *Gammarus insensibilis*, both species protected under Schedules 5 and 8 of the Wildlife and Countryside Act 1981 (as amended).

Other notable invertebrates on the site include: *Malacosoma castrensis*, *Campsicnemus magius*, *Cheilosia velutina*, *Empis prodomus*, *Dixella attica*, *Hylaeus euryscapus*, *Pseudamnicola confusa*, *Euophrys browni*, *Baryphyma duffeyi*, *Haplodrassus minor*, *Trichoncus affinis*.

### 23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Aquatic vegetation (e.g. reeds, willows, seaweed)
- Archaeological/historical site
- Environmental education/ interpretation
- Fisheries production
- Livestock grazing
- Non-consumptive recreation

Scientific research  
 Sport fishing  
 Sport hunting  
 Tourism  
 Transportation/navigation

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? **No**

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

**24. Land tenure/ownership:**

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	+
National/Crown Estate	+	
Private	+	+
Public/communal	+	

**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	
Collection of non-timber natural products: commercial	+	
Fishing: recreational/sport	+	
Marine/saltwater aquaculture	+	
Gathering of shellfish	+	
Permanent arable agriculture		+
Grazing (unspecified)	+	+
Hunting: recreational/sport	+	
Harbour/port		+
Flood control		+
Irrigation (incl. agricultural water supply)		+
Non-urbanised settlements		+



**26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:**

*Explanation of reporting category:*

1. *Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.*
2. *Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.*

*NA = Not Applicable because no factors have been reported.*

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2		+		+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?  
 Erosion - English Nature provides advice to the Environment Agency and coastal local authorities in relation to flood and coastal protection management. This will inform the development of the Suffolk Estuaries strategies and the second generation shoreline management plan.

A Management Scheme is required, taking into account the effects of erosion. A Coastal Habitat Management Plan will be produced for this site.

Is the site subject to adverse ecological change? YES

**27. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	
National Nature Reserve (NNR)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	+
Site management statement/plan implemented	+	
Other	+	
Area of Outstanding National Beauty (AONB)	+	
Environmentally Sensitive Area (ESA)	+	
Special Area of Conservation (SAC)	+	
Management plan in preparation	+	

**b) Describe any other current management practices:**

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

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**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

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**29. Current scientific research and facilities:**

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

**Fauna.**

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

**Environment.**

Monitoring estuarine processes.

Saline lagoon survey.

Study on the effects of guano-fication on shingle flora.

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**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

None reported

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**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

**Activities.**

The site is used informally for walking, boating and angling.

Facilities provided.

River moorings.

Seasonality.

Walking and boating activities are predominantly in spring and summer. Seasonal (winter) wildfowling occurs on the estuary.

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**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs,

European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

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**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

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**34. Bibliographical references:**

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

**Site-relevant references**

Anon. (1995) *Biodiversity: The UK Steering Group Report. Volume 2: Action plans*. HMSO, London

- Anon. (2002) *Suffolk Coast and Estuaries Coastal Habitat Management Plan: Executive summary*. English Nature, Peterborough (Living with the Sea LIFE Project) [www.english-nature.org.uk/livingwiththesea/project\\_details/good\\_practice\\_guide/HabitatCRR/ENRestore/CHaMPs/SuffolkCoast/SuffolkCHaMP.pdf](http://www.english-nature.org.uk/livingwiththesea/project_details/good_practice_guide/HabitatCRR/ENRestore/CHaMPs/SuffolkCoast/SuffolkCHaMP.pdf)
- Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)
- Beardall, CH, Dryden, RC & Holzer, TJ (1988) *The Suffolk estuaries: a report...on the wildlife and conservation of the Suffolk estuaries*. Suffolk Wildlife Trust, Saxmundham [accompanied by separate volume, *Suffolk estuaries bibliography*]
- Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough
- Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 5. Eastern England*. Joint Nature Conservation Committee, Peterborough
- Cadbury, CJ & Morris, P (2002) Reserve focus – Havergate Island NNR, Suffolk. *British Wildlife*, **14**(2), 101-105
- Chandler, TJ & Gregory, S (eds.) (1976) *The climate of the British Isles*. Longman, London
- Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)
- Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge
- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
- Downie, AJ & Barnes, RSK (1996) Survey of the brackish pools on the King's Marshes, Orfordness, Suffolk, 1994. *English Nature Research Reports*, No. **209**
- Fuller, RM & Randall, RE (1988) The Orford shingles, Suffolk, U.K. – classic conflicts in coastline management. *Biological Conservation*, **46**, 95-114
- Hill, TO, Emblow, CS & Northen, KO (1996) *Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)
- Hodges, M (1996) *The National Trust Orfordness ornithological report*. National Trust.
- May, VJ & Hansom, JD (eds.) (2003) *Coastal geomorphology of Great Britain*. Joint Nature Conservation Committee, Peterborough (Geological Conservation Review Series, No. 28)
- McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough. [www.jncc.gov.uk/SACselection](http://www.jncc.gov.uk/SACselection)
- Morris, RKA & Parsons, MA (1992) A survey of invertebrate communities on the shingle of Dungeness, Rye Harbour and Orford Ness *JNCC Report*, No. **77**
- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. [www.wwt.org.uk/publications/default.asp?PubID=14](http://www.wwt.org.uk/publications/default.asp?PubID=14)
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Shirt, DB (ed.) (1987) *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough
- Sneddon, P & Randall, RE (1994) *Coastal vegetated shingle structures of Great Britain: Appendix 3. Shingle sites in England*. Joint Nature Conservation Committee, Peterborough
- Stewart, A, Pearman, DA & Preston, CD (eds.) (1994) *Scarce plants in Britain*. Joint Nature Conservation Committee, Peterborough
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.) [www.jncc.gov.uk/UKSPA/default.htm](http://www.jncc.gov.uk/UKSPA/default.htm)
- Suffolk Wildlife Trust (1993) *National Vegetation Classification of the saltmarsh of the Deben, Alde–Ore and Blyth estuaries, Suffolk*. Suffolk Wildlife Trust, Ashbocking

Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: [ramsar@ramsar.org](mailto:ramsar@ramsar.org)

**NATURA 2000****STANDARD DATA FORM**

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

**1. Site identification:**

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

**1.5 Relationship with other Natura 2000 sites**

1.6 Respondent(s)

1.7 Site name

**1.8 Site indication and designation classification dates**

date site proposed as eligible as SCI	199506
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

**2. Site location:****2.1 Site centre location**

longitude	latitude
01 42 37 E	52 23 11 N

2.2 Site area (ha)  2.3 Site length (km)

**2.5 Administrative region**

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

**2.6 Biogeographic region**

Alpine    
 Atlantic    
 Boreal    
 Continental    
 Macaronesia    
 Mediterranean

**3. Ecological information:****3.1 Annex I habitats**

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Coastal lagoons	5	A	C	A	B

Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> )	2.4	D			
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### 3.2 Annex II species

Species name	Population			Site assessment			
	Resident	Migratory		Population	Conservation	Isolation	Global
		Breed	Winter				

## 4. Site description

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	5.0
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	5.0
Shingle. Sea cliffs. Islets	25.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	30.0
Heath. Scrub. Maquis and garrigue. Phygrana	5.0
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	30.0
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

<p><b>Soil &amp; geology:</b> Acidic, Alluvium, Neutral, Sand, Shingle</p> <p><b>Geomorphology &amp; landscape:</b> Coastal, Lagoon, Lowland, Open coast (including bay)</p>
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### 4.2 Quality and importance

<p>Coastal lagoons</p> <ul style="list-style-type: none"> <li>for which this is considered to be one of the best areas in the United Kingdom.</li> </ul>
--

### 4.3 Vulnerability

The lagoons at the Denes were created through shingle extraction. Salinity is maintained through percolation and overtopping of the shingle barrier. No management input is required to maintain these lagoons. The lagoons at Benacre, Covehithe and Easton are natural and result from ponded streams behind shingle barriers. Sea water enters the lagoons through overtopping of the barriers during high tides. These lagoons are experiencing erosion and landwards movement of the confining barrier, leading to the reduction in the area of each lagoon. Natural processes will eventually lead to the loss of these features. Potential management actions to reduce the rate of erosion are being addressed through the Shoreline Management Plan process.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	88.0
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199610
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 42 37 E	52 23 11 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment



### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment			
		Resident	Migratory		Population	Conservation	Isolation	Global
Breed	Winter	Stage						
A021	<i>Botaurus stellaris</i>		1 I		B		B	
A081	<i>Circus aeruginosus</i>		8 I		B		B	
A195	<i>Sterna albifrons</i>		21 P		C		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	30.0
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	5.0
Shingle. Sea cliffs. Islets	5.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	50.0
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	10.0
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

#### Soil & geology:

Sand, Sedimentary, Shingle

#### Geomorphology & landscape:

Coastal, Lowland, Shingle bar

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

#### During the breeding season the area regularly supports:

<i>Botaurus stellaris</i> (Europe - breeding)	5% of the GB breeding population 5 year mean, 1992-1996
<i>Circus aeruginosus</i>	5.1% of the GB breeding population 5 year mean, 1993-1997
<i>Sterna albifrons</i> (Eastern Atlantic - breeding)	0.9% of the GB breeding population 5 year mean, 1992-1996

**ARTICLE 4.2 QUALIFICATION (79/409/EEC)**

**4.3 Vulnerability**

The natural sea level rise will lead to more frequent saltwater inundation of the site, whilst being beneficial for some habitats will lead to loss of others. Sea level rise is causing erosion of the lagoons through the landward movement of the confining shingle barrier. Natural processes if unchecked are likely over time to lead to the loss of these features and the area of reedbed will be reduced. New lagoons have been created further back from the coast and other management actions to decrease the rate of erosion are being addressed through the Shoreline Management Plan.

**5. Site protection status and relation with CORINE biotopes:**

**5.1 Designation types at national and regional level**

<b>Code</b>	<b>% cover</b>
UK01 (NNR)	76.0
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	199601
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 36 40 E	52 43 49 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK402	Norfolk	96.73%
UK403	Suffolk	3.27%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	2.99	A	A	A	A
Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation	4.99	A	B	A	B
<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> )	1	B	C	A	C
Transition mires and quaking bogs	0.1	B	C	A	B
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	3.55	A	A	A	A
Alkaline fens	0.1	A	C	A	B
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> )	12.96	A	B	A	A

#### 3.2 Annex II species

Species name	Population				Site assessment			
	Resident	Migratory			Population	Conservation	Isolation	Global
		Breed	Winter	Stage				
<i>Vertigo moulinsiana</i>	Present	-	-	-	C	A	C	A
<i>Triturus cristatus</i>	Present	-	-	-	D			
<i>Lutra lutra</i>	23	-	-	-	C	A	C	C
<i>Liparis loeselii</i>	251-500	-	-	-	C	B	A	B

### 4. Site description

#### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	16.0
Bogs. Marshes. Water fringed vegetation. Fens	19.0
Heath. Scrub. Maquis and garrigue. Phygrana	1.0
Dry grassland. Steppes	1.0
Humid grassland. Mesophile grassland	39.0
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	24.0
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

## 4.1 Other site characteristics

### Soil & geology:

Alluvium, Basic, Clay, Nutrient-poor, Nutrient-rich, Peat

### Geomorphology & landscape:

Floodplain, Lowland, Valley

## 4.2 Quality and importance

Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.

- for which this is considered to be one of the best areas in the United Kingdom.

Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation

- for which this is considered to be one of the best areas in the United Kingdom.

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

- for which the area is considered to support a significant presence.

Transition mires and quaking bogs

- for which this is considered to be one of the best areas in the United Kingdom.

Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*

- which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares.
- for which this is considered to be one of the best areas in the United Kingdom.

Alkaline fens

- for which this is considered to be one of the best areas in the United Kingdom.

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

- for which this is considered to be one of the best areas in the United Kingdom.

*Vertigo moulinsiana*

- for which this is considered to be one of the best areas in the United Kingdom.

*Lutra lutra*

- for which the area is considered to support a significant presence.

*Liparis loeselii*

- for which this is one of only three known outstanding localities in the United Kingdom.
- which is known from 15 or fewer 10 x 10 km squares in the United Kingdom.

## 4.3 Vulnerability

The site has suffered from management neglect and natural succession during the 20th century. This is slowly being reversed through conservation and other management works undertaken by a number of bodies. Sea-level rise and reduced summer flows in the northern rivers brought about by abstraction are resulting in increasing saline intrusion into the site and generally drier summer conditions. The Environment Agency, Broads Authority and English Nature are investigating options to remedy this situation. The site also suffers from eutrophication, primarily from sewage outfalls and to a lesser degree, agriculture. Some of the sewage works in the northern rivers are now phosphorus stripping and there is a programme of mud-pumping to remove enriched material from lakes, followed by biomanipulation. Pressure from tourism and recreation is now being considered by the Broads Authority through the Broads Plan. Water Level Management Plans and the Environmentally Sensitive Area scheme are starting to raise water levels, revert arable areas back to grass and encourage sensitive management particularly of the ditches, to address problems brought about by drainage in the past. Appropriate standards of flood defence are necessary for the wetland, and works are currently proceeding under the Environment Agency Broads Strategy.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	35.7
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199409
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 36 00 E	52 43 56 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK402	Norfolk	99.00%
UK403	Suffolk	1.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment				
		Resident	Breed	Winter	Stage	Population	Conservation	Isolation	Global
A056	<i>Anas clypeata</i>			231 I		B		C	
A050	<i>Anas penelope</i>			10071 I		C		C	
A051	<i>Anas strepera</i>			240 I		B		C	
A021	<i>Botaurus stellaris</i>		>2 I			B		B	
A081	<i>Circus aeruginosus</i>		16 P			B		B	
A082	<i>Circus cyaneus</i>			22 I		B		C	
A037	<i>Cygnus columbianus bewickii</i>			>600 I		B		B	
A038	<i>Cygnus cygnus</i>			100 I		C		C	
A151	<i>Philomachus pugnax</i>			96 I		B		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	2.5
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	10.0
Bogs. Marshes. Water fringed vegetation. Fens	25.0
Heath. Scrub. Maquis and garrigue. Phygrana	13.0
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	41.0
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	8.5
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

#### Soil & geology:

Basic, Clay, Nutrient-rich, Peat, Sedimentary

#### Geomorphology & landscape:

Floodplain, Lowland, Valley

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

#### During the breeding season the area regularly supports:

*Botaurus stellaris*  
(Europe - breeding)

at least 10% of the GB breeding population  
Three year mean 1996-1998



<i>Circus aeruginosus</i>	10.2% of the GB breeding population 5 year mean, 1987/8-1991/2
<b>Over winter the area regularly supports:</b>	
<i>Circus cyaneus</i>	2.9% of the GB population 5 year peak mean 1987/8-1991/2
<i>Cygnus columbianus bewickii</i> (Western Siberia/North-eastern & North-western Europe)	at least 8.2% of the GB population Count, as at 1996/7
<i>Cygnus cygnus</i> (Iceland/UK/Ireland)	1.8% of the GB population Count, as at 1996/7

<b>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</b>	
<b>Over winter the area regularly supports:</b>	
<i>Anas strepera</i> (North-western Europe)	0.8% of the population 5 year peak mean, 1991/2-1995/6

### 4.3 Vulnerability

The site has suffered from management neglect and natural succession during this century. This is slowly being reversed via conservation and other management works undertaken through a number of bodies. Sea level rise and reduced summer flows in the river Bure brought about by abstraction are resulting in increasing saline intrusion into the site and generally drier summer conditions. The Environment Agency, Broads Authority and English Nature are proceeding with a project, to investigate options to remedy this situation. The site also suffers from eutrophication, brought through the build up of nutrients over a long period, primarily through sewage outfalls and, to a lesser degree, agriculture. Some of the sewage works are now stripping phosphorus and there is a programme of mud pumping to remove enriched material from lakes.

The region as a whole is a centre for tourism and recreation, however this pressure is now starting to be brought under control by the Broads Authority via the Broads Plan. Efficient drainage within much of the reclaimed parts of the wetland has reduced the wildlife value. Water Level Management Plans and the ESA scheme are starting to raise water levels, revert arable areas back to grass and encourage sensitive management, particularly of the ditches. Flood defence works are carried out in accordance with the Environmental Agency Broads Strategy.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	39.8
UK04 (SSSI/ASSI)	100.0

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

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Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

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DD MM YY

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Designated: 21 September 1994

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## 3. Country:

UK (England)

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## 4. Name of the Ramsar site:

Broadland

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

### b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ;

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

52 43 56 N                      01 36 00 E

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Great Yarmouth

Located in eastern Norfolk, part of East Anglia.

**Administrative region:** Norfolk; Suffolk

**10. Elevation** (average and/or max. & min.) (metres):    **11. Area** (hectares): 5488.61

Min.	-2
Max.	4
Mean	1

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Broadland is a low-lying wetland complex straddling the boundaries between east Norfolk and northern Suffolk. The area includes the river valley systems of the Bure, Yare and Waveney and their major tributaries. The open distinctive landscape comprises a complex and interlinked mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow. The region is important for recreation, tourism, agriculture and wildlife.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**2, 6**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 2

The site supports a number of rare species and habitats within the biogeographical zone context, including the following Habitats Directive Annex I features:

H7210	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> Calcium-rich fen dominated by great fen sedge (saw sedge).	
H7230	Alkaline fens	Calcium-rich springwater-fed fens.
H91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> ) and the Annex II species	Alder woodland on floodplains,
S1016	<i>Vertigo moulinsiana</i>	Desmoulin's whorl snail
S1355	<i>Lutra lutra</i>	Otter
S1903	<i>Liparis loeselii</i>	Fen orchid.

The site supports outstanding assemblages of rare plants and invertebrates including nine British Red Data Book plants and 136 British Red Data Book invertebrates.

**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in winter:**

Tundra swan , <i>Cygnus columbianus bewickii</i> , NW Europe	196 individuals, representing an average of 2.4% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian wigeon , <i>Anas penelope</i> , NW Europe	6769 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3)
Gadwall , <i>Anas strepera strepera</i> , NW Europe	545 individuals, representing an average of 3.1% of the GB population (5 year peak mean 1998/9-2002/3)
Northern shoveler , <i>Anas clypeata</i> , NW & C Europe	247 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3)

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

**Species with peak counts in winter:**

Pink-footed goose , <i>Anser brachyrhynchus</i> , Greenland, Iceland/UK	4263 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3)
Greylag goose , <i>Anser anser anser</i> , Iceland/UK, Ireland	1007 individuals, representing an average of 1.1% of the population (Source period not collated)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	acidic, basic, neutral, clay, alluvium, peat, nutrient-rich, sedimentary
Geomorphology and landscape	lowland, valley, floodplain
Nutrient status	eutrophic, highly eutrophic, mesotrophic, oligotrophic
pH	acidic, alkaline, circumneutral
Salinity	brackish / mixosaline, fresh
Soil	mainly mineral, mainly organic
Water permanence	usually permanent, usually seasonal / intermittent
Summary of main climatic features	Annual averages (Lowestoft, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html">www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html</a> ) Max. daily temperature: 13.0° C Min. daily temperature: 7.0° C Days of air frost: 27.8 Rainfall: 576.3 mm Hrs. of sunshine: 1535.5

**General description of the Physical Features:**

Broadland is a low-lying wetland complex in eastern England. The Broads are a series of flooded medieval peat cuttings within the floodplains of five principal river systems. The area includes the river valley systems of the Bure, Yare and Waveney and their major tributaries. The distinctive open landscape comprises a complex and interlinked mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow, forming one of the finest marshland complexes in the UK. The differing types of management of the vegetation for reed, sedge and marsh hay, coupled with variations in hydrology and substrate, support an extremely diverse range of plant communities.

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

Broadland is a low-lying wetland complex in eastern England. The Broads are a series of flooded medieval peat cuttings within the floodplains of five principal river systems. The area includes the river valley systems of the Bure, Yare and Waveney and their major tributaries. The distinctive open landscape comprises a complex and interlinked mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow, forming one of the finest marshland complexes in the UK.

**18. Hydrological values:**

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Recharge and discharge of groundwater, Flood water storage / desynchronisation of flood peaks, Maintenance of water quality (removal of nutrients)

**19. Wetland types:**

Inland wetland

Code	Name	% Area
U	Peatlands (including peat bogs swamps, fens)	30
Tp	Freshwater marshes / pools: permanent	30
W	Shrub-dominated wetlands	15
Xf	Freshwater, tree-dominated wetlands	10
O	Freshwater lakes: permanent	10
Q	Saline / brackish lakes: permanent	3
M	Rivers / streams / creeks: permanent	2

**20. General ecological features:**

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The peatland areas of this site support: alder woodland on the floodplain dominated by *Alnus glutinosa* and the *Betula-Dryopteris cristata* community; mixed tall-herb fen typical of calcareous conditions are dominated by *Phragmites australis* and *Cladium mariscus*. The very wet mires are dominated by *Carex* spp. and *Juncus* spp., and spring-fed fens with *Schoenus nigricans*, *Carex dioica* and *Pinguicula nigricans*. Open waters are mostly highly eutrophic; however, some plant-rich mesotrophic and eutrophic examples remain, dominated by *Chara* sp., *Najas marina* and *Ceratophyllum demersum*. The ditch systems within the drained grasslands support Magnopotamion and Hydrocharition vegetation, often with *Stratiotes aloides*.

Ecosystem services

**21. Noteworthy flora:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

**Nationally important species occurring on the site.****Higher Plants.**

Nationally Rare:

S1903 *Liparis loeselii* Fen orchid.  
S1831 *Luronium natans* Floating water-plantain.  
*Najas marina*, *Potamogeton acutifolius*, *Dryopteris cristata*

Nationally Scarce: *Althaea officinalis*, *Dactylorhiza traunsteineri*, *Potamogeton compressus*, *Potamogeton trichoides*, *Pyrola rotundifolia*, *Sonchus palustris*, *Cicuta virosa*, *Carex appropinquata*, *Thelypteris palustris*, *Lathyrus palustris*, *Potamogeton coloratus*, *Sium latifolium*, *Stratiotes aloides*, *Myriophyllum verticillatum*.

Lower Plants.

Nationally Rare: *Chara intermedia*, *Nitellopsis obtusa*, *Chara connivens*, *Chara intermedia* and *Cinclidium stygium*

Nationally scarce: *Chara curta*, *Drepanocladus vernicosus*, *Chara pendunculata*, *Campyllum elodes*,  
*Chara aspera*, *Ricciocarpus natans*, *Tolypella glomerata*.

## 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

### Birds

#### Species currently occurring at levels of national importance:

#### Species regularly supported during the breeding season:

Eurasian marsh harrier, *Circus aeruginosus*, 16 pairs, representing an average of 10.5% of the GB population (5 year mean 1987/8-1991/2)  
Europe

#### Species with peak counts in spring/autumn:

Common coot, *Fulica atra atra*, NW Europe 3112 individuals, representing an average of 1.7% of the GB population (5 year peak mean 1998/9-2002/3)

#### Species with peak counts in winter:

Great cormorant, *Phalacrocorax carbo carbo*, 273 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)  
NW Europe

Great bittern, *Botaurus stellaris stellaris*, W 2 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)  
Europe, NW Africa

Bean goose, *Anser fabalis fabalis*, NW Europe - 238 individuals, representing an average of 59.5% of the GB population (5 year peak mean for  
wintering 1996/7-2000/01)

Greater white-fronted goose, *Anser albifrons albifrons*, NW Europe 351 individuals, representing an average of 6% of the GB population (Source period not collated)

Eurasian teal, *Anas crecca*, NW Europe 2934 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)

Common pochard, *Aythya ferina*, NE & NW 800 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)  
Europe

Smew, *Mergellus albellus*, NW & C Europe 10 individuals, representing an average of 2.7% of the GB population (5 year peak mean 1998/9-2002/3)

Hen harrier, *Circus cyaneus*, Europe 22 individuals, representing an average of 2.9% of the GB population (5 year peak mean 1987/8-1991/2)

Water rail, *Rallus aquaticus*, Europe 23 individuals, representing an average of 5.1% of the GB population (5 year peak mean 1998/9-2002/3)

Ruff, *Philomachus pugnax*, Europe/W Africa 82 individuals, representing an average of 11.7% of the GB population (5 year peak mean 1998/9-2002/3)

### Species Information

#### Species occurring at levels of international importance.

#### Invertebrates.

S1016 *Vertigo moulinsiana* Desmoulin's whorl snail

**Assemblage.**

This site supports a diverse assemblage of invertebrates including:

*Aeshna isosceles*, *Papilio machaon britannicus*.

136 British Red Data Book invertebrate species have been recorded on the site.

**Nationally important species occurring on the site.**

**Mammals.**

S1355 *Lutra lutra* Otter

**23. Social and cultural values:**

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Aquatic vegetation (e.g. reeds, willows, seaweed)
- Archaeological/historical site
- Environmental education/ interpretation
- Fisheries production
- Forestry production
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Tourism
- Transportation/navigation

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

**24. Land tenure/ownership:**

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	
Local authority, municipality etc.	+	
National/Crown Estate	+	



Private	+	+
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**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	+
Collection of non-timber natural products: commercial	+	
Commercial forestry	+	+
Cutting/coppicing for firewood/fuel	+	+
Cutting of vegetation (small-scale/subsistence)	+	+
Fishing: commercial	+	+
Fishing: recreational/sport	+	+
Permanent arable agriculture		+
Rough or shifting grazing	+	+
Permanent pastoral agriculture	+	+
Hay meadows	+	+
Hunting: recreational/sport	+	+
Sewage treatment/disposal		+
Flood control	+	+
Irrigation (incl. agricultural water supply)		+
Mineral exploration (excl. hydrocarbons)		+
Transport route		+
Domestic water supply		+
Urban development		+
Non-urbanised settlements		+

**26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:**

*Explanation of reporting category:*

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
No factors reported	NA				

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For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Is the site subject to adverse ecological change? NO

**27. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	
National Nature Reserve (NNR)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	+
Management agreement	+	+
Site management statement/plan implemented	+	
Other	+	+
Environmentally Sensitive Area (ESA)	+	+
Special Area of Conservation (SAC)	+	

**b) Describe any other current management practices:**

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

**29. Current scientific research and facilities:**

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

**Contemporary.**

**Flora.**

The entire site has had a vegetation survey, primarily fen, wet woodland and open water areas, lakes plus ditch systems, and this is now on GIS.

Monitoring is undertaken on the site, particularly freshwater and fen habitats.

**Completed.**

**Fauna.**

Wintering and breeding bird survey of all drained marshland area completed, results on a GIS.

Some species survey and monitoring, e.g. *Liparis loeselii*, *Lurionium natans* and a number of molluscs.

**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Many nature trails and footpaths with information boards and leaflets plus five visitor centres at Ranworth, Hickling, Strumpshaw, How Hill and Carlton Colville.

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**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

**Activities.**

The area attracts large numbers of tourists predominantly during the summer, many of which are water-borne. The river and broads (lakes) both within and adjacent to the site carry large numbers of power and sail craft which results in large-scale erosion and loss of fringing reedswamp. Speed limits have been imposed, however boat numbers remains too high.

**Facilities provided.**

Land-based recreation within the site is well managed, directing people to facilities where boardwalks are provided.

**Seasonality.**

All year.

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**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

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**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

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**34. Bibliographical references:**

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

**Site-relevant references**

Aldridge, DC & Müller, SJ (2001) The Asiatic clam, *Corbicula fluminea*, in Britain: current status and potential impacts. *Journal of Conchology*, **37**(2), 177-183

Baker, R, Clarke, K & Howlett, D (1999) A survey of the Broadland distribution of *Pseudamnicola confusa* (Frauenfeld). *English Nature Research Reports*, No. **319**

Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough

Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough. [www.jncc.gov.uk/SACselection](http://www.jncc.gov.uk/SACselection)

Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. [www.wwt.org.uk/publications/default.asp?PubID=14](http://www.wwt.org.uk/publications/default.asp?PubID=14)

Pritchard, DE, Housden, SD, Mudge, GP, Galbraith, CA & Pienkowski, MW (eds.) (1992) *Important Bird Areas in the United Kingdom including the Channel Islands and the Isle of Man*. Royal Society for the Protection of Birds, Sandy

- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Shirt, DB (ed.) (1987) *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough
- Stewart, NF (2004) *Important stonewort areas. An assessment of the best areas for stoneworts in the United Kingdom*. Plantlife International, Salisbury
- Stewart, NF & Church, JM (1992) *Red Data Books of Britain and Ireland: Stoneworts*. Joint Nature Conservation Committee, Peterborough
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.)  
[www.jncc.gov.uk/UKSPA/default.htm](http://www.jncc.gov.uk/UKSPA/default.htm)
- O'Riordan, AM (1976) *A Broadland bibliography*. Nature Conservancy Council, England, East Anglia Region, Norwich (Internal report, Rep.NC.162B)
- Tickner, M, Evans, C & Blackburn, M (1991) Restoration of a Norfolk Broad: a case study of Strumpshaw Fen. *RSPB Conservation Review*, **5**, 72-77
- Wiggington, M (1999) *British Red Data Books. 1. Vascular plants*. 3rd edn. Joint Nature Conservation Committee, Peterborough

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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: [ramsar@ramsar.org](mailto:ramsar@ramsar.org)

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199407
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
00 57 36 E	51 48 57 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK54	Essex	100.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment				
		Resident	Breed	Winter	Stage	Population	Conservation	Isolation	Global
A059	<i>Aythya ferina</i>		<15 P			B		C	
A046a	<i>Branta bernicla bernicla</i>			4907 I		B		C	
A137	<i>Charadrius hiaticula</i>		<135 P			C		C	
A082	<i>Circus cyaneus</i>			<19 I		C		C	
A195	<i>Sterna albifrons</i>		>38 P			C		C	
A162	<i>Tringa totanus</i>			2077 I		C		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	52.0
Salt marshes. Salt pastures. Salt steppes	25.0
Coastal sand dunes. Sand beaches. Machair	1.0
Shingle. Sea cliffs. Islets	2.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	15.0
Alpine and sub-alpine grassland	
Improved grassland	5.0
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

#### Soil & geology:

Alluvium, Clay, Gravel, Mud, Neutral, Sand, Shingle

#### Geomorphology & landscape:

Coastal, Estuary, Intertidal sediments (including sandflat/mudflat), Islands, Lagoon, Lowland, Open coast (including bay), Shingle bar, Subtidal sediments (including sandbank/mudbank), Valley

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

#### During the breeding season the area regularly supports:

*Sterna albifrons*

(Eastern Atlantic - breeding)

at least 1.6% of the GB breeding population  
5 year mean, 1992-1996

#### Over winter the area regularly supports:

<i>Circus cyaneus</i>	up to 2.5% of the GB population No count period specified.
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**ARTICLE 4.2 QUALIFICATION (79/409/EEC)**

**During the breeding season the area regularly supports:**

<i>Aythya ferina</i> (North-western/North-eastern Europe)	up to 6% of the population in Great Britain 5 year mean, 1987-1991
<i>Charadrius hiaticula</i> (Europe/Northern Africa - wintering)	up to 1.6% of the population in Great Britain 5 year mean, 1987-1991

**Over winter the area regularly supports:**

<i>Branta bernicla bernicla</i> (Western Siberia/Western Europe)	1.6% of the population 5 year peak mean 1991/92-1995/96
<i>Tringa totanus</i> (Eastern Atlantic - wintering)	1.2% of the population 5 year peak mean 1991/92-1995/96

**ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS**

**Over winter the area regularly supports:**

38600 waterfowl (5 year peak mean 01/04/1998)

Including:

*Branta bernicla bernicla* , *Tringa totanus* .

**4.3 Vulnerability**

The Colne Estuary encompasses a diversity of soft coastal habitats, dependent upon natural coastal processes. The vulnerability of these habitats is linked to changes in the physical environment: the intertidal zone is threatened by coastal squeeze and changes to the sediment budget, especially up drift of the site. Limited beach feeding is under way to alleviate the sediment problem. The site is vulnerable to recreational pressures which can lead to habitat damage (salt marsh and sand dunes) and to disturbance of feeding and roosting waterfowl. Pressures for increased use and development of recreational facilities are being addressed through the planning system and under the provisions of the Habitat Regulations. Jet- and water-skiing are largely contained by the Harbour Authorities. Most grazing marshes are managed under ESA/ Countryside Stewardship Agreements, but low water levels are of great concern, and low freshwater flows into the estuary, may be affecting bird numbers and/or distribution. This is being addressed through reviews of consents under the Habitats Regulations. Unregulated samphire harvesting is being addressed by notifying all pickers of the legal implications of uprooting plants without the consent of landowners. To secure protection of the site, an Estuarine Management Plan is in preparation, which will work alongside the Essex SMP and the emerging Marine Scheme of Management. The Environment Agency's Local Plan aims to reduce the nutrient enrichment arising from sewage and fertiliser run-off.

**5. Site protection status and relation with CORINE biotopes:**

**5.1 Designation types at national and regional level**

Code	% cover
UK01 (NNR)	25.8
UK04 (SSSI/ASSI)	100.0

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Designated: 28 July 1994

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## 3. Country:

UK (England)

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## 4. Name of the Ramsar site:

Colne Estuary (Mid-Essex Coast Phase 2)

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

### b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:



**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ;

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

51 48 57 N                      00 57 36 E

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Colchester

The Colne Estuary lies about 3 km south-east of Colchester on the north Essex coast.

**Administrative region:** Essex

**10. Elevation (average and/or max. & min.) (metres):    11. Area (hectares): 2701.43**

Min.	-1
Max.	4
Mean	1

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Colne Estuary is a comparatively short and branching estuary, with five tidal arms which flow into the main river channel. The estuary has a narrow intertidal zone predominantly composed of flats of fine silt with mudflat communities typical of south-eastern estuaries. The estuary is of international importance for wintering Brent Geese and Black-tailed Godwit and of national importance for breeding Little Terns and five other species of wintering waders and wildfowl. The variety of habitats which include mudflat, saltmarsh, grazing marsh, sand and shingle spits, disused gravel pits and reedbeds, support outstanding assemblages of invertebrates and plants.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**1, 2, 3, 5, 6**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 1

The site is important due to the extent and diversity of saltmarsh present. This site, and the four other sites in the Mid-Essex Coast complex, includes a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total saltmarsh in Britain.

Ramsar criterion 2

The site supports 12 species of nationally scarce plants and at least 38 British Red Data Book invertebrate species.

Ramsar criterion 3

This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.

Ramsar criterion 5

**Assemblages of international importance:**

**Species with peak counts in winter:**

32041 waterfowl (5 year peak mean 1998/99-2002/2003)

**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in winter:**

Dark-bellied brent goose, <i>Branta bernicla bernicla</i> ,	3165 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3)
Common redshank , <i>Tringa totanus totanus</i> ,	1624 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)

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

**Species with peak counts in winter:**

Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	402 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
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Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

See Sections 21/22 for details of noteworthy species

Details of bird species occurring at levels of National importance are given in Section 22

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	neutral, shingle, sand, mud, clay, alluvium, sedimentary, pebble
Geomorphology and landscape	lowland, island, coastal, valley, shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay), estuary, islands, lagoon, cliffs
Nutrient status	eutrophic
pH	circumneutral
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Lowestoft, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html">www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html</a> ) Max. daily temperature: 13.0° C Min. daily temperature: 7.0° C Days of air frost: 27.8 Rainfall: 576.3 mm Hrs. of sunshine: 1535.5

**General description of the Physical Features:**

The Colne Estuary is a comparatively short and branching estuary, with five tidal arms that flow into the main channel of the River Colne. The estuary has a narrow intertidal zone predominantly composed of flats of fine silt with mudflat communities typical of south-eastern English estuaries.

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The catchment area of the River Colne is approximately 250 km<sup>2</sup> to the tidal limit. Being a long and narrow catchment it has few tributaries, with most contributions being from field drains or minor watercourses. The Colne Estuary is a comparatively short and branching estuary, with five tidal arms that flow into the main channel of the River Colne. The estuary has a narrow intertidal zone predominantly composed of flats of fine silt with mudflat communities typical of south-eastern English estuaries.

**18. Hydrological values:**

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces

**19. Wetland types:**

Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	30
H	Salt marshes	25
Tp	Freshwater marshes / pools: permanent	20
F	Estuarine waters	19

E	Sand / shingle shores (including dune systems)	3
J	Coastal brackish / saline lagoons	2
B	Marine beds (e.g. sea grass beds)	1

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## 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The Colne Estuary has a narrow intertidal zone predominantly composed of flats of fine silt with mudflat communities typical of south-eastern estuaries. The fauna is dominated by *Hydrobia ulvae* with *Macoma balthica*, *Scrobicularia plana*, *Hediste diversicolor*, and *Nephtys hombergii*. Towards the mouth of the estuary the substratum becomes more sandy; *Zostera noltei* and *Zostera marina* have been recorded at Sandy Point.

Saltmarsh has colonised a large proportion of the estuary at Geedon Saltings, Colne Point and the Strood. The majority of this is high-level marsh dominated by saltmarsh grass *Puccinellia maritima*, sea purslane *Atriplex portulacoides* and annual seablite *Suaeda maritima* while the creek edges and disused oyster pits have been colonised by glasswort *Salicornia* spp, sea aster *Aster tripolium*, and cord grass *Spartina* spp. There are extensive saltpans on Geedon Saltings and Colne Point where there is a shorter sward of saltmarsh grass, thrift *Armeria maritima* and common sea-lavender *Limonium vulgare*. Nationally uncommon species such as golden samphire *Inula crithmoides* and shrubby sea blite *Suaeda vera* occur frequently in the upper marsh and at the foot of the sea-walls. Shrubby sea blite is particularly extensive at Colne Point where there is a transition from saltmarsh to sand dune and shingle. This transition habitat is also important for the nationally uncommon rock sea-lavender *Limonium binervosum* and is one of the few East Anglian sites for sea heath *Frankenia laevis*.

Ecosystem services

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## 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

### Nationally important species occurring on the site.

#### Higher Plants.

*Bupleurum tenuissimum* (nationally scarce), *Carex divisa* (nationally scarce), *Frankenia laevis* (nationally scarce), *Hordeum marinum* (nationally scarce), *Inula crithmoides* (nationally scarce), *Limonium binervosum* (RDB Lower risk – near threatened), *Sarcocornia perennis* (nationally scarce), *Salicornia pusilla* (nationally scarce), *Spartina maritima* (nationally scarce), *Suaeda vera* (nationally scarce), *Zostera marina* (nationally scarce), *Zostera noltei* (nationally scarce).

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## 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

#### Birds

#### Species currently occurring at levels of national importance:

#### Species regularly supported during the breeding season:

Mediterranean gull , <i>Larus melanocephalus</i> , Europe	2 apparently occupied nests, representing an average of 1.8% of the GB population (Seabird 2000 Census)
Black-headed gull , <i>Larus ridibundus</i> , N & C Europe	2300 apparently occupied nests, representing an average of 1.7% of the GB population (Seabird 2000 Census)
Little tern , <i>Sterna albifrons albifrons</i> , W Europe	20 apparently occupied nests, representing an average of 1% of the GB population (Seabird 2000 Census)
<b>Species with peak counts in spring/autumn:</b>	
Ringed plover , <i>Charadrius hiaticula</i> , Europe/Northwest Africa	361 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	3 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9-2002/3)
<b>Species with peak counts in winter:</b>	
Little egret , <i>Egretta garzetta</i> , West Mediterranean	20 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3)
Common shelduck , <i>Tadorna tadorna</i> , NW Europe	840 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Hen harrier, <i>Circus cyaneus</i> , Europe	<19 individuals, representing an average of 2.5% of the GB population (5 year mean 1987-1991)
Water rail , <i>Rallus aquaticus</i> , Europe	5 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Pied avocet , <i>Recurvirostra avosetta</i> , Europe/Northwest Africa	376 individuals, representing an average of 11% of the GB population (5 year peak mean 1998/9-2002/3)
European golden plover , <i>Pluvialis apricaria</i> <i>apricaria</i> , P. a. altifrons Iceland & Faroes/E Atlantic	3665 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Grey plover , <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering	1124 individuals, representing an average of 2.1% of the GB population (5 year peak mean 1998/9-2002/3)
Dunlin , <i>Calidris alpina alpina</i> , W Siberia/W Europe	7939 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)

### Species Information

#### Nationally important species occurring on the site.

#### Invertebrates.

*Dyschirius extensus* (RDB3), *Coleophora fuscicornis* (potential RDB1), *Ethmia terminella* (potential RDB2), *Lestes dryas* (RDB2), *Polistichus connexus* (RDB3), *Aethes margarotana* (RDB2), *Cnaemidophorus rhododactyla* (potential RDB2), *Coleophora wockeella* (potential RDB2), *Neofriseria singula* (potential RDB2), *Aedes flavescens* (RDB2), *Erioptera bivittata* (RDB2), *Stratiomys longicornis* (RDB2), *Hybomitra expollicata* (RDB3), *Heliophanus auratus* (RDB2), *Trichoncus hackmani* (RDB2), *Trichoptera cito* (RDB2), *Baris scolopacea* (RDB3), *Graptodytes bilineatus* (RDB3), *Philonthus punctus* (RDB3), *Eupithecia extensaria* (RDB3), *Idaea ochrata* (RDB3), *Malacosoma castrensis* (RDB3), *Ancylis upupana* (potential RDB3), *Eucosma catoptyrana* (pRDB3), *Eucosma maritima*, *Nyctegretis lineana* (potential RDB3), *Platyptilia calodactyla* (potential RDB3), *Platytes alpinella* (potential RDB3), *Stigmella samiatella* (potential RDB3), *Yponomeuta rorrella* (potential RDB3), *Campsicnemus magius* (RDB3), *Haematopota bigoti* (RDB3), *Hybomitra ciureai* (RDB3), *Limonia danica* (RDB2), *Myrmica specioles* (RDB3), *Arctosa fulvolineata* (RDB3), *Euophrys browningo* (rare and endemic to Great Britain. A UKBAP species) and *Haplodrassus minor* (RDB3).

### 23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Aquatic vegetation (e.g. reeds, willows, seaweed)
- Archaeological/historical site
- Environmental education/ interpretation
- Fisheries production
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Tourism
- Transportation/navigation

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

### 24. Land tenure/ownership:

Ownership category	On-site	Off-site
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Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	+
Private	+	+
Other	+	+

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**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	
Tourism	+	+
Recreation	+	+
Current scientific research	+	
Collection of non-timber natural products: commercial	+	
Collection of non-timber natural products: subsistence	+	
Cutting of vegetation (small-scale/subsistence)	+	
Fishing: commercial	+	+
Fishing: recreational/sport	+	
Freshwater aquaculture	+	
Bait collection	+	
Permanent arable agriculture		+
Livestock watering hole/pond	+	
Permanent pastoral agriculture	+	
Hunting: recreational/sport	+	
Industry	+	
Sewage treatment/disposal		+
Harbour/port	+	
Flood control	+	
Irrigation (incl. agricultural water supply)		+
Urban development	+	
Military activities	+	+

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**26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:**

*Explanation of reporting category:*

1. *Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.*
2. *Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.*

*NA = Not Applicable because no factors have been reported.*

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2		+		+
Pollution – agricultural fertilisers	2	Run off from adjacent agricultural land		+	
Pollution – pesticides/agricultural runoff	2	Run off from adjacent agricultural land		+	

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?  
 Erosion - The Essex Coast and Estuaries Coastal Habitat Management Plan (CHaMP) (Anon. 2002) covers the site and it is expected to inform the shoreline management plan as well as local plan policies.

It is proposed at strategic level to consider opportunities for managed realignment.

Pollution – agricultural fertilisers - The Water Framework Directive and new Agri-Environment Schemes are expected to address this factor.

Pollution – pesticides/agricultural runoff - The Water Framework Directive and new Agri-Environment Schemes are expected to address this factor.

Is the site subject to adverse ecological change? YES

**27. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	+
National Nature Reserve (NNR)	+	
Special Protection Area (SPA)	+	



Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	
Site management statement/plan implemented	+	
Environmentally Sensitive Area (ESA)	+	+
Special Area of Conservation (SAC)	+	
Management plan in preparation	+	

**b) Describe any other current management practices:**

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

**29. Current scientific research and facilities:**

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

**Fauna.**

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

**Environment.**

Foreshore monitoring by EA.

**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Essex Wildlife Trust have an education officer based near the site. The Colne Estuary Project has been established.

**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

**Activities, Facilities provided and Seasonality.**

Holiday camps: March to October (some all year).

Dog walking: all year - no facilities.

Bird watching - all year - there are nature reserves and hides.

Sailing: predominantly summer - there are marinas and moorings for boats.

Jet-skiing: summer only - there is a licensed area and access to open water provided at West Mersea.

Water-skiing: predominantly summer - there is a licensed area.

**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

### 34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

#### Site-relevant references

- Anon. (2002) *Essex Coast and Estuaries Coastal Habitat Management Plan: Executive summary*. English Nature, Peterborough (Living with the Sea LIFE Project). [www.english-nature.org.uk/livingwiththesea/champs/pdf/ESSEX.FINALEXEC.SUMMARY.pdf](http://www.english-nature.org.uk/livingwiththesea/champs/pdf/ESSEX.FINALEXEC.SUMMARY.pdf)
- Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)
- Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough
- Bridgland, DR (1994) *Quaternary of the Thames*. Chapman & Hall, London, for Joint Nature Conservation Committee, Peterborough (Geological Conservation Review Series, No. 7)
- Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 5. Eastern England*. Joint Nature Conservation Committee, Peterborough
- Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes*. Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)
- Cottle, R, Pethick, J & Dalton, H (2002) *Essex Estuaries Coastal Habitat Management Plan: final report*. English Nature, Peterborough (Living with the Sea LIFE Project)
- Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)
- Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge
- Davidson, NC, Laffoley, D d'A, Doody, JP, Way, LS, Gordon, J, Key, R, Pienkowski, MW, Mitchell, R & Duff, KL (1991) *Nature conservation and estuaries in Great Britain*. Nature Conservancy Council, Peterborough
- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
- Hill, TO, Emblow, CS & Northen, KO (1996) *Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)
- McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough. [www.jncc.gov.uk/SACselection](http://www.jncc.gov.uk/SACselection)
- Musgrove, AJ, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)
- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. [www.wwt.org.uk/publications/default.asp?PubID=14](http://www.wwt.org.uk/publications/default.asp?PubID=14)
- Pritchard, DE, Housden, SD, Mudge, GP, Galbraith, CA & Pienkowski, MW (eds.) (1992) *Important Bird Areas in the United Kingdom including the Channel Islands and the Isle of Man*. Royal Society for the Protection of Birds, Sandy
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Shirt, DB (ed.) (1987) *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.) [www.jncc.gov.uk/UKSPA/default.htm](http://www.jncc.gov.uk/UKSPA/default.htm)
- Worley, A & Simpson, M (1998) Littoral and sublittoral biotope mapping and data capture exercise for the Essex estuaries candidate Marine Special Area of Conservation. *English Nature Research Reports*, No. 305

Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
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# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199603
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 20 44 E	52 02 31 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment			
		Resident	Migratory		Population	Conservation	Isolation	Global
Breed	Winter	Stage						
A046a	<i>Branta bernicla bernicla</i>		2516 I		B		C	
A132	<i>Recurvirostra avosetta</i>		95 I		B		B	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	80.0
Salt marshes. Salt pastures. Salt steppes	18.0
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	1.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	1.0
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

#### Soil & geology:

Mud, Sedimentary

#### Geomorphology & landscape:

Coastal, Estuary, Intertidal sediments (including sandflat/mudflat), Lowland, Valley

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

##### Over winter the area regularly supports:

*Recurvirostra avosetta*

(Western Europe/Western Mediterranean - breeding)

7.5% of the GB population

5 year peak mean 1991/92-1995/96

#### ARTICLE 4.2 QUALIFICATION (79/409/EEC)

##### Over winter the area regularly supports:

*Branta bernicla bernicla*  
(Western Siberia/Western Europe)

0.8% of the population  
5 year peak mean 1991/92-1995/96

### 4.3 Vulnerability

The saltmarsh and intertidal habitats are vulnerable to sea level rise and coastal squeeze. These issues are being addressed through the Environment Agency LEAP, the estuary Shoreline Management Plan and research into possible managed retreat in parts of the site.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Designated: 11 March 1996

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## 3. Country:

UK (England)

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## 4. Name of the Ramsar site:

Deben Estuary

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

### b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

52 02 31 N                      01 20 44 E

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Ipswich

Deben Estuary is located in East Anglia, on the east coast of Suffolk. It extends 18 km from the tidal limit above Wilford Bridge near Woodbridge, south to the mouth of the estuary at Felixstowe.

**Administrative region:** Suffolk

**10. Elevation** (average and/or max. & min.) (metres):    **11. Area** (hectares): 978.93

Min.	-1
Max.	4
Mean	1

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

This estuary is relatively narrow and sheltered. It has limited amounts of freshwater input and the intertidal areas are constrained by sea-walls. The site supports nationally and internationally-important flora and fauna.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**2, 6**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 2

Supports a population of the mollusc *Vertigo angustior* (Habitats Directive Annex II (S1014); British Red Data Book Endangered). Martlesham Creek is one of only about fourteen sites in Britain where this species survives.



**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in winter:**

Dark-bellied brent goose, *Branta bernicla bernicla*, 1953 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	mud, sedimentary
Geomorphology and landscape	lowland, coastal, valley, intertidal sediments (including sandflat/mudflat), estuary
Nutrient status	eutrophic
pH	no information
Salinity	saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Lowestoft, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html">www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html</a> ) Max. daily temperature: 13.0° C Min. daily temperature: 7.0° C Days of air frost: 27.8 Rainfall: 576.3 mm Hrs. of sunshine: 1535.5

**General description of the Physical Features:**

The Deben Estuary extends south-eastwards for over 12 km from the town of Woodbridge to the sea just north of Felixstowe. It is relatively narrow and sheltered, and has limited amounts of freshwater input. The estuary mouth is the narrowest section and is protected by the presence of shifting sandbanks. The intertidal areas are constrained by sea-walls. The saltmarsh and intertidal mudflats that occupy the majority of the site, however, display the

most complete range of saltmarsh community types in Suffolk. The estuary holds a range of swamp communities that fringe the estuary, and occasionally form larger stands. In general, these are dominated by common reed *Phragmites australis*.

### 17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The Deben Estuary extends south-eastwards for over 12 km from the town of Woodbridge to the sea just north of Felixstowe. It is relatively narrow and sheltered, and has limited amounts of freshwater input. The estuary mouth is the narrowest section and is protected by the presence of shifting sandbanks. The intertidal areas are constrained by sea-walls. The saltmarsh and intertidal mudflats that occupy the majority of the site, however, display the most complete range of saltmarsh community types in Suffolk.

### 18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

No special values known

### 19. Wetland types:

Marine/coastal wetland

Code	Name	% Area
H	Salt marshes	46.8
G	Tidal flats	36.8
F	Estuarine waters	15.3
U	Peatlands (including peat bogs swamps, fens)	1
E	Sand / shingle shores (including dune systems)	0.1

### 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The estuary supports a highly complex mosaic of habitat types including:

mudflats, lower and upper saltmarsh, swamp and scrub. The composition of the mosaic varies with substrate, frequency and duration of tidal inundation, exposure, location and management.

Ecosystem services

### 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

#### Nationally important species occurring on the site.

##### Higher Plants.

*Althaea officinalis*, *Bupleurum tenuissimum*, *Lepidium latifolium*, *Puccinellia fasciculata*, *Sarcocornia perennis*, *Suaeda vera*, *Zostera angustifolia* are nationally scarce plants associated with estuarine habitats.

**22. Noteworthy fauna:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Birds****Species currently occurring at levels of national importance:****Species with peak counts in spring/autumn:**

Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	307 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	22 individuals, representing an average of 3.6% of the GB population (5 year peak mean 1998/9-2002/3)

**Species with peak counts in winter:**

Bean goose , <i>Anser fabalis fabalis</i> , NW Europe - wintering	5 individuals, representing an average of 1.2% of the GB population (Source period not collated)
Common shelduck , <i>Tadorna tadorna</i> , NW Europe	832 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Pied avocet , <i>Recurvirostra avosetta</i> , Europe/Northwest Africa	167 individuals, representing an average of 4.9% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	3 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9-2002/3)
Common redshank , <i>Tringa totanus totanus</i> ,	2124 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)

**Species Information****Nationally important species occurring on the site.****Invertebrates.**

*Vertigo angustior* (Nationally Scarce)

*Vertigo pusilla* (Nationally Scarce)

**23. Social and cultural values:**

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Fisheries production
- Non-consumptive recreation
- Sport fishing
- Sport hunting
- Tourism
- Transportation/navigation

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

**24. Land tenure/ownership:**

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	+
National/Crown Estate	+	
Private	+	+

**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Cutting of vegetation (small-scale/subsistence)	+	
Fishing: commercial	+	
Fishing: recreational/sport	+	
Bait collection	+	
Arable agriculture (unspecified)		+
Grazing (unspecified)	+	+
Hunting: recreational/sport	+	
Flood control		+
Irrigation (incl. agricultural water supply)		+
Urban development		+
Non-urbanised settlements		+

**26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:**

Explanation of reporting category:

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2	Coastal squeeze within the Deben Estuary	+		+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors? Erosion - English Nature provides advice to the Environment Agency and coastal local authorities in relation to flood and coastal protection management. This will inform the development of the Suffolk Estuaries strategies and the second generation shoreline management plan.

Is the site subject to adverse ecological change? YES

**27. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Site management statement/plan implemented	+	
Other	+	+
Area of Outstanding National Beauty (AONB)	+	
Environmentally Sensitive Area (ESA)	+	

**b) Describe any other current management practices:**

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

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**29. Current scientific research and facilities:**

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

**Fauna.**

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

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**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

None reported

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**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

**Activities.**

Boating and walking locally and bird watching centred on Martlesham Creek and Felixstowe Ferry. Fishing.

**Facilities provided.**

Moorings along the river at Woodbridge, Waldring Field, Ramsholt.

**Seasonality.**

Activities are predominantly undertaken during the summer especially fishing, as this is when thin-lipped grey mullet *Liza ramada* enter the estuary.

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**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

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**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

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**34. Bibliographical references:**

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

**Site-relevant references**

Anon. (2002) *Suffolk Coast and Estuaries Coastal Habitat Management Plan: Executive summary*. English Nature, Peterborough (Living with the Sea LIFE Project) [www.english-nature.org.uk/livingwiththesea/project\\_details/good\\_practice\\_guide/HabitatCRR/ENRestore/CHaMPs/SuffolkCoast/SuffolkCHaMP.pdf](http://www.english-nature.org.uk/livingwiththesea/project_details/good_practice_guide/HabitatCRR/ENRestore/CHaMPs/SuffolkCoast/SuffolkCHaMP.pdf)

Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)

Beardall, CH, Dryden, RC & Holzer, TJ (1988) *The Suffolk estuaries: a report...on the wildlife and conservation of the Suffolk estuaries*. Suffolk Wildlife Trust, Saxmundham [accompanied by separate volume, *Suffolk estuaries bibliography*]

- Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough
- Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 5. Eastern England*. Joint Nature Conservation Committee, Peterborough
- Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes*. Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)
- Carter, I (1994) *Departmental Brief: the Deben Estuary proposed Special Protection Area and Ramsar site (926A)*. English Nature (Ornithology Section), Peterborough
- Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)
- Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge
- Davidson, NC, Laffoley, D d'A, Doody, JP, Way, LS, Gordon, J, Key, R, Pienkowski, MW, Mitchell, R & Duff, KL (1991) *Nature conservation and estuaries in Great Britain*. Nature Conservancy Council, Peterborough
- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
- Hill, TO, Emblow, CS & Northen, KO (1996) *Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)
- McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough. [www.jncc.gov.uk/SACselection](http://www.jncc.gov.uk/SACselection)
- Musgrove, AJ, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)
- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. [www.wwt.org.uk/publications/default.asp?PubID=14](http://www.wwt.org.uk/publications/default.asp?PubID=14)
- Pritchard, DE, Housden, SD, Mudge, GP, Galbraith, CA & Pienkowski, MW (eds.) (1992) *Important Bird Areas in the United Kingdom including the Channel Islands and the Isle of Man*. Royal Society for the Protection of Birds, Sandy
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.) [www.jncc.gov.uk/UKSPA/default.htm](http://www.jncc.gov.uk/UKSPA/default.htm)
- Suffolk Wildlife Trust (1993) *National Vegetation Classification of the saltmarsh of the Deben, Alde–Ore and Blyth estuaries, Suffolk*. Suffolk Wildlife Trust, Saxmundham

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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
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# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

1.5 Relationship with other Natura 2000 sites

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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1.6 Respondent(s)

1.7 Site name

### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	200107
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 30 02 E	52 17 31 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

#### 2.6 Biogeographic region

Alpine
  Atlantic
  Boreal
  Continental
  Macaronesia
  Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment



### 3.2 Annex II species

Species name	Population			Site assessment				
	Resident	Migratory			Population	Conservation	Isolation	Global
		Breed	Winter	Stage				
<i>Triturus cristatus</i>	101-250	-	-	-	C	B	C	B

## 4. Site description

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	4.0
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	85.0
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	10.0
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	1.0
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

<p><b>Soil &amp; geology:</b> Clay, Neutral</p> <p><b>Geomorphology &amp; landscape:</b> Lowland</p>
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### 4.2 Quality and importance

<p><i>Triturus cristatus</i></p> <ul style="list-style-type: none"> <li>for which this is considered to be one of the best areas in the United Kingdom.</li> </ul>
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### 4.3 Vulnerability

<p>The majority of ponds and grassland are under sympathetic conservation management from one landowner and therefore not vulnerable. The remaining ponds, in different ownership, are vulnerable to lack of appropriate management such as stocking with fish. Countryside Management has been applied for and a Site Management Statement will be prepared for these ponds.</p>
---

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

U	K	9	0	0	9	1	7	1
U	K	9	0	0	9	2	4	2
U	K	9	0	0	9	2	4	3
U	K	9	0	0	9	2	4	4
U	K	9	0	0	9	2	4	5
U	K	9	0	0	9	2	4	6

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	199610
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 02 37 E	51 42 06 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK54	Essex	13.27%
0	Marine	86.73%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Sandbanks which are slightly covered by sea water all the time	3.89	B	C	C	C
Estuaries	40.93	A	B	B	B
Mudflats and sandflats not covered by seawater at low tide	51.16	A	B	B	B
Perennial vegetation of stony banks	0	D			
<i>Salicornia</i> and other annuals colonising mud and sand	0.72	A	B	A	A
<i>Spartina</i> swards ( <i>Spartinion maritimae</i> )	0.04	A	A	A	A
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	7.37	B	B	A	B
Mediterranean and thermo-Atlantic halophilous scrubs ( <i>Sarcocornetea fruticosi</i> )	0.05	B	A	A	A
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")	0	D			

#### 3.2 Annex II species

Species name	Population				Site assessment			
	Resident	Migratory			Population	Conservation	Isolation	Global
		Breed	Winter	Stage				
<i>Alosa alosa</i>	Rare	-	-	-	D			
<i>Alosa fallax</i>	Very rare	-	-	-	D			
<i>Phoca vitulina</i>	Present	-	-	-	D			

### 4. Site description

#### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	30.0
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	56.5
Salt marshes. Salt pastures. Salt steppes	11.0
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	0.5
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	2.0
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

#### 4.1 Other site characteristics

**Soil & geology:**

Clay, Cobble, Mud, Neutral, Nutrient-rich, Pebble, Sand, Sedimentary, Shingle

**Geomorphology & landscape:**

Coastal, Estuary, Floodplain, Intertidal sediments (including sandflat/mudflat), Islands, Lowland, Open coast (including bay), Subtidal sediments (including sandbank/mudbank)

#### 4.2 Quality and importance

Sandbanks which are slightly covered by sea water all the time

- for which the area is considered to support a significant presence.

Estuaries

- for which this is considered to be one of the best areas in the United Kingdom.

Mudflats and sandflats not covered by seawater at low tide

- for which this is considered to be one of the best areas in the United Kingdom.

*Salicornia* and other annuals colonising mud and sand

- for which this is considered to be one of the best areas in the United Kingdom.

*Spartina* swards (*Spartinion maritimae*)

- for which this is one of only two known outstanding localities in the United Kingdom.
- which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 100 hectares.

Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

- for which this is considered to be one of the best areas in the United Kingdom.

Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)

- for which this is one of only four known outstanding localities in the United Kingdom.
- which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares.

#### 4.3 Vulnerability

The saltmarshes and mudflats are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. These habitats are also vulnerable to plans or projects (onshore and offshore) which have impacts on sediment transport. English Nature's Regulation 33 advice was issued June 2000. A scheme of management is being established with the aim of addressing such problems.

### 5. Site protection status and relation with CORINE biotopes:

#### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	8.3
UK00 (N/A)	55.2
UK04 (SSSI/ASSI)	44.8

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

1.5 Relationship with other Natura 2000 sites

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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1.6 Respondent(s)

1.7 Site name

### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199306
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 14 29 E	51 52 46 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK54	Essex	100.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment			
		Resident	Migratory		Population	Conservation	Isolation	Global
Breed	Winter	Stage						
A052	<i>Anas crecca</i>		3631 I		B		C	
A046a	<i>Branta bernicla bernicla</i>		6892 I		B		C	
A137	<i>Charadrius hiaticula</i>		520 I		C		C	
A156	<i>Limosa limosa islandica</i>		1121 I		A		C	
A141	<i>Pluvialis squatarola</i>		3251 I		B		C	
A132	<i>Recurvirostra avosetta</i>		317 I		A		B	
A195	<i>Sterna albifrons</i>	55 P			B		C	
A048	<i>Tadorna tadorna</i>		1629 I		B		C	
A162	<i>Tringa totanus</i>		1461 I		C		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	70.0
Salt marshes. Salt pastures. Salt steppes	25.0
Coastal sand dunes. Sand beaches. Machair	1.0
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	1.0
Bogs. Marshes. Water fringed vegetation. Fens	2.0
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	1.0
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

#### Soil & geology:

Alluvium, Clay, Mud, Neutral, Sand

#### Geomorphology & landscape:

Barrier beach, Coastal, Enclosed coast (including embayment), Estuary, Floodplain, Intertidal sediments (including sandflat/mudflat), Islands, Lagoon, Lowland, Open coast (including bay), Subtidal sediments (including sandbank/mudbank)

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

During the breeding season the area regularly supports:

<i>Sterna albifrons</i> (Eastern Atlantic - breeding)	2.3% of the GB breeding population 4 year mean 1992-1995
<b>Over winter the area regularly supports:</b>	
<i>Recurvirostra avosetta</i> (Western Europe/Western Mediterranean - breeding)	25% of the GB population 5 year peak mean 1991/92-1995/96

<b>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</b>	
<b>Over winter the area regularly supports:</b>	
<i>Anas crecca</i> (North-western Europe)	2.7% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Branta bernicla bernicla</i> (Western Siberia/Western Europe)	2.3% of the population 5 year peak mean 1991/92-1995/96
<i>Charadrius hiaticula</i> (Europe/Northern Africa - wintering)	1.1% of the population 5 year peak mean 1991/92-1995/96
<i>Limosa limosa islandica</i> (Iceland - breeding)	1.7% of the population 5 year peak mean 1991/92-1995/96
<i>Pluvialis squatarola</i> (Eastern Atlantic - wintering)	7.5% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Tadorna tadorna</i> (North-western Europe)	2.2% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Tringa totanus</i> (Eastern Atlantic - wintering)	0.8% of the population 5 year peak mean 1991/92-1995/96

### 4.3 Vulnerability

The main vulnerability is due to natural changes in sea level, leading to accelerated erosion of saltmarshes. The problem is being addressed in two ways; use of sand and gravels from dredging in Harwich harbour to reinforce existing beaches and protecting grazing marsh areas by reinforcing seawall toe with these materials in the most aggressive areas. The option of managed realignment may be considered in the future.

The nature of the site leads to potential water quality problems due to discharge from boats and from local sewage works as well as small industrial discharges. English Nature is addressing this problem with Water Quality Control officers of the Environment Agency (monitoring) and any authorised discharges will be reviewed under the provisions of the Habitat Regulations.

Although a secluded backwater the site attracts a large number of yachts and accompanying watersports. There is occasional disturbance to the site by water and jet skiers. This is controlled by a wardening scheme.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	64.8
UK04 (SSSI/ASSI)	100.0





# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Designated: 08 June 1993

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## 3. Country:

UK (England)

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## 4. Name of the Ramsar site:

Hamford Water

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

### b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* □;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* □;

b) **Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

51 52 46 N 01 14 29 E

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Harwich

Hamford Water is a tidal inlet whose mouth is about 5 km south of Harwich, Essex.

**Administrative region:** Essex

**10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 2187.21**

Min.	-1
Max.	3
Mean	1

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Hamford Water is a large, shallow estuarine basin comprising tidal creeks and islands, intertidal mud and sand flats, and saltmarsh supporting rare plants and internationally important species/populations of migratory waterfowl.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**6**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

**Ramsar criterion 6 – species/populations**

occurring at levels of international importance.

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in spring/autumn:**

Ringed plover , <i>Charadrius hiaticula</i> , Europe/Northwest Africa	1169 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)
Common redshank , <i>Tringa totanus totanus</i> ,	2099 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)

**Species with peak counts in winter:**

Dark-bellied brent goose, <i>Branta bernicla bernicla</i> ,	3629 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)
Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	377 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)

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

**Species with peak counts in winter:**

Grey plover , <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering	2749 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
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Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	neutral, shingle, sand, mud, clay, alluvium, sedimentary
Geomorphology and landscape	lowland, coastal, floodplain, barrier beach, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), estuary, islands, lagoon, pools
Nutrient status	eutrophic
pH	strongly alkaline
Salinity	brackish / mixosaline, fresh
Soil	mainly organic
Water permanence	usually permanent

Summary of main climatic features	<p>Annual averages (Lowestoft, 1971–2000)                  (www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html)                  Max. daily temperature: 13.0° C                  Min. daily temperature: 7.0° C                  Days of air frost: 27.8                  Rainfall: 576.3 mm                  Hrs. of sunshine: 1535.5</p>
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**General description of the Physical Features:**

Hamford Water is a large, shallow estuarine basin comprising tidal creeks and islands, intertidal mud- and sand-flats, and saltmarsh.

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

Hamford Water is a large, shallow estuarine basin comprising tidal creeks and islands, intertidal mud- and sand-flats, and saltmarsh.

**18. Hydrological values:**

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping, Recharge and discharge of groundwater, Maintenance of water quality (removal of nutrients)

**19. Wetland types:**

Human-made wetland, Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	69.5
H	Salt marshes	25
E	Sand / shingle shores (including dune systems)	2
9	Canals and drainage channels	1
5	Salt pans, salines	0.5
Tp	Freshwater marshes / pools: permanent	0.5
O	Freshwater lakes: permanent	0.5
K	Coastal fresh lagoons	0.5
J	Coastal brackish / saline lagoons	0.5

**20. General ecological features:**

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The main habitat types of this site are, intertidal mud and sand flats; and saltmarsh.

The main vegetation types of this site consist of pioneer saltmarsh communities; *Salicornia sp.*, *Suaeda maritima* and *Spartina maritima*. Mature saltmarsh communities; *Limonium binervosum* and *Atriplex portulacoides*, *Puccinellia sp.* and eelgrass *Zostera sp.* beds

Ecosystem services

**21. Noteworthy flora:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Nationally important species occurring on the site.****Higher Plants.**

*Peucedanum officinale* (nationally rare RDB Lower risk – near threatened)

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**22. Noteworthy fauna:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Birds****Species currently occurring at levels of national importance:****Species regularly supported during the breeding season:**

Mediterranean gull , <i>Larus melanocephalus</i> , Europe	3 apparently occupied nests, representing an average of 2.7% of the GB population (Seabird 2000 Census)
Black-headed gull , <i>Larus ridibundus</i> , N & C Europe	11000 apparently occupied nests, representing an average of 8.5% of the GB population (Seabird 2000 Census)
Little tern , <i>Sterna albifrons albifrons</i> , W Europe	113 apparently occupied nests, representing an average of 5.8% of the GB population (Seabird 2000 Census)

**Species with peak counts in spring/autumn:**

Ruff , <i>Philomachus pugnax</i> , Europe/W Africa	28 individuals, representing an average of 4% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	3 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	76 individuals, representing an average of 12.7% of the GB population (5 year peak mean 1998/9-2002/3)

**Species with peak counts in winter:**

Common shelduck , <i>Tadorna tadorna</i> , NW Europe	1738 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian teal , <i>Anas crecca</i> , NW Europe	2684 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)
Pied avocet , <i>Recurvirostra avosetta</i> , Europe/Northwest Africa	388 individuals, representing an average of 11.4% of the GB population (5 year peak mean 1998/9-2002/3)
European golden plover , <i>Pluvialis apricaria</i> <i>apricaria</i> , P. a. <i>altifrons</i> Iceland & Faroes/E Atlantic	3021 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3)
Red knot , <i>Calidris canutus islandica</i> , W & Southern Africa (wintering)	3956 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)

**Species Information**

None reported

**23. Social and cultural values:**

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Fisheries production
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Tourism
- Transportation/navigation

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

**24. Land tenure/ownership:**

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	+
Private	+	+

**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	
Tourism		+
Recreation	+	
Current scientific research		+
Fishing: commercial	+	
Fishing: recreational/sport		+
Marine/saltwater aquaculture		+
Gathering of shellfish		+

Bait collection		+
Livestock watering hole/pond		+
Grazing (unspecified)		+
Rough or shifting grazing		+
Permanent pastoral agriculture		+
Hay meadows		+
Hunting: recreational/sport	+	
Industry		+
Sewage treatment/disposal		+
Harbour/port		+
Flood control	+	
Military activities		+

**26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:**

*Explanation of reporting category:*

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2		+		+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?  
 Erosion - There is a programme of recharge of dredged material from off-site that has alleviated some of the habitat loss on site. The Essex Coast and Estuaries Coastal Habitat Management Plan (CHaMP) (Anon. 2002) covers the site and it is expected to inform the shoreline management plan as well as local plan policies.  
 The possibility of managed realignment schemes to address erosion impacts may be considered.

Is the site subject to adverse ecological change? YES

**27. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	



National Nature Reserve (NNR)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	
Site management statement/plan implemented	+	

**b) Describe any other current management practices:**

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

**29. Current scientific research and facilities:**

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

**Fauna.**

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

There are also other bird counts and research on oysters.

**Environment.**

Hydrological monitoring.

Sedimentation monitoring.

Saltmarsh erosion.

**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Boat trips are available around the site.

**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

**Activities, Facilities provided and Seasonality.**

Yachting, walking, wildfowling and sport fishing occur on the site.

**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs,

European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

**34. Bibliographical references:**

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

**Site-relevant references**

- Anon. (2002) *Essex Coast and Estuaries Coastal Habitat Management Plan: Executive summary*. English Nature, Peterborough (Living with the Sea LIFE Project). [www.english-nature.org.uk/livingwiththesea/champs/pdf/ESSEX.FINALEXEC.SUMMARY.pdf](http://www.english-nature.org.uk/livingwiththesea/champs/pdf/ESSEX.FINALEXEC.SUMMARY.pdf)
- Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)
- Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 5. Eastern England*. Joint Nature Conservation Committee, Peterborough
- Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes*. Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)
- Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)
- Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge
- Davidson, NC, Laffoley, D d'A, Doody, JP, Way, LS, Gordon, J, Key, R, Pienkowski, MW, Mitchell, R & Duff, KL (1991) *Nature conservation and estuaries in Great Britain*. Nature Conservancy Council, Peterborough
- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
- Hill, TO, Emblow, CS & Northen, KO (1996) *Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)
- Musgrove, AJ, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)
- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. [www.wwt.org.uk/publications/default.asp?PubID=14](http://www.wwt.org.uk/publications/default.asp?PubID=14)
- Pritchard, DE, Housden, SD, Mudge, GP, Galbraith, CA & Pienkowski, MW (eds.) (1992) *Important Bird Areas in the United Kingdom including the Channel Islands and the Isle of Man*. Royal Society for the Protection of Birds, Sandy
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.) [www.jncc.gov.uk/UKSPA/default.htm](http://www.jncc.gov.uk/UKSPA/default.htm)

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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
 Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: [ramsar@ramsar.org](mailto:ramsar@ramsar.org)

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	199506
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 37 02 E	52 15 22 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

#### 2.6 Biogeographic region

Alpine
  Atlantic
  Boreal
  Continental
  Macaronesia
  Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Coastal lagoons	0.1	D			
Annual vegetation of drift lines	0.4	A	B	A	A

Perennial vegetation of stony banks	0.3	C	C	C	C
European dry heaths	40	B	C	A	B

### 3.2 Annex II species

Species name	Population				Site assessment			
	Resident	Migratory			Population	Conservation	Isolation	Global
		Breed	Winter	Stage				
<i>Triturus cristatus</i>	Present	-	-	-	D			

## 4. Site description

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	5.0
Shingle. Sea cliffs. Islets	15.0
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	20.0
Heath. Scrub. Maquis and garrigue. Phygrana	40.0
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	
Coniferous woodland	
Evergreen woodland	
Mixed woodland	20.0
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

<p><b>Soil &amp; geology:</b> Acidic, Sand, Shingle</p> <p><b>Geomorphology &amp; landscape:</b> Coastal, Lagoon, Lowland</p>
---

### 4.2 Quality and importance

<p>Annual vegetation of drift lines</p> <ul style="list-style-type: none"> <li>for which this is one of only four known outstanding localities in the United Kingdom.</li> <li>which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 100 hectares.</li> </ul> <p>Perennial vegetation of stony banks</p> <ul style="list-style-type: none"> <li>for which the area is considered to support a significant presence.</li> </ul> <p>European dry heaths</p> <ul style="list-style-type: none"> <li>for which this is considered to be one of the best areas in the United Kingdom.</li> </ul>
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### 4.3 Vulnerability

Dry heath: These heaths were formed through, and are dependent upon, active management. Without grazing or cutting of heather, scrub and tree invasion onto the heaths is rapid and can be extensive. Bracken can also dominate large areas if suitable management has not been undertaken over the past decade. The heathland at Minsmere forms part of a RSPB reserve. The site management plan includes actions to ensure that open heathland is maintained and areas of scrub and bracken are cleared from former heath. Part of the cSAC is managed as Westleton Heath Nature Reserve.

Annual vegetation of drift lines: This habitat is maintained through the action of natural coastal processes upon the shoreline. The requirement for management is limited and is restricted to ensuring that significant human disturbance of the vegetated shore zone does not occur. This aspect of management is addressed through the RSPB visitor management plan.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	24.0
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199205
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 38 02 E	52 18 55 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

#### 2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment				
		Resident	Breed	Winter	Stage	Population	Conservation	Isolation	Global
A056	<i>Anas clypeata</i>		23 P			B		C	
A056	<i>Anas clypeata</i>			98 I		C		C	
A052	<i>Anas crecca</i>		73 P			B		C	
A051	<i>Anas strepera</i>			93 I		C		C	
A051	<i>Anas strepera</i>		24 P			B		C	
A041a	<i>Anser albifrons albifrons</i>			67 I		C		B	
A021	<i>Botaurus stellaris</i>		7 I			A		B	
A224	<i>Caprimulgus europaeus</i>		24 P			C		C	
A081	<i>Circus aeruginosus</i>		16 P			B		B	
A082	<i>Circus cyaneus</i>			15 I		C		C	
A132	<i>Recurvirostra avosetta</i>		47 P			B		B	
A195	<i>Sterna albifrons</i>		28 P			C		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	14.0
Salt marshes. Salt pastures. Salt steppes	8.0
Coastal sand dunes. Sand beaches. Machair	3.0
Shingle. Sea cliffs. Islets	3.0
Inland water bodies (standing water, running water)	4.0
Bogs. Marshes. Water fringed vegetation. Fens	15.0
Heath. Scrub. Maquis and garrigue. Phygrana	23.0
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	7.0
Other arable land	2.0
Broad-leaved deciduous woodland	16.0
Coniferous woodland	5.0
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

#### Soil & geology:

Acidic, Mud, Nutrient-poor, Peat, Sand, Shingle

#### Geomorphology & landscape:

Coastal, Estuary, Floodplain, Intertidal sediments (including sandflat/mudflat), Lagoon, Lowland, Open coast (including bay), Shingle bar

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

**During the breeding season the area regularly supports:**

<i>Botaurus stellaris</i> (Europe - breeding)	35% of the GB breeding population 5 year mean, 1993-1997
<i>Caprimulgus europaeus</i>	0.7% of the GB breeding population Count, as at 1990
<i>Circus aeruginosus</i>	10.2% of the GB breeding population 5 year mean, 1993-1997
<i>Recurvirostra avosetta</i> (Western Europe/Western Mediterranean - breeding)	10.4% of the GB breeding population Count, as at early 1990s
<i>Sterna albifrons</i> (Eastern Atlantic - breeding)	1.2% of the GB breeding population 5 year mean, 1992-1996
<b>Over winter the area regularly supports:</b>	
<i>Circus cyaneus</i>	2% of the GB population 5 year peak mean, 1985/6-1989/90

<b>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</b>	
<b>During the breeding season the area regularly supports:</b>	
<i>Anas clypeata</i> (North-western/Central Europe)	2.3% of the population in Great Britain Count, as at 1990
<i>Anas crecca</i> (North-western Europe)	4.9% of the population in Great Britain Count, as at 1990
<i>Anas strepera</i> (North-western Europe)	3.1% of the population in Great Britain Count, as at 1990
<b>Over winter the area regularly supports:</b>	
<i>Anas clypeata</i> (North-western/Central Europe)	1% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Anas strepera</i> (North-western Europe)	1.1% of the population in Great Britain 5 year peak mean 1991/92-1995/96
<i>Anser albifrons albifrons</i> (North-western Siberia/North-eastern & North-western Europe)	1.1% of the population in Great Britain 5 year peak mean 1991/92-1995/96

### 4.3 Vulnerability

The site is actively managed to prevent scrub and tree invasion of the heathlands grazing marshes and reedbeds. Much of the land is managed by conservation organisations and positively by private landowners through ESA and Countryside Stewardship schemes. The coastline is going to be pushed back by natural processes, this is being addressed in the Shoreline Management Plan. Alternative sites for reed bed creation are being sought to help offset the possible future natural losses.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	27.6



*UK SPA data form*

UK04 (SSSI/ASSI)	100.0
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# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

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DD MM YY

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Designated: 05 January 1976

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## 3. Country:

UK (England)

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## 4. Name of the Ramsar site:

Minsmere–Walberswick

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

### b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

52 18 55 N                      01 38 02 E

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Southwold

Composite site situated on the coast of Suffolk, between Southwold in the north and Sizewell in the south.

**Administrative region:** Suffolk

**10. Elevation** (average and/or max. & min.) (metres):    **11. Area** (hectares): 2018.92

Min.	-1
Max.	24
Mean	9

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

This composite, Suffolk coastal site contains a complex mosaic of habitats, notably, areas of marsh with dykes, extensive reedbeds, mudflats, lagoons, shingle and driftline, woodland and areas of lowland heath. The site supports the largest continuous stand of reed in England and Wales and demonstrates the nationally rare transition in grazing marsh ditch plants from brackish to fresh water. The combination of habitats create an exceptional area of scientific interest supporting nationally scarce plants, British Red Data Book invertebrates and nationally important numbers of breeding and wintering birds.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**1, 2**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 1

The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and rare transition in grazing marsh ditch plants from brackish to fresh water.

Ramsar criterion 2

This site supports nine nationally scarce plants and at least 26 red data book invertebrates.

Supports a population of the mollusc *Vertigo angustior* (Habitats Directive Annex II; British Red Data Book Endangered), recently discovered on the Blyth estuary river walls.

An important assemblage of rare breeding birds associated with marshland and reedbeds including: *Botaurus stellaris*, *Anas strepera*, *Anas crecca*, *Anas clypeata*, *Circus aeruginosus*, *Recurvirostra avosetta*, *Panurus biarmicus*

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	acidic, neutral, shingle, sand, peat, nutrient-poor, mud, alluvium
Geomorphology and landscape	lowland, coastal, valley, floodplain, shingle bar, intertidal sediments (including sandflat/mudflat), open coast (including bay), estuary, lagoon
Nutrient status	mesotrophic
pH	circumneutral
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	no information
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Lowestoft, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html">www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html</a> ) Max. daily temperature: 13.0° C Min. daily temperature: 7.0° C Days of air frost: 27.8 Rainfall: 576.3 mm Hrs. of sunshine: 1535.5

**General description of the Physical Features:**

Minsmere – Walberswick comprises two large marshes, the tidal Blyth estuary and associated habitats. This composite coastal site contains a complex mosaic of habitats, notably areas of marsh with dykes, extensive reedbeds, mudflats, lagoons, shingle, woodland and areas of lowland heath. It supports the largest continuous stand of common reed *Phragmites australis* in England and Wales, and demonstrates the nationally rare transition in grazing marsh ditch plants from brackish to fresh water.

### 17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

Minsmere – Walberswick comprises two large marshes, the tidal Blyth estuary and associated habitats. This composite coastal site contains a complex mosaic of habitats, notably areas of marsh with dykes, extensive reedbeds, mudflats, lagoons, shingle, woodland and areas of lowland heath.

### 18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

No special values known

### 19. Wetland types:

Marine/coastal wetland

Code	Name	% Area
Other	Other	30
U	Peatlands (including peat bogs swamps, fens)	30
G	Tidal flats	12.9
E	Sand / shingle shores (including dune systems)	12.4
H	Salt marshes	7.2
M	Rivers / streams / creeks: permanent	4
F	Estuarine waters	2.5
J	Coastal brackish / saline lagoons	1

### 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

This composite Suffolk coastal site contains a complex mosaic of habitats notably, areas of marsh with dykes, extensive reedbeds, mud flats, lagoons, shingle, woodland and areas of lowland heath. The site supports the largest continuous stand of reed *Phragmites australis* in England and Wales and nationally rare transition in grazing marsh ditch plants from brackish to fresh water. The combination of habitats create an exceptional area of scientific interest supporting nationally scarce plants, RDB invertebrates and nationally important numbers of breeding and wintering birds.

Ecosystem services

### 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

#### Nationally important species occurring on the site.

#### Higher Plants.

This is one of few sites nationally for red-tipped cudweed *Filago lutescens* (RDB2) which occurs on light, sandy soils.

The nationally rare species *Corynephorus canescens* (RDB3) occurs on coastal dune habitat.

The site supports a range of nationally scarce plant species characteristic of heathland, wetland and coastal habitats, and the transitions between them. *Althaea officinalis*, *Myriophyllum verticillatum*, *Ruppia cirrhosa*, *Sium latifolium*, *Sonchus palustris*, *Ceratophyllum submersum*, *Ranunculus baudotii*, and *Carex divisa* (all nationally scarce) are associated with reedbeds, grazing marsh or ditches. *Hordeum marinum* occurs on sea-walls, *Lathyrus japonicus* on coastal shingle, and *Crassula tillaea* on heathland.

## 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

### Birds

#### Species currently occurring at levels of national importance:

##### Species regularly supported during the breeding season:

Eurasian marsh harrier , <i>Circus aeruginosus</i> , Europe	16 pairs, representing an average of 10.5% of the GB population (5 year mean 1993-1997)
Mediterranean gull , <i>Larus melanocephalus</i> , Europe	2 apparently occupied nests, representing an average of 1.8% of the GB population (Seabird 2000 Census)
Black-headed gull , <i>Larus ridibundus</i> , N & C Europe	2558 apparently occupied nests, representing an average of 1.9% of the GB population (Seabird 2000 Census)
Little tern , <i>Sterna albifrons albifrons</i> , W Europe	20 apparently occupied nests, representing an average of 1% of the GB population (Seabird 2000 Census)

##### Species with peak counts in spring/autumn:

Great bittern , <i>Botaurus stellaris stellaris</i> , W Europe, NW Africa	3 individuals, representing an average of 3% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak)
Eurasian teal , <i>Anas crecca</i> , NW Europe	3083 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3)
Ruff , <i>Philomachus pugnax</i> , Europe/W Africa	10 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	846 individuals, representing an average of 5.4% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	15 individuals, representing an average of 11% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	9 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)

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

Greater white-fronted goose , <i>Anser albifrons albifrons</i> , NW Europe	212 individuals, representing an average of 3.6% of the GB population (5 year peak mean for 1996/7-2000/01)
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Gadwall , <i>Anas strepera strepera</i> , NW Europe	261 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)
Northern shoveler , <i>Anas clypeata</i> , NW & C Europe	238 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3)
Hen harrier, <i>Circus cyaneus</i> , Europe	15 individuals, representing an average of 2% of the GB population (5 year peak mean 1985/6-1989/90)
Water rail , <i>Rallus aquaticus</i> , Europe	5 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Pied avocet , <i>Recurvirostra avosetta</i> , Europe/Northwest Africa	329 individuals, representing an average of 9.6% of the GB population (5 year peak mean 1998/9-2002/3)
European golden plover , <i>Pluvialis apricaria apricaria</i> , P. a. altifrons Iceland & Faroes/E Atlantic	4503 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)
Common redshank , <i>Tringa totanus totanus</i> ,	1386 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Lesser black-backed gull , <i>Larus fuscus graellsii</i> ,	905 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)

### Species Information

#### Nationally important species occurring on the site.

#### Invertebrates.

*Ethmia bipunctella*, *Aleochara inconspicua*, *Philonthus dimidiatipennis*, *Deltote bankiana*, *Cephalops perspicuus*, *Erioptera bivittata*, *E. meijerei*, *Gymnancycla canella*, *Pisidium pseudosphaerium*, *Archanara neurica*, *Heliothis viriplaca*, *Pelosia muscerda*, *Photodes brevilinea*, *Senta flammea*, *Herminea tarsicrinalis*, *Haematopota grandis*, *Tipula marginata*, *Podalonia affinis*, *Arctosa fulvolineata*, *Eucosma catroptana*, *E.maritima*, *Melissoblaptres zelleri*, *Pima boisduvaliella*, *Acrotophthalmus bicolor*, *Limonia danica*, *Telmaturus tumidulus*, *Vertigo angustior* (a Habitats Directive Annex II species (S1014)).

### 23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Aquatic vegetation (e.g. reeds, willows, seaweed)
- Environmental education/ interpretation
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Tourism

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

**24. Land tenure/ownership:**

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	
National/Crown Estate	+	
Private	+	+
Other	+	

**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	
Cutting of vegetation (small-scale/subsistence)	+	
Permanent arable agriculture		+
Grazing (unspecified)	+	
Flood control	+	
Transport route	+	+
Non-urbanised settlements	+	+



**26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:**

*Explanation of reporting category:*

1. *Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.*
2. *Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.*

*NA = Not Applicable because no factors have been reported.*

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2	Coastal squeeze within the Blyth Estuary	+		+
Recreational/tourism disturbance (unspecified)	2	Trampling damage to vegetated shingle and driftline communities, and disturbance of little tern nesting habitat	+		+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?  
 Erosion - English Nature provides advice to the Environment Agency and coastal local authorities in relation to flood and coastal protection management. This will inform the development of the Suffolk Estuaries strategies and the second generation shoreline management plan.

Recreational/tourism disturbance (unspecified) - English Nature to work with owners/occupiers and regulatory authorities to develop a strategy to manage visitor pressure on Suffolk vegetated shingle. These measures are likely to include temporary fencing and provision of boardwalks as well as measures to increase visitor awareness about the sensitivity of the shingle habitat, for example by interpretation, wardening.

Is the site subject to adverse ecological change? YES

**27. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	
National Nature Reserve (NNR)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	
Site management statement/plan implemented	+	

Area of Outstanding National Beauty (AONB)	+	+
Environmentally Sensitive Area (ESA)	+	+
Special Area of Conservation (SAC)	+	

**b) Describe any other current management practices:**

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

**29. Current scientific research and facilities:**

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

**Fauna.**

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

**Flora.**

NVC and vegetation monitoring, bird and invertebrate surveys/monitoring carried out on EN's NNRs, NT, SWT, RSPB reserves.

**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Facilities at National Trust and Royal Society for the Protection of Birds reserves.

**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

**Activities, Facilities provided and Seasonality.**

A popular area for tourists as it is an AONB and contains Minsmere bird reserve and Dunwich heath, both with toilets/shop/cafe. There are more visitors in the summer, however it well used throughout the year by walkers and bird watchers.

**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs,

European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

### 34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

#### Site-relevant references

- Axell, HE (1977) *Minsmere: portrait of a bird reserve*. Hutchinson, London
- Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)
- Batten, LA, Bibby, CJ, Clement, P, Elliot, GD & Porter, RF (1990) *Red Data Birds in Britain. Action for rare, threatened and important species*. Poyser, London, for Nature Conservancy Council and Royal Society for the Protection of Birds
- Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough
- Burgess, N, Evans, C & Sorensen, J (1990) Heathland management for nightjars. *RSPB Conservation Review*, **4**, 32-35
- Council of Europe (1980) *Minsmere Nature Reserve, United Kingdom*. Council of Europe, Strasbourg (European Diploma Series, No. 18)
- Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)
- Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge
- Day, JCU & Wilson, J (1978) Breeding bitterns in Britain. *British Birds*, **71**, 285-300
- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
- ESL (1997) *National Vegetation Classification Survey of Walberswick NNR*. ESL, Lincolnshire
- Evans, C, Marrs, R & Welch, G (1993) The restoration of heathland on arable farmland at Minsmere RSPB Nature Reserve. *RSPB Conservation Review*, **7**, 80-84
- McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough. [www.jncc.gov.uk/SACselection](http://www.jncc.gov.uk/SACselection)
- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. [www.wwt.org.uk/publications/default.asp?PubID=14](http://www.wwt.org.uk/publications/default.asp?PubID=14)
- National Rivers Authority (1996) *Southwold Town Marshes Water Level Management Plan*. National Rivers Authority, Ipswich
- National Rivers Authority (1996) *Tinker's Marsh Water Level Management Plan*. National Rivers Authority, Ipswich
- National Rivers Authority (1996) *Westwood and Dingle Marshes Water Level Management Plan*. National Rivers Authority, Ipswich
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Royal Society for the Protection of Birds (1994) *Minsmere management plan*. Royal Society for the Protection of Birds
- Shirt, DB (ed.) (1987) *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough
- Smith, K, Welch, G, Tyler, G, Gilbert, G, Hawkins, I & Hiron, G (2000) Management of RSPB Minsmere reedbeds and its impact on breeding bitterns. *British Wildlife*, **12**(1), 16-21
- Stewart, A, Pearman, DA & Preston, CD (eds.) (1994) *Scarce plants in Britain*. Joint Nature Conservation Committee, Peterborough
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.) [www.jncc.gov.uk/UKSPA/default.htm](http://www.jncc.gov.uk/UKSPA/default.htm)
- Suffolk Wildlife Trust (1993) *National Vegetation Classification of the saltmarsh of the Deben, Alde–Ore and Blyth estuaries, Suffolk*. Suffolk Wildlife Trust, Ashbocking

Wiggington, M (1999) *British Red Data Books. 1. Vascular plants*. 3rd edn. Joint Nature Conservation Committee, Peterborough

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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
Telephone: **+41 22 999 0170** • Fax: **+41 22 999 0169** • email: **[ramsar@ramsar.org](mailto:ramsar@ramsar.org)**

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

1.5 Relationship with other Natura 2000 sites

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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1.6 Respondent(s)

1.7 Site name

### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	200108
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 26 33 E	52 04 44 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

#### 2.6 Biogeographic region

  
Alpine

  
Atlantic

  
Boreal

  
Continental

  
Macaronesia

  
Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment			
		Resident	Migratory		Population	Conservation	Isolation	Global
Breed	Winter	Stage						
A224	<i>Caprimulgus europaeus</i>		109 P		B		C	
A246	<i>Lullula arborea</i>		154 P		B		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	1.5
Bogs. Marshes. Water fringed vegetation. Fens	0.9
Heath. Scrub. Maquis and garrigue. Phygrana	14.6
Dry grassland. Steppes	11.5
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	0.1
Other arable land	
Broad-leaved deciduous woodland	10.6
Coniferous woodland	57.6
Evergreen woodland	
Mixed woodland	1.4
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	1.8
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

**Soil & geology:**

**Geomorphology & landscape:**

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

**During the breeding season the area regularly supports:**

<i>Caprimulgus europaeus</i>	3.2% of the GB breeding population Count as at 1992
<i>Lullula arborea</i>	10.3% of the GB breeding population Count as at 1997

#### ARTICLE 4.2 QUALIFICATION (79/409/EEC)

### 4.3 Vulnerability

Sandlings SPA comprises six SSSIs. Sandlings Forest SSSI, the largest of these, is dominated by commercial forestry. Within the forest, large areas of open ground suitable for woodlark and nightjar were created by storm damage in 1987. Maintenance of open areas in the future relies on clear felling as the main silvicultural practice and the maintenance of some areas earmarked for woodlark and nightjar habitat. These objectives are included in the East Anglia Forest District Strategic Plan.

On the heathland SSSIs, lack of traditional management has resulted in the heathland being subjected to successional changes with the consequent spread of bracken, shrubs and trees. This is being addressed through habitat management work under the Countryside Stewardship Scheme and Tomorrows Heathland Heritage, and is resulting in the restoration of more typical heathland habitat favourable to both nightjar and woodlark.

Human influences on the site include the frequent presence of travellers' caravans. This is a longstanding problem, and a variety of mechanisms are utilised to keep them from the heathland; the digging of trenches and construction of earth barriers around the borders of sites is proving effective.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

1.5 Relationship with other Natura 2000 sites

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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1.6 Respondent(s)

1.7 Site name

1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	199506
date confirmed as SCI	200412
date site classified as SPA	
date site designated as SAC	200504

### 2. Site location:

2.1 Site centre location

longitude	latitude
01 26 27 E	52 06 21 N

2.2 Site area (ha)  2.3 Site length (km)

2.5 Administrative region

NUTS code	Region name	% cover
UK403	Suffolk	100.00%

2.6 Biogeographic region

Alpine
  Atlantic
  Boreal
  Continental
  Macaronesia
  Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment
Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains	100	A	C	A	B



### 3.2 Annex II species

Species name	Population			Site assessment			
	Resident	Migratory		Population	Conservation	Isolation	Global
		Breed	Winter				

## 4. Site description

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	100.0
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

### 4.1 Other site characteristics

<p><b>Soil &amp; geology:</b> Acidic, Nutrient-poor, Sand</p> <p><b>Geomorphology &amp; landscape:</b> Lowland</p>
--

### 4.2 Quality and importance

<p>Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains</p> <ul style="list-style-type: none"> <li>for which this is one of only four known outstanding localities in the United Kingdom.</li> </ul>
--

### 4.3 Vulnerability

<p>This site, mainly consisting of veteran oak pollards, is vulnerable to fire as there is a dense ground cover dominated by bracken. <i>Rhododendron</i>, although established in one small area of the Thicks, does not seem to be spreading. The veteran trees themselves are subject in the long-term to decay, which is a normal part of the ageing process. If the veterans start to become unhealthy, a programme of re-pollarding may be required to prolong their life. In order to maintain the age-structure of the woodland in the very long-term the collection of indigenous seed and replanting of seedlings is ongoing. The site has an agreed Site Management Statement which addresses these issues.</p>
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## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

1.5 Relationship with other Natura 2000 sites

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1.6 Respondent(s)

1.7 Site name

### 1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	199407
date site designated as SAC	

### 2. Site location:

#### 2.1 Site centre location

longitude	latitude
01 09 38 E	51 57 16 N

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

NUTS code	Region name	% cover
UK54	Essex	28.60%
UK403	Suffolk	71.40%

#### 2.6 Biogeographic region

  
Alpine

  
Atlantic

  
Boreal

  
Continental

  
Macaronesia

  
Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment				
		Resident	Breed	Winter	Stage	Population	Conservation	Isolation	Global
A054	<i>Anas acuta</i>			741 I		B		C	
A050	<i>Anas penelope</i>			3979 I		C		C	
A051	<i>Anas strepera</i>			97 I		C		C	
A169	<i>Arenaria interpres</i>			690 I		C		C	
A046a	<i>Branta bernicla bernicla</i>			2627 I		B		C	
A067	<i>Bucephala clangula</i>			213 I		C		C	
A149	<i>Calidris alpina alpina</i>			19114 I		B		C	
A143	<i>Calidris canutus</i>			5970 I		C		C	
A137	<i>Charadrius hiaticula</i>				638 I	B		C	
A137	<i>Charadrius hiaticula</i>			372 I		B		C	
A156	<i>Limosa limosa islandica</i>			2559 I		A		C	
A160	<i>Numenius arquata</i>			2153 I		C		C	
A017	<i>Phalacrocorax carbo</i>			232 I		C		C	
A141	<i>Pluvialis squatarola</i>			3261 I		B		C	
A005	<i>Podiceps cristatus</i>			245 I		C		C	
A132	<i>Recurvirostra avosetta</i>		21 P			B		C	
A048	<i>Tadorna tadorna</i>			2955 I		B		C	
A162	<i>Tringa totanus</i>			3687 I		B		C	
A162	<i>Tringa totanus</i>				2588 I	B		C	
A142	<i>Vanellus vanellus</i>			6242 I		C		C	

## 4. Site description:

### 4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	88.0
Salt marshes. Salt pastures. Salt steppes	5.0
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	0.5
Inland water bodies (standing water, running water)	0.8
Bogs. Marshes. Water fringed vegetation. Fens	5.5
Heath. Scrub. Maquis and garrigue. Phygrana	
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	0.2
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
<b>Total habitat cover</b>	<b>100%</b>

## 4.1 Other site characteristics

### Soil & geology:

Alluvium, Clay, Mud, Neutral, Sand, Shingle

### Geomorphology & landscape:

Coastal, Estuary, Intertidal sediments (including sandflat/mudflat), Lagoon, Lowland, Subtidal sediments (including sandbank/mudbank)

## 4.2 Quality and importance

### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

#### During the breeding season the area regularly supports:

<i>Recurvirostra avosetta</i> (Western Europe/Western Mediterranean - breeding)	3.6% of the population in Great Britain 5-year peak mean 1996-2000
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### ARTICLE 4.2 QUALIFICATION (79/409/EEC)

#### Over winter the area regularly supports:

<i>Anas acuta</i> (North-western Europe)	1.2% of the population 5-year peak mean 1995/96-1999/2000
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<i>Branta bernicla bernicla</i> (Western Siberia/Western Europe)	1.2% of the population 5-year peak mean 1995/96-1999/2000
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<i>Calidris alpina alpina</i> (Northern Siberia/Europe/Western Africa)	1.4% of the population 5-year peak mean 1995/96-1999/2000
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<i>Calidris canutus</i> (North-eastern Canada/Greenland/Iceland/North-western Europe)	1.3% of the population 5-year peak mean 1995/96-1999/2000
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<i>Limosa limosa islandica</i> (Iceland - breeding)	7.3% of the population 5-year peak mean 1995/96-1999/2000
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<i>Pluvialis squatarola</i> (Eastern Atlantic - wintering)	1.3% of the population 5-year peak mean 1995/96-1999/2000
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<i>Tringa totanus</i> (Eastern Atlantic - wintering)	2.8% of the population 5-year peak mean 1995/96-1999/2000
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#### On passage the area regularly supports:

<i>Tringa totanus</i> (Eastern Atlantic - wintering)	2% of the population 5-year peak mean 1995/96-1999/2000
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### ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS

#### Over winter the area regularly supports:

63017 waterfowl (5 year peak mean 19/05/2005)

#### Including:

*Podiceps cristatus* , *Phalacrocorax carbo* , *Branta bernicla bernicla* , *Tadorna tadorna* , *Anas penelope* , *Anas strepera* , *Anas acuta* , *Bucephala clangula* , *Charadrius hiaticula* , *Pluvialis squatarola* , *Vanellus vanellus* , *Calidris canutus* , *Calidris alpina alpina* , *Limosa limosa islandica* , *Numenius arquata* , *Tringa totanus* , *Arenaria interpres* .

### 4.3 Vulnerability

There is pressure for increased port development and marine recreation in this area. Marine recreation is being addressed within the Estuary Management Plan. Port development is being considered by public inquiry. Maintenance dredging of the River Stour and River Orwell poses potential threats to the SPA but the activity is being addressed through the provisions of the Habitats Regulations. The saltmarsh is eroding, partly as a result of natural coastal processes; the beneficial use of dredgings is taking place to try to combat these processes.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

Code	% cover
UK04 (SSSI/ASSI)	100.0

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Designated: 13 July 1994

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## 3. Country:

UK (England)

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## 4. Name of the Ramsar site:

Stour and Orwell Estuaries

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

### b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

051 57 16 N                      001 09 38 E

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Felixstowe

The Stour Estuary forms the south-eastern part of Essex/Suffolk boundary.

The Orwell Estuary is a relatively long and narrow estuary with extensive mudflats and some saltmarsh, running from Ipswich in the north, southwards towards Felixstowe.

**Administrative region:** Essex; Suffolk

**10. Elevation (average and/or max. & min.) (metres):** **11. Area (hectares):** 3676.92

Min.	-1
Max.	3
Mean	0

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The Stour and Orwell Estuaries is a wetland of international importance, comprising extensive mudflats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. It provides habitats for an important assemblage of wetland birds in the non-breeding season and supports internationally important numbers of wintering and passage wildfowl and waders. The site also holds several nationally scarce plants and British Red Data Book invertebrates.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**2, 5, 6**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 2

Contains seven nationally scarce plants: stiff saltmarsh-grass *Puccinellia rupestris*; small cord-grass *Spartina maritima*; perennial glasswort *Sarcocornia perennis*; lax-flowered sea lavender *Limonium humile*; and the eelgrasses *Zostera angustifolia*, *Z. marina* and *Z. noltei*.



Contains five British Red Data Book invertebrates: the muscid fly *Phaonia fusca*; the horsefly *Haematopota grandis*; two spiders, *Arctosa fulvolineata* and *Baryphema duffeyi*; and the Endangered swollen spire snail *Mercuria confusa*.

Ramsar criterion 5

**Assemblages of international importance:**

**Species with peak counts in winter:**

63017 waterfowl (5 year peak mean 1998/99-2002/2003)

**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in spring/autumn:**

Common redshank , *Tringa totanus totanus*, 2588 individuals, representing an average of 2% of the population (5-year peak mean 1995/96-1999/2000)

**Species with peak counts in winter:**

Dark-bellied brent goose, *Branta bernicla bernicla*, 2627 individuals, representing an average of 1.2% of the population (5-year peak mean 1995/96-1999/2000)

Northern pintail , *Anas acuta*, NW Europe 741 individuals, representing an average of 1.2% of the population (5-year peak mean 1995/96-1999/2000)

Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa -wintering 3261 individuals, representing an average of 1.3% of the population (5-year peak mean 1995/96-1999/2000)

Red knot , *Calidris canutus islandica*, W & Southern Africa (wintering) 5970 individuals, representing an average of 1.3% of the population (5-year peak mean 1995/96-1999/2000)

Dunlin , *Calidris alpina alpina*, W Siberia/W Europe 19114 individuals, representing an average of 1.4% of the population (5-year peak mean 1995/96-1999/2000)

Black-tailed godwit , *Limosa limosa islandica*, Iceland/W Europe 2559 individuals, representing an average of 7.3% of the population (5-year peak mean 1995/96-1999/2000)

Common redshank , *Tringa totanus totanus*, 3687 individuals, representing an average of 2.8% of the population (5-year peak mean 1995/96-1999/2000)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

Details of bird species occurring at levels of National importance are given in Section 22

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	shingle, sand, mud
Geomorphology and landscape	lowland, coastal, valley, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), estuary
Nutrient status	
pH	
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	no information
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Lowestoft, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html">www.metoffice.com/climate/uk/averages/19712000/sites/lowestoft.html</a> ) Max. daily temperature: 13.0° C Min. daily temperature: 7.0° C Days of air frost: 27.8 Rainfall: 576.3 mm Hrs. of sunshine: 1535.5

**General description of the Physical Features:**

The Stour and Orwell estuaries include extensive mudflats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. The site also includes an area of low-lying grazing marsh at Shotley Marshes on the south side of the Orwell.

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The Stour and Orwell estuaries include extensive mudflats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. The site also includes an area of low-lying grazing marsh at Shotley Marshes on the south side of the Orwell.

**18. Hydrological values:**

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Sediment trapping

**19. Wetland types:**

Inland wetland, Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	44.2

H	Salt marshes	35
F	Estuarine waters	19.8
4	Seasonally flooded agricultural land	0.7
E	Sand / shingle shores (including dune systems)	0.3

## 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

Orwell is a relatively long and narrow estuary with extensive mudflats bordering the channel that support large patches of eelgrass *Zostera* sp. The saltmarsh tends to be sandy and fairly calcareous with a wide range of communities. There are small areas of vegetated shingle on the foreshore of the lower reaches. Grazing marshes adjoin the estuary at Shotley. The Stour estuary is a relatively simply structured estuary with a sandy outer area and a muddier inner section. The mud is rich in invertebrates and there are areas of higher saltmarsh. The shoreline vegetation varies from oak-dominated wooded cliffs, through scrub-covered banks to coarse grasses over seawalls, with reed-filled borrow dykes behind.

Ecosystem services

## 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

### Nationally important species occurring on the site.

#### Higher Plants.

*Puccinellia rupestris* (nationally scarce); *Spartina maritima* (nationally scarce); *Sarcocornia perennis* (nationally scarce); *Limonium humile* (nationally scarce); *Zostera angustifolia* (nationally scarce); *Zostera marina* (nationally scarce); *Zostera noltei* (nationally scarce).

## 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

### Birds

#### Species currently occurring at levels of national importance:

#### Species regularly supported during the breeding season:

Pied avocet , *Recurvirostra avosetta*, W Europe 21 pairs, representing an average of 2.8% of the GB population (5-year peak mean 1996-2000)

#### Species with peak counts in spring/autumn:

Ringed plover , *Charadrius hiaticula*, Europe/Northwest Africa 638 individuals, representing an average of 2.1% of the GB population (5-year peak mean 1995/96-1999/2000)

#### Species with peak counts in winter:

Great crested grebe , *Podiceps cristatus cristatus*, NW Europe 245 individuals, representing an average of 1.5% of the GB population (5-year peak mean 1995/96-1999/2000)

Great cormorant , *Phalacrocorax carbo carbo*, NW Europe 232 individuals, representing an average of 1% of the GB population (5-year peak mean 1995/96-1999/2000)

Common shelduck , <i>Tadorna tadorna</i> , NW Europe	2955 individuals, representing an average of 3.8% of the GB population (5-year peak mean 1995/96-1999/2000)
Eurasian curlew , <i>Numenius arquata arquata</i> , N. a. <i>arquata</i> Europe (breeding)	1824 individuals, representing an average of 1.2% of the GB population (5-year peak mean 1995/96-1999/2000)
Ruddy turnstone , <i>Arenaria interpres interpres</i> , NE Canada, Greenland/W Europe & NW Africa	690 individuals, representing an average of 1.4% of the GB population (5-year peak mean 1995/96-1999/2000)

**Species Information**

**Nationally important species occurring on the site.**

**Invertebrates.**

*Phaonia fusca*; *Haematopota grandis* (Meigen) (RDB3); *Arctosa fulvolineata* (RDB3); *Baryphyma duffeyi* (RDB3); *Mercuria (=Pseudamnicola) confusa* (RDB1).

**23. Social and cultural values:**

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Archaeological/historical site
- Livestock grazing
- Non-consumptive recreation
- Sport hunting
- Tourism
- Transportation/navigation

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

**24. Land tenure/ownership:**

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	
Local authority, municipality etc.	+	

National/Crown Estate	+	
Private	+	+

**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	
Tourism	+	+
Recreation	+	+
Cutting of vegetation (small-scale/subsistence)	+	
Bait collection	+	
Permanent arable agriculture		+
Grazing (unspecified)	+	
Hunting: recreational/sport	+	
Sewage treatment/disposal	+	
Harbour/port	+	
Flood control	+	
Transport route	+	+
Urban development		+
Non-urbanised settlements	+	+

**26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:**

*Explanation of reporting category:*

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Erosion	2	Natural coastal processes exacerbated by fixed sea defences, port development and maintenance dredging.	+		+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?  
 Erosion - Erosion is being tackled through sediment replacement for additional erosion that can be attributed to port development and maintenance dredging. A realignment site has been created on-site to make up for the loss of habitat due to capital dredging. General background erosion has not been tackled although a Flood Management Strategy for the site is being produced.

Is the site subject to adverse ecological change? YES

**27. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	
Site management statement/plan implemented	+	
Area of Outstanding National Beauty (AONB)	+	+

**b) Describe any other current management practices:**

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

**29. Current scientific research and facilities:**

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

**Fauna.**

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

High tide bird counts.

**Environment, Flora and Fauna.**

Vegetation, bird and invertebrate surveys/monitoring carried out on NGO reserves.

**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

None reported

**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

**Activities, Facilities provided and Seasonality.**

A popular area for tourists as it is within an AONB. There are more visitors in the summer. However it is well used throughout the year by walkers, bird watches and for sailing.

**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House,  
Northminster Road, Peterborough, PE1 1UA, UK

**34. Bibliographical references:**

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

**Site-relevant references**

- Anon. (2002) *Suffolk Coast and Estuaries Coastal Habitat Management Plan: Executive summary*. English Nature, Peterborough (Living with the Sea LIFE Project) [www.english-nature.org.uk/livingwiththesea/project\\_details/good\\_practice\\_guide/HabitatCRR/ENRestore/CHaMPs/SuffolkCoast/SuffolkCHaMP.pdf](http://www.english-nature.org.uk/livingwiththesea/project_details/good_practice_guide/HabitatCRR/ENRestore/CHaMPs/SuffolkCoast/SuffolkCHaMP.pdf)
- Armitage, MJS, Burton, NHK, Atkinson, PW, Austin, GE, Clark, NA, Mellan, HJ & Rehfish, MM (2002) *Reviewing the impact of Agency permissions and activities on bird populations in Special Protection Areas: Level 1 interpretation*. British Trust for Ornithology, Thetford (BTO Research Report, No. 296)
- Ashelby, CW, Worsfold, TM & Fransen, CHJM (2004) First records of the oriental prawn *Palaemon macrodactylus* (Decapoda: Caridea), an alien species in European waters, with a revised key to British Palaemonidae. *Journal of the Marine Biological Association*, **84**(5), 1041-1050
- Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)
- Beardall, CH, Dryden, RC & Holzer, TJ (1988) *The Suffolk estuaries: a report on the wildlife and conservation of the Suffolk estuaries*. Suffolk Wildlife Trust, Saxmundham [accompanied by separate volume, *Suffolk estuaries bibliography*]
- Beardall, CH, Gooch, SM & Pilcher, R (1990) The intertidal invertebrate fauna of the Orwell estuary. *Transactions of the Suffolk Naturalists' Society*, **26**, 33-45
- Bratton, JH (ed.) (1991) *British Red Data Books: 3. Invertebrates other than insects*. Joint Nature Conservation Committee, Peterborough
- Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 5. Eastern England*. Joint Nature Conservation Committee, Peterborough
- Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes*. Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)
- Cadbury, CJ & Olney, PJS (1978) Avocet population dynamics in England. *British Birds*, **71**, 102-121
- Cayford, JT & Waters, RJ (1996) Population estimates for waders Charadrii wintering in Great Britain, 1987/88 – 1991/92. *Biological Conservation*, **77**, 7-17
- Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)
- Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge
- Crewe, MD (1993) *Suffolk birds 1992 Volume 42*. Suffolk Naturalists' Society, Ipswich
- Crewe, MD (1994) *Suffolk birds 1993 Volume 43*. Suffolk Naturalists' Society, Ipswich
- Crewe, MD (1996) *Suffolk birds 1995 Volume 45*. Suffolk Naturalists' Society, Ipswich
- Crewe, MD (1997) *Suffolk birds 1996 Volume 46*. Suffolk Naturalists' Society, Ipswich
- Davidson, NC, Laffoley, D d'A, Doody, JP, Way, LS, Gordon, J, Key, R, Pienkowski, MW, Mitchell, R & Duff, KL (1991) *Nature conservation and estuaries in Great Britain*. Nature Conservancy Council, Peterborough
- Delany, S & Scott, D (2002) *Waterbird population estimates*. 3rd edn. Wetlands International, Wageningen (Global Series, No. 12) [www.wetlands.org/pubs/WPE.htm](http://www.wetlands.org/pubs/WPE.htm)
- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
- Dyer, MF (2000) *Stour and Orwell benthic survey 1997*. (Contractor: Unicmarine, Letchworth) Unpublished report to Harwich Haven Authority, Harwich (StrOrw97)

- French, JR, Watson, CJ, Moller, I, Spencer, T, Dixon, M & Allen, R (2001) Beneficial use of cohesive dredgings for foreshore recharge. In: *Proceedings of 35th MAFF Conference of River and Coastal Engineers, 5–7 July 2000, Keele*, 11.10, 1-4. [www.geog.ucl.ac.uk/ceru/projects\\_FR.stm](http://www.geog.ucl.ac.uk/ceru/projects_FR.stm)
- Gibbons, DW, Reid, JB & Chapman, RA (1993) *The new atlas of breeding birds in Britain and Ireland: 1988–1991*. Poyser, London
- Hagemeijer, EJM & Blair, MJ (eds.) (1997) *The EBCC atlas of European breeding birds: their distribution and abundance*. Poyser, London
- Hill, TO, Emblow, CS & Northen, KO (1996) *Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)
- Hoyo, J del, Elliot, A & Sargatal, J (eds.) (1996) *Handbook of the birds of the world. Volume 3: Hoatzin to auks*. Lynx Edicions, Barcelona
- Joint Nature Conservation Committee (1999) *The Birds Directive – selection guidelines for Special Protection Areas*. Joint Nature Conservation Committee, Peterborough
- Lack, P (1986) *The atlas of wintering birds in Britain and Ireland*. Poyser, Calton
- Lowe, G (1998) *Suffolk birds 1997 Volume 47*. Suffolk Naturalists' Society, Ipswich
- Lowe, G (1999) *Suffolk birds 1998 Volume 48*. Suffolk Naturalists' Society, Ipswich
- Lowe, G (2000) *Suffolk birds 1999 Volume 49*. Suffolk Naturalists' Society, Ipswich
- Lowe, G (2002) *Suffolk birds 2000 Volume 50*. Suffolk Naturalists' Society, Ipswich
- Moser, M (1988) Limits to the numbers of grey plovers *Pluvialis squatarola* wintering on British estuaries: an analysis of long-term population trends. *Journal of Applied Ecology*, **25**, 473-485
- Musgrove, AJ, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)
- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. [www.wwt.org.uk/publications/default.asp?PubID=14](http://www.wwt.org.uk/publications/default.asp?PubID=14)
- Ogilvie, MA & the Rare Breeding Birds Panel (1996) Rare breeding birds in the United Kingdom in 1993. *British Birds*, **89**, 61-91
- Owen, M, Atkinson-Willes, GL & Salmon, DG (1986) *Wildfowl in Great Britain*. 2nd edn. Cambridge University Press Cambridge
- Piersma, T (1994) *Close to the edge: energetic bottlenecks and the evolution of migratory pathways in knots*. Unpublished PhD thesis, Rijksuniversiteit Groningen, Netherlands
- Prater, AJ (1981) *Estuary birds of Britain and Ireland*. Poyser, London
- Rafe, RW (1995) *Suffolk birds 1994 Volume 44*. Suffolk Naturalists' Society, Ipswich
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Ridgill, SC & Fox, AD (1990) *Cold weather movements of waterfowl in western Europe*. International Waterfowl and Wetlands Research Bureau, Slimbridge (Special Publication, No 13)
- Rose, PM & Scott, DA (1997) *Waterfowl population estimates*. 2nd edn. Wetlands International, Wageningen (Wetlands International Publication, No. 44) [www.wetlands.org/IWC/wpe2/WPE2-toc.htm](http://www.wetlands.org/IWC/wpe2/WPE2-toc.htm)
- Scott, DA & Rose, DA (1996) *Atlas of Anatidae populations in Africa and western Eurasia*. Wetlands International, Wageningen (Publication, No. 41)
- Shirt, DB (ed.) (1987) *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough
- Sneddon, P & Randall, RE (1994) *Coastal vegetated shingle structures of Great Britain: Appendix 3. Shingle sites in England*. Joint Nature Conservation Committee, Peterborough
- Snow, DW & Perrins, CM (1998) *The birds of the western Palearctic. Volume 1: Non-passerines*. Concise edn. Oxford University Press, Oxford
- Stone, BH, Sears, J, Cranswick, PA, Gregory, RD, Gibbons, DW, Rehfish, MM, Aebischer, NJ & Reid, JB (1997) Population estimates of birds in Britain and in the United Kingdom. *British Birds*, **90**(1), 1-22
- Stour and Orwell Estuaries Group (1996) *Stour and Orwell Estuaries management plan*. Suffolk Coast and Heaths Project, Woodbridge
- Stour and Orwell Estuaries Management Group (2004) *Stour and Orwell Estuaries management plan* Stour and Orwell Estuaries Management Group, Woodbridge



- Stour and Orwell Estuaries Management Group (2004) *Stour and Orwell Estuaries website* Stour and Orwell Estuaries Management Group, Woodbridge. [www.stourandorwell.org](http://www.stourandorwell.org)
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.) [www.jncc.gov.uk/UKSPA/default.htm](http://www.jncc.gov.uk/UKSPA/default.htm)
- Tubbs, CR (1991) The population history of grey plovers *Pluvialis squatarola* in the Solent, southern England. *Wader Study Group Bulletin*, **61**, 15-21
- Worsfold, TM (2002) *Combined intertidal and subtidal biotope report and maps for the Stour and Orwell estuaries*. (Contractor: Unicmarine, Letchworth) Unpublished report to Harwich Haven Authority, Harwich (HHAComBiotope02)
- Wright, M (2000) Orwell estuary: systematic review of waterbirds incorporating a report on the effects of the Felixstowe Dock expansion on key wading species at Fagbury. *English Nature Research Reports*, No. **381**

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## ***Appendix 2***



**Appendix 2. Conservation Objectives for the European interest features on component SSSIs.**

Special Areas of Conservation (SAC)/Special Protection Areas (SPA)	SSSI Compartment	Conservation Objectives for the European interests on the SSSI
Alde, Ore & Butley Estuaries SAC	Alde-Ore Estuary SSSI	Subject to natural change, to maintain, in favourable condition, the Atlantic salt meadows, estuaries, mudflats and sandflats not covered by the seawater at low tide.
Benacre to Easton Barents Lagoons SAC	Benacre to Easton Barents SSSI	Subject to natural change, to maintain, in favourable condition, the saline lagoon feature.
The Broads SAC	Sprat's Water and Marshes, Carlton Colville SSSI	<p>To maintain, in favourable condition, the:</p> <ul style="list-style-type: none"> <li>• Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>.</li> <li>• Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davalliana</i>.</li> <li>• Alkaline Fens</li> <li>• Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>- type vegetation.</li> <li>• Transition mires and quaking bogs.</li> </ul> <p>To maintain, in favourable condition, the habitats for the population of:</p> <ul style="list-style-type: none"> <li>• Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>).</li> <li>• Otter (<i>Lutra lutra</i>).</li> </ul> <p>To maintain, in favourable condition, the habitats for the populations of Annex 1 bird species<sup>1</sup> of European importance with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Reed swamp</li> <li>• Fen</li> <li>• Reedbed</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul> <p><sup>1</sup> Bittern, Marsh Harrier, Hen Harrier</p> <p>To maintain, in favourable condition, the habitats for the populations of migratory bird species<sup>2</sup> of European importance with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Reed swamp</li> <li>• Fen</li> </ul>

		<ul style="list-style-type: none"> <li>• Reedbed</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul> <p><sup>2</sup> Gadwall and Shoveler</p> <p>To maintain, in favourable condition, the habitats of the populations of waterfowl that contribute to the wintering waterfowl assemblages of European importance, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Swamp and fen</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul>
The Broads SAC	Barnby Broad and Marshes	<p>To maintain, in favourable condition, the:</p> <ul style="list-style-type: none"> <li>• Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>.</li> <li>• Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davalliana</i>.</li> <li>• Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>- type vegetation.</li> <li>• Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp..</li> <li>• <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>).</li> </ul> <p>To maintain, in favourable condition, the habitats for the population of:</p> <ul style="list-style-type: none"> <li>• Otter (<i>Lutra lutra</i>).</li> <li>• Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>).</li> </ul> <p>To maintain, in favourable condition, the habitats for the populations of Annex 1 bird species<sup>1</sup> of European importance with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Swamp</li> <li>• Fen</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul> <p><sup>1</sup> Marsh Harrier, Hen Harrier, Whooper Swan and Ruff</p> <p>To maintain, in favourable condition, the habitats for the populations of migratory bird species<sup>2</sup> of European importance with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Reed swamp</li> <li>• Fen</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul>

		<p><sup>2</sup> Pink-Footed Goose, Gadwall and Shoveler</p> <p>To maintain, in favourable condition, the habitats of the populations of waterfowl that contribute to the wintering waterfowl assemblages of the Broadland SPA with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Swamp and fen and lowland wet grassland with ditches and water bodies.</li> </ul>
The Broads SAC	Stanley & Alder Carrs, Aldeby SSSI	<p>Subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as listed in the Conservation Objectives Document prepared by Natural England and dated 23<sup>rd</sup> October 2007.</p> <p>Habitat types represented (BAP Categories):</p> <ul style="list-style-type: none"> <li>• Broadleaved, Mixed and Yew Woodland</li> <li>• Fen Marsh and Swamp</li> </ul>
Minsmere to Walberswick Heath and Marshes SAC	Minsmere to Walberswick Heath and Marshes SSSI	<p>Subject to natural change, to maintain, in favourable condition, the:</p> <ul style="list-style-type: none"> <li>• Annual vegetation of drift lines</li> <li>• Perennial vegetation of stony banks</li> </ul> <p>To maintain, to maintain, in favourable condition, the:</p> <ul style="list-style-type: none"> <li>• European dry heaths</li> </ul> <p>To maintain, in favourable condition, the habitats for the populations of Annex 1 species of European importance<sup>1</sup> with particular reference to:</p> <ul style="list-style-type: none"> <li>• Shingle</li> <li>• Swamp, marginal and inundation communities</li> <li>• Saltmarsh</li> <li>• Standing water</li> <li>• Grassland</li> <li>• Heathland</li> </ul> <p><sup>1</sup>Avocet, Bittern, Little Tern, Marsh Harrier, Nightjar, Woodlark, Hen Harrier.</p> <p>To maintain, in favourable condition, the habitats for the populations of migratory bird species of European importance<sup>2</sup> with particular reference to:</p> <ul style="list-style-type: none"> <li>• Grassland, marsh and standing water</li> </ul> <p><sup>2</sup>Gadwall, Teal, Shoveler, European White-Fronted Goose.</p>

Orfordness to Shingle Street SAC	Alde-Ore Estuary SSSI	Subject to natural change, to maintain, in favourable condition, the saline lagoons, annual vegetation of drift lines and perennial vegetation of stony banks.
Staverton Park and The Thicks, Wantisden SAC	Staverton Park and The Thicks, Wantisden SSSI	To maintain, in favourable condition, old acidophilous Oakwoods with <i>Quercus robur</i> on sandy plains.
Dew's Ponds SAC	Dew's Ponds SSSI	To maintain, in favourable condition, the habitats for the populations of Great Crested Newt <i>Triturus cristatus</i> .
Alde-Ore Estuary SPA	Alde-Ore Estuary SSSI	Subject to natural change, to maintain, in favourable condition, the Atlantic salt meadows, estuaries, mudflats and sandflats not covered by the seawater at low tide. Subject to natural change, to maintain, in favourable condition, the habitats for the regularly occurring Annex 1 bird species and migratory bird species <sup>1</sup> , of European importance, with particular reference to grazing marsh, saltmarsh, intertidal mudflat and shallow coastal waters. <sup>1</sup> Avocet, Sandwich Tern, Little Tern, Ruff, Redshank, Lesser Black-Backed Gull.
Benacre to Easton Barents SPA	Benacre to Easton Barents SSSI	To maintain, in favourable condition, the habitats for the populations of Bittern ( <i>Botaurus stellaris</i> ) and Marsh Harrier ( <i>Circus aeruginosus</i> ), with particular reference to swamp, marginal and inundation and standing water. Subject to natural change, to maintain in favourable condition, the habitats for the populations of Little Tern ( <i>Sterna albifrons</i> ), with particular reference to shingle and shallow coastal waters.
Broadland SPA	Sprat's Water and Marshes, Carlton Colville SSSI	To maintain, in favourable condition, the: <ul style="list-style-type: none"> <li>• Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>.</li> <li>• Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davalliana</i>.</li> <li>• Alkaline Fens</li> <li>• Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>- type vegetation.</li> <li>• Transition mires and quaking bogs.</li> </ul> <p>To maintain, in favourable condition, the habitats for the population of:</p> <ul style="list-style-type: none"> <li>• Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>).</li> <li>• Otter (<i>Lutra lutra</i>).</li> </ul> <p>To maintain, in favourable condition, the habitats for the populations of Annex 1 bird species<sup>1</sup> of European importance with particular reference to:</p>



		<ul style="list-style-type: none"> <li>• Open water</li> <li>• Reed swamp</li> <li>• Fen</li> <li>• Reedbed</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul> <p><sup>1</sup> Bittern, Marsh Harrier, Hen Harrier</p> <p>To maintain, in favourable condition, the habitats for the populations of migratory bird species<sup>2</sup> of European importance with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Reed swamp</li> <li>• Fen</li> <li>• Reedbed</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul> <p><sup>2</sup> Gadwall and Shoveler</p> <p>To maintain, in favourable condition, the habitats of the populations of waterfowl that contribute to the wintering waterfowl assemblages of European importance, with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Swamp and fen</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul>
Broadland SPA	Barnby Broad and Marshes SSSI	<p>To maintain, in favourable condition, the:</p> <ul style="list-style-type: none"> <li>• Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>.</li> <li>• Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davalliana</i>.</li> <li>• Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>- type vegetation.</li> <li>• Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp..</li> <li>• <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>).</li> </ul> <p>To maintain, in favourable condition, the habitats for the population of:</p> <ul style="list-style-type: none"> <li>• Otter (<i>Lutra lutra</i>).</li> <li>• Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>).</li> </ul> <p>To maintain, in favourable condition, the habitats for the populations of Annex 1 bird species<sup>1</sup> of European importance with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> </ul>

		<ul style="list-style-type: none"> <li>• Swamp</li> <li>• Fen</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul> <p><sup>1</sup> Marsh Harrier, Hen Harrier, Whooper Swan and Ruff</p> <p>To maintain, in favourable condition, the habitats for the populations of migratory bird species<sup>2</sup> of European importance with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> <li>• Reed swamp</li> <li>• Fen</li> <li>• Lowland wet grassland with ditches and water bodies.</li> </ul> <p><sup>2</sup> Pink-Footed Goose, Gadwall and Shoveler</p> <p>To maintain, in favourable condition, the habitats of the populations of waterfowl that contribute to the wintering waterfowl assemblages of the Broadland SPA with particular reference to:</p> <ul style="list-style-type: none"> <li>• Open water</li> </ul> <p>Swamp and fen and lowland wet grassland with ditches and water bodies.</p>
Broadland SPA	Stanley & Alder Carrs, Aldeby SSSI	<p>Subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as listed in the Conservation Objectives Document prepared by Natural England and dated 23<sup>rd</sup> October 2007.</p> <p>Habitat types represented (BAP Categories):</p> <ul style="list-style-type: none"> <li>• Broadleaved, Mixed and Yew Woodland</li> <li>• Fen Marsh and Swamp</li> </ul>
Deben Estuary SPA	Deben Estuary SSSI	<p>Subject to natural change, to maintain, in favourable condition, the habitats for the regularly occurring Annex 1 bird species and the regularly occurring migratory bird species<sup>1</sup>, of European importance, with particular reference to intertidal saltmarsh and mudflats.</p> <p><sup>1</sup>Avocet, Brent Goose.</p>
Hamford Water SPA	Hamford Water SSSI	<p>Subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar) as listed in the Conservation Objectives Document prepared by Natural</p>

		<p>England and dated 2<sup>nd</sup> October 2008.</p> <p>Habitat types represented (BAP Categories):</p> <ul style="list-style-type: none"> <li>• Broadleaved, Mixed and Yew Woodland (Lowland)</li> <li>• Arable &amp; Horticulture</li> <li>• Neutral Grassland (Lowland)</li> <li>• Supralittoral Sediment</li> <li>• Littoral Sediment</li> <li>• Coastal Lagoon.</li> </ul>
Minsmere – Walberswick SPA	Minsmere to Walberswick Heath and Marshes SSSI	<p>Subject to natural change, to maintain, in favourable condition, the:</p> <ul style="list-style-type: none"> <li>• Annual vegetation of drift lines</li> <li>• Perennial vegetation of stony banks</li> </ul> <p>To maintain, to maintain, in favourable condition, the:</p> <ul style="list-style-type: none"> <li>• European dry heaths</li> </ul> <p>To maintain, in favourable condition, the habitats for the populations of Annex 1 species of European importance<sup>1</sup> with particular reference to:</p> <ul style="list-style-type: none"> <li>• Shingle</li> <li>• Swamp, marginal and inundation communities</li> <li>• Saltmarsh</li> <li>• Standing water</li> <li>• Grassland</li> <li>• Heathland</li> </ul> <p><sup>1</sup>Avocet, Bittern, Little Tern, Marsh Harrier, Nightjar, Woodlark, Hen Harrier.</p> <p>To maintain, in favourable condition, the habitats for the populations of migratory bird species of European importance<sup>2</sup> with particular reference to:</p> <ul style="list-style-type: none"> <li>• Grassland, marsh and standing water</li> </ul> <p><sup>2</sup>Gadwall, Teal, Shoveler, European White-Fronted Goose.</p>
Sandlings SPA	Blaxhall Heath SSSI	To maintain, in favourable condition, the habitats for the populations of Woodlark ( <i>Lullula arborea</i> ) and Nightjar ( <i>Caprimulgus europaeus</i> ).
Sandlings SPA	Leiston – Aldeburgh SSSI	To maintain, in favourable condition, the habitats for the populations of Woodlark ( <i>Lullula arborea</i> ) and Nightjar ( <i>Caprimulgus europaeus</i> ).
Sandlings SPA	Sandlings Forest SSSI	To maintain, in favourable condition, the habitats for the populations of Woodlark ( <i>Lullula arborea</i> ) and Nightjar ( <i>Caprimulgus europaeus</i> ).
Sandlings SPA	Sutton and Hollesley	To maintain, in favourable condition, the habitats for the populations of Woodlark ( <i>Lullula arborea</i> ) and Nightjar

	Heath SSSI	<i>(Caprimulgus europaeus)</i> .
Sandlings SPA	Snape Warren SSSI	To maintain, in favourable condition, the habitats for the populations of Woodlark ( <i>Lullula arborea</i> ) and Nightjar ( <i>Caprimulgus europaeus</i> ).
Sandlings SPA	Tunstall Common SSSI	To maintain, in favourable condition, the habitats for the populations of Woodlark ( <i>Lullula arborea</i> ) and Nightjar ( <i>Caprimulgus europaeus</i> ).
Stour and Orwell Estuary SPA	Stour Estuary SSSI	Subject to natural change, to maintain, in favourable condition, the habitats for the populations of the regularly occurring migratory bird species <sup>1</sup> , of European importance, with particular reference to intertidal mudflats and saltmarsh.  <sup>1</sup> Golden Plover, Black-Tailed Godwit, Dark-Bellied Brent Goose, Dunlin, Grey Plover, Redshank, Ringed Plover, Shelduck, Turnstone.
Stour and Orwell Estuary SPA	Orwell Estuary SSSI	Subject to natural change, to maintain, in favourable condition, the habitats for the populations of the regularly occurring migratory bird species <sup>1</sup> , of European importance, with particular reference to intertidal mudflats, saltmarsh and grazing marsh.  <sup>1</sup> Black-Tailed Godwit, Dark-Bellied Brent Goose, Dunlin, Grey Plover, Redshank, Ringed Plover, Shelduck, Turnstone.

# ***Appendix 3***



Condition of SSSI units

Downloaded from Natural England’s website www.naturalengland.org.uk on 28 May 2009.

Data described as ‘Compiled: 01 Apr 2009’

County: Suffolk

**Team - Four Counties - SSSI name - Stour Estuary - Staff member responsible for site - Carol Reid**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Littoral sediment	2	388.45	Unfavourable declining	Erosion (while partly natural) is partly attributable to coastal squeeze; also possible contribution from recreational disturbance, water quality factors, and maintenance dredging. Agreed mitigation is in place in respect of maintenance dredging, and subject to comprehensive monitoring which is reported to EN and other regulators; however, although English Nature has no reason to assume it is not working, the monitoring results are not able as yet to confirm that it is working as indicated by modelling. It is expected that such confirmation is unlikely to be available until the end of the second five-year review in 2010. In the event that it is not after an appropriate period possible to demonstrate that mitigational sediment replacement is working, or if further investigation indicates that adverse effects are arising from unmitigated maintenance dredging requirements arising from dredges previous to 1998-2000, it is likely that dredging will be then indicated as a reason for unfavourability.	Coastal squeeze

Littoral sediment	4	713.77	Unfavourable declining	Erosion (while partly natural) is partly attributable to coastal squeeze; also possible contribution from recreational disturbance, water quality factors, and maintenance dredging. Agreed mitigation is in place in respect of maintenance dredging, and subject to comprehensive monitoring which is reported to EN and other regulators; however, although English Nature has no reason to assume it is not working, the monitoring results are not able as yet to confirm that it is working as indicated by modelling. It is expected that such confirmation is unlikely to be available until the end of the second five-year review in 2010. In the event that it is not after an appropriate period possible to demonstrate that mitigational sediment replacement is working, or if further investigation indicates that adverse effects are arising from unmitigated maintenance dredging requirements arising from dredges previous to 1998-2000, it is likely that dredging will be then indicated as a reason for unfavourability.	Coastal squeeze
Littoral sediment	6	162.83	Unfavourable declining	Erosion (while partly natural) is partly attributable to coastal squeeze; also possible contribution from recreational disturbance, water quality factors, and maintenance dredging. Agreed mitigation is in place in respect of maintenance dredging, and subject to comprehensive monitoring which is reported to EN and other regulators; however, although English Nature has no reason to assume it is not working, the monitoring results are not able as yet to confirm that it is working as indicated by modelling. It is expected that such confirmation is unlikely to be available until the end of the second five-year review in 2010. In the event that it is not after an appropriate period possible to demonstrate that mitigational sediment replacement is working, or if further investigation indicates that adverse effects are arising from unmitigated maintenance dredging requirements arising from	Coastal squeeze



				dredges previous to 1998-2000, it is likely that dredging will be then indicated as a reason for unfavourability.	
Earth heritage	8	3.45	Favourable		

**Team - Norfolk And Suffolk - SSSI name - Alde-ore Estuary - Staff member responsible for site - John Jackson**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Littoral sediment	1	59.87	Favourable	Unit comprises intertidal mudflat with fringe of brackish reedbed and saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates no net change in area of saltmarsh and reedbed - accretion in some areas erosion in others. Site visit - no obvious saltmarsh 'mud mounds' - remnant river walls in main channel eroding. Extensive area of brackish reedbed with saltmarsh plants in amongst reed and on fringes eg Sea pursulane, Sea Aster. Avocet and redshank feeding . *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	
Littoral sediment	2	29.38	Favourable	Unit comprises intertidal mudflat with brackish reedbed and saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates no net change in area of saltmarsh and reedbed - accretion in some areas erosion in others. Site visit - no obvious saltmarsh 'mud mounds. Extensive areas of brackish reedbed with saltmarsh plants in amongst reed and on fringes eg Sea pursulane, Sea Aster. Extensive area of	

				saltmarsh dominated by sea couch landward - not grazed. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	
Littoral sediment	3	51.84	Favourable	Evidence of erosion in some areas, but accretion in other area, net balance confirmed by 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	
Littoral sediment	4	101.94	Favourable	Duncan Smith visited this site alone in January 2002. Saltmarsh fronts most of the length of the unit, and is wide in places. Grassland is contiguous landward of the saltmarsh, which slopes gently upwards. The majority of the unit is within the ESA scheme, and is due for renewal on 2003. The EA GIS map shows large areas of saltmarsh that are stable and significant areas which have accreted since 1986. For these reasons I have classified this unit as favourable.	
Littoral sediment	5	97.60	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh. 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates loss in of saltmarsh - especially since 1986. In particular, there is evidence of erosion over many of the marsh edges combined with loss of horizontal extent. Also significant losses in 'bay' areas. This 'desk' assesment corresponds with site observations made in 2003. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	6	93.13	Unfavourable declining	Unit of intertidal mud and saltmarsh. 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates a net loss in extent over this period for the unit. There is evidence of erosion over most of the marsh edges combined with	Coastal squeeze

				loss of horizontal extent of saltmarsh area. The river walls where they exist causing coastal squeeze. In other parts of unit backed by naturally rising ground habitats have potential to migrate. In some areas stands of <i>Spartina maritima</i> appear to be establishing (obs from site visit) but currently monoculture. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	
Neutral grassland - lowland	7	71.93	Favourable	'Current management regime (summer grazing and topping) working well. Still more work required to control soft rush on some marshes.'	
Littoral sediment	8	71.36	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates loss in of saltmarsh - In particular, there is evidence of erosion over many of the marsh edges combined with loss of horizontal extent. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	Coastal squeeze
Littoral sediment	9	63.32	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates loss in of saltmarsh - In particular, there is evidence of significant erosion over many of the marsh edges combined with loss of horizontal extent. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	Coastal squeeze
Littoral sediment	10	108.71	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates net loss in of saltmarsh. Data indicates there has been some accretion in a few areas but much less overall extent than in 1971. In particular, there is evidence of erosion	Coastal squeeze

				over many of the marsh edges combined with loss of horizontal extent. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	
Littoral sediment	11	146.51	Favourable	Unit comprises river channel with fringing intertidal mudflat and saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates no net change in extent. EA, 2000. Saltmarsh change in Suffolk estuaries between 1971, 1986 and 1998.	
Littoral sediment	12	33.17	Unfavourable recovering	Following breach in 1999, continuing to develop into saltmarsh and intertidal mud. Good accretion rates in excess of those predicted evidenced by monitoring which is carried out by NT in association with RSPB (who are monitoring their own managed re-alignment area on havergate Island.). Spartina + salicornia spp developing well, with other saltmarsh plants establishing. Also becoming an important area for Little Egret.	
Supralittoral sediment	13	14.86	Unfavourable no change	Shingle used to re-inforce the shingle barrier at Slaughden is removed from this unit. Diggers driving over the shingle ridges have historically damaged the shingle structures and vegetation. No shingle movement took place during 2004 as ridge deemed sufficiently wide to hold line. An appropriate assessment is ongoing. New working methods have been implemented since 2003 to minimise vehicle impact and there is monitoring of vegetation and key invertebrates. Too early to tell if unit is recovering.	Inappropriate coastal management
Supralittoral sediment	15	58.27	Favourable	Large shingle unit fronting cobra mist site and lantern marshes (ridge forms coastal defence for bbc radio installation). According to Site manager beach appears to be accreting rapidly -approx 50m in 10 years. Extensive areas of , sea pea in southern half of unit(although just further down coast at unit 20 eroding at	

				lighthouse at rate of 5m /year)	
Neutral grassland - lowland	16	156.92	Favourable	Lantern Marshes - Improved ditching has led to reduced fox predation on gull colonies. Extent of Reed spreading as site becomes wetter although limit to water levels as BBC transmitter site cannot be isolated from rest of unit, although sufficient levels to maintain ditches as wet fences.	
Supralittoral sediment	17	29.91	Favourable	Lagoon areas formed when shingle was used to build roads for MoD etc. Although relatively new and ephemeral, surveys (98)suggest habitat quality still high and as spp rich as more established lagoons. On coastal ridge, large areas of well developed sea pea and some other other driftline & perennial vegetation.	
Neutral grassland - lowland	18	99.70	Favourable	Kings Marshes- Center block grazed, north end non-intervention management (more brackish). Currently 70-100 head cattle combined grazing & mow regime. Now Tier 2A & More tightly grazed areas good for lapwing & redshank approx 20 pairs each annually+ med pippit & skylark. Gradual increase in occurrence of reed as unit wetter.	
Littoral sediment	19	31.58	Favourable	'stony ditch' surrounded by extensive areas of well developed saltmarsh and saline lagoons.	
Supralittoral sediment	20	81.61	Favourable	Apparent abundance of shingle vegetation has increased over recent years, especially grass spp, with vegetation along shingle ridges well established. Shingle heath communities well established with abundant sea campion. Most of unit not accessible to public, and so ridges & vegetation remain largely undisturbed- Although some minor trampling and damage along designated walkways.	
Supralittoral	21	112.43	Favourable	Apparent abundance of shingle vegetation has increased over	

sediment				recent years, especially grass spp, with vegetation along shingle ridges well established. Shingle heath communities well established with abundant sea campion. Most of unit not accessible to public, and so ridges & vegetation remain largely undisturbed, although there are unauthorised access issues at southern end of unit.	
Neutral grassland - lowland	22	86.50	Favourable	Reed bed extent south side of bridge increasing- Dry reedbed has specialist dry-litter beetle spp. 2 new lagoons dug 98 approx 2ha- well established. New boundary ditch created in 1998 and linked into existing grups etc. Gradual increase in juncus spp on some marsh areas esp as water levels raised (although not across all fields). However not excessive & provides cover for redshank etc. Managed through topping etc.	
Littoral sediment	23	35.03	Favourable	saltmarsh fringe along stony ditch extends out to significant area toward south of unit.	
Littoral sediment	24	117.32	Favourable	Unit comprises river channel with fringing intertidal mudflat and saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates no net change in extent.	
Littoral sediment	25	252.11	Favourable	Unit comprises river channel with fringing intertidal mudflat and saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates no net change in extent. Managed re-alignment area continuing to accrete and developing saltmarsh flora.	
Supralittoral sediment	26	79.03	Favourable	Vegetation favourable -on older shingle, extensive Silene vulgaris(sea campion), Sedum and Arrhenatherum (false oat grass) with Crambe (sea kale) toward shore.NT manager mentioned that unauthorised access by public can be problem	

				(e.g. BBQ's) also potential problem with access from water skiers.	
Supralittoral sediment	27	57.72	Favourable	Some evidence of use by people and trampling, especially where boats have moored up, but not excessive. Interesting transition from some low saltmarshy areas through to perennial vegetated shingle.	
Littoral sediment	28	57.24	Unfavourable declining	Unit comprises river channel with large areas of intertidal mudflat and saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent and aerial photographs indicates net loss in extent. Although some apparent accretion, large mud pans appear to have formed along with erosion along other edges.	Coastal squeeze
Littoral sediment	29	48.63	Unfavourable declining	Unit comprises river channel with large areas of intertidal mudflat and saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent and aerial photographs indicates net loss in extent. Although some apparent accretion, large mud pans appear to have formed along with erosion along other edges.	Coastal squeeze
Littoral sediment	31	131.02	Favourable	Unit comprises river channel with fringing intertidal mudflat and saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates no net change in extent.	
Supralittoral sediment	32	19.96	Unfavourable recovering	Looking at the citation map, there seems to have been movement of quite a lot of shingle from this unit south into unit 33. Sea beet and yellow-horned poppy are present in some areas on the open shingle. Behind the main shingle ridge, the vegetation grades into short grassland with lichens in some areas. There are also patches of longer grassland. This part of the site is heavily used by people	

				walking dogs, birdwatching etc, and there seem to be established grassy tracks. In early January the representative of the owners reported that someone had driven over the vegetation and shingle. On the visit, there were obvious vehicle tracks which had caused damage to the vegetation. To the South of The Beacons there was more of an expanse of open shingle, with evidence of ridges, and sparse shingle vegetation.	
Supralittoral sediment	33	40.42	Favourable	Assessment changed as a result of re-evaluation of coastal process issues - East Lane sea defences act as throttle to sediment movement bt do not prevent it.	
Earth heritage	38	1.29	Unfavourable declining	This section of cliff is overgrown. There are a few mature oaks and several patches of scrub - hawthorn, blackthorn and elder. The rest of the slope is mostly overgrown with nettles, brambles etc. This however does not seem to be significantly worse than the photos from the Site Management Brief from 1993 show. The only significant exposure is at the south west of the site where cross-stratification is visible. This area is more overgrown than in 1993. There is saltmarsh between the cliff and the river, so the cliff does not benefit from river erosion. There is a vehicle track along the base of the cliff, so it might be possible to access the face for clearance works. Vegetation growth is considered detrimental to the scientific interest and for access to the cliff face. Clearance works would be necessary to bring this site into favourable condition, but this should only be done if there is a research interest in the site.	Earth science feature obstructed
Littoral sediment	42	36.24	Favourable	Duncan Smith, John Jackson and Emma Coombs visited this site in May 2002. The unit contains an extensive area of saltmarsh, with a good variety of saltmarsh flora, including sea-milkwort ( <i>Glaux maritima</i> ), Sea arrow grass ( ( <i>Triglochin maritima</i> ), Sea	



				lavender ( <i>Limonium vulgare</i> ), red fescue ( <i>Festuca rubra</i> ), Sea spurry ( <i>Spergularia media</i> ) and Danish scurvey grass ( <i>Cochlearia danica</i> ). The EA GIS map shows extensive areas of stable saltmarsh, with areas around the edges of the creeks showing accretion and erosion in approximately equal amounts. There was evidence of cattle grazing (hoofmarks), but the salt marsh was not poached.	
Littoral sediment	43	25.27	Favourable	Duncan Smith, John Jackson and Emma Coombs visited this site in May 2002. The unit contains an extensive area of saltmarsh, with a good variety of saltmarsh flora, including sea-milkwort ( <i>Glaux maritima</i> ), Sea arrow grass ( <i>Triglochin maritima</i> ), Sea lavender ( <i>Limonium vulgare</i> ), red fescue ( <i>Festuca rubra</i> ), Sea spurry ( <i>Spergularia media</i> ) and Danish scurvey grass ( <i>Cochlearia danica</i> ). The EA GIS map shows extensive areas of stable saltmarsh, with areas around the edges of the creeks showing accretion and erosion in approximately equal amounts. There was evidence of cattle grazing (hoofmarks), but the salt marsh was not poached.	
Fen, marsh and swamp - lowland	44	18.82	Favourable	Duncan Smith, John Jackson and Emma Coombs visited this site in May 2002. To the west and south of the decoy pond is a large expanse of reed bed, which is under the Fen Tier of the ESA prescriptions. About 50 percent of the reedbed is cut, and there were dried reed bundles in a shed closeby - evidence of small scale industry.	
Broadleaved, mixed and yew woodland - lowland	45	13.31	Favourable	Duncan Smith, John Jackson and Emma Coombs visited this site in May 2002. There is a shallow duck decoy pond at the north of the unit (containing abundant tadpoles), surrounded by common reed ( <i>Phragmatis australis</i> ). The vegetation around the reed bed is variable, but includes wet alder woodland, including dead	

				standing trees. Parts of the surrounding woodland is drier, and has planted oaks, beech, sweetchestnut and sycamore. To the north east of the decoy pond is an area of ESA Tier 2 low input grassland, with a ground flora including pond sedge, hemp agrimony, bugle, marsh valerian, southern marsh orchid, ragged robbin, marsh woundwort and filipendula ulmaria . Overall condition assessment for this habitat: Favourable.	
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**Team** - Norfolk And Suffolk - **SSSI name** - Barnby Broad & Marshes - **Staff member responsible for site** - Patrick Robinson

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Neutral grassland - lowland	1	45.72	Favourable	Ditches looking fantastic - frogbit, water soldier, Norfolk hawkler. Marsh declining due to rush . Need to look into water level management. Stock on late due to foot and moputh disease. Managed by grazing, ditch clearance as required and topping of rush.	
Neutral grassland - lowland	2	7.80	Unfavourable no change	Passed on the following assessments: Sward composition: frequency of negative indicators Sward composition: frequency and % cover of scrub and trees Sward composition: frequency of negative indicator species Sward structure: average height of sward Sward structure: litters in a more or less continuous layer Sward structure: extent of bare ground Failed on the following assessments: Sward composition: frequency of positive indicator species Sward composition: indicators of waterlogging	Inappropriate weed control, Water pollution - agriculture/run off
Neutral	3	3.18	Unfavourable	Following discussions with SWT it was agreed that this unit was	

grassland - lowland			recovering	Carex riparia fen rather than grazing marsh and as such was in a unfavourable recovering condition.	
Fen, marsh and swamp - lowland	4	5.70	Favourable	Vegetation appears stable and in favourable condition.	
Broadleaved, mixed and yew woodland - lowland	5	8.81	Favourable	Assessed as being favourable on all features.	
Neutral grassland - lowland	6	1.18	Favourable	Passed on all relevant assessments.	
Neutral grassland - lowland	7	6.09	Unfavourable recovering	Unit passed on the following assessments: Sward composition: frequency and cover of all scrub and tree species Sward structure: litter layer Sward structure: extent of bare ground Unit failed the following assessments: Sward composition: frequency of positive indicators Sward composition: frequency of negative indicators Sward composition: indicators of waterlogging Sward structure: average height of sward.	
Neutral grassland - lowland	8	4.11	Unfavourable recovering	The northern and central dyke now are ready to be desilted. Parts of the marsh are also looking rushy.	
Neutral grassland - lowland	9	11.25	Unfavourable recovering	The three southern e-w running dykes need slubbing out. I was unable to visit the central n-s one due to lack of time.	
Neutral	10	2.35	Unfavourable	Trees aqnd shrubs have been cut back around the unit. Slubbing	

grassland - lowland			recovering	work had started on the west, north and southern dykes. Three field drains had been opened up.	
Neutral grassland - lowland	11	11.89	Unfavourable recovering	The two central dykes (n-s and e-w) need slubbing out. A digger was on site, though work has yet to begin. There appears to have been a good rush kill over the bulk of the marsh, though the SW corner still seems quite rushy and poached. Rolling might help improve it.	
Fen, marsh and swamp - lowland	12	0.46	Unfavourable recovering	Extensive scrub and tree control has taken place in this unit. It looks much more open. There is still a considerable amount of timber and wood on site. There has been some trampling resulting from the work.	
Broadleaved, mixed and yew woodland - lowland	13	4.61	Favourable	On the whole the unit is fine. The recent coppicing along the east side of the track (c. 25m across) has been completed and appears to be regrowing well. A further section c. 50m by 15m has been cut along the railway track. The cutting has been done satisfactorily but the burning up of the debris has been done in one long fire. This was some 35m by 5m and was still smouldering when I was there. There appeared to be at least one burnt coppice stool in the fire site. An additional 3 fire sites were found in the cut area. These were much more reasonably sized (c. 1.5m in diameter). The newly cut area was wider than the estate had planned. I spoke to the site manger about the work. He visited the work area following my call and agreed that the work was unsatisfactory. Future burning will be carried out on corrugated iron. The aim had been to create a small area along the ditch edge that a small tracked vehicle could be run to slub the ditch. The woods also contain sycamore that will need some control eventually. The north - western section of the woodland block seemed fine. The growth was beginning to obstruct the	

				track way and will need to be cut back or coppiced in the next year or two.	
Broadleaved, mixed and yew woodland - lowland	14	6.06	Favourable	Visited on 22/7/03. The section of woodland that we looked at seemed to be in a favourable condition. There are sycamore and rhododendron growing in the unit. These seem to be limited to the outer edge and seem to be at levels that are currently not damaging to the interest. The unit is currently managed as high forest. It contains a pheasant release pen also. The unit contains old dead tussock sedge tussocks. The canopy is composed of willow, ash and oak. Hazel, hawthorn and rowan also grow here. The ground flora was fairly sparse with Geranium robertiana, and Lonicera.	
Broadleaved, mixed and yew woodland - lowland	15	4.89	Favourable	Visited on 22/7/03. Unit seemed fine. Woodland is dominated by birch ash and hazel. Wood had adequate deadwood and no non-natives observed.	
Broadleaved, mixed and yew woodland - lowland	16	18.13	Unfavourable recovering	Visited on 22/7/03. Unit is recovering following reinstatement of ditches to the west of the Broad. On the whole it looks fine but the unit still contains sycamore and rhododendron.	
Neutral grassland - lowland	17	2.51	Favourable	Unit looks better following weed wiping of rush last year. Marsh did look under-grazed.	
Neutral grassland - lowland	18	2.11	Unfavourable recovering	Visited 22/7/03. This marsh is now too rushy over much of the area. There was evidence that a weed wiper had been used on the marsh. Subsequent investigations confirmed that this had	

				happened the day before. The marshes still contained the interesting Sphagnum mounds. Anagalis in flower.	
Fen, marsh and swamp - lowland	20	8.56	Unfavourable recovering	Visited 22/7/03. Marsh continues to improve. A marsh harrier nested and raised chicks on this marsh this year.	
Fen, marsh and swamp - lowland	21	7.09	Unfavourable recovering	Marshes visited on 22/7/03. Marshes now becoming quite rushy. The marsh also seemed quite high. Otherwise it seemed fine. Cattle had just been put on to graze it.	
Standing open water and canals	22	1.97	Unfavourable recovering	Broads Authority completed mud pumping of the broad in the Summer 2007. This will move the unit from being unfavourable into a recovering state.	
Fen, marsh and swamp - lowland	23	11.08	Favourable	Visited 22/7/03. Unit seems fine. Good show of meadow rue.	
Neutral grassland - lowland	24	11.26	Unfavourable recovering	Visited 22/7/03. This unit appears quite rushy, and there was evidence to indicate that the northern marsh had just been weed wiped. This marsh seems quite floristically rich. Had been cattle grazed. The southern marsh appeared to be increasingly rushy and contained marsh thistles too. The inner marshes were not being grazed.	
Fen, marsh and swamp - lowland	25	5.56	Favourable	Visited 22/7/03. No change.	

**Team** - Norfolk And Suffolk - **SSSI name** - Blaxhall Heath - **Staff member responsible for site** - Monica O'Donnell

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Dwarf shrub heath - lowland	1	45.90	Unfavourable recovering	Current management - scrub and tree clearance and bracken management under HLF sandlings project and WES.Bracken on soil stripped areas sprayed July 03, larger Silver Birch on soil stripped areas to be removed winter 03/04.	

**Team - Norfolk And Suffolk - SSSI name - Deben Estuary - Staff member responsible for site - John Jackson**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Fen, marsh and swamp - lowland	1	9.08	Favourable	Assessment made by Steve Aylward reserves manager SWT- no management occurs other than occasional scrub control.	
Littoral sediment	2	33.53	Favourable	This unit was visited as part of the coastal SSSI sample survey. The site was viewed from the opposite river bank. The unit has been recorded as favourable as there appeared to be evidence of some accretion of mud and pioneer colonisation of sediments in the lee of a man-made bund which formed the edge of the saltmarsh communities. It was not possible to tell whether the marsh was grazed or not. The unit contained good upper marsh transitions from marsh to reedbed. The reedbeds were quite extensive at the base of a steep slope. This section of the estuary is very busy with a large boatyard nearby. There may be pollution entering the estuary from the adjacent light industrial and	

				urban areas of Woodbridge and Melton.	
Littoral sediment	3	18.15	Unfavourable declining	Assessment of saltmarsh erosion based on GIS mapping of saltmarsh conducted for University of Newcastle report to EA (2000). This unit is eroding overall, with a 10-20 metre strip lost from the outer edge of the marsh in places.	Coastal squeeze
Littoral sediment	4	24.99	Favourable	Although the intertidal is in favourable condition overall the proportion of saltmarsh to mudflat is decreasing due to sea level rise. Met with occupiers who want to dredge out quay - problem with toxic mud. Currently no go unless remove from site.	
Littoral sediment	5	78.75	Unfavourable declining	Assessment of saltmarsh erosion based on GIS mapping of saltmarsh conducted for University of Newcastle report to EA (2000). High levels of erosion to north of unit. Less to the south where erosion and accretion are more balanced.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	6	20.35	Unfavourable declining	Assessment of saltmarsh erosion based on GIS mapping of saltmarsh conducted for University of Newcastle report to EA (2000). High levels of erosion around unit even in areas where saltmarsh survey suggested no net change. Areas of Saltmarsh dominated by Spartina with evidence of erosion in these areas. Upper and mid-marsh zones mostly absent or squeezed against defence structures. (NB Fixed point Photo's taken and filed).	Coastal squeeze, Water pollution - agriculture/run off
Fen, marsh and swamp - lowland	7	1.34	Favourable	Known location for Vertigo angustio (RDB mollusc)- Assume habitat is favourable for this species. Estuary Reedbed covering most of unit. Some signs of erosion- edges of reedbed grade into small fringe of saltmarsh(cliffed) but back of reedbed bounded only by rising land. Photos taken & filed.	



Littoral sediment	8	29.73	Unfavourable declining	Assessment of saltmarsh erosion based on GIS mapping of saltmarsh conducted for University of Newcastle report to EA (2000). High levels of erosion around unit even in areas where saltmarsh survey suggested no net change. Areas of Saltmarsh dominated by Spartina with evidence of erosion in these areas. Upper and mid-marsh zones mostly absent or squeezed against defence structures. Evidence of extensive erosion (mud pooling, cliffing, spartina dominance with algae covering). Only area showing any zonation is in 'wildfowl conservation area' where river walls set back onto rising ground. Shrubby seablite (Nationally Scarce) present in unit on river wall opposite Kyson Point. NB Fixed point Photo's taken and filed.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	9	74.33	Unfavourable declining	Assessment of saltmarsh erosion based on GIS mapping of saltmarsh conducted for University of Newcastle report to EA (2000). A 20m strip along the leading edge of the main saltmarsh has eroded since 1971.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	10	91.78	Favourable	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates some gains but greater losses of saltmarsh (esp toward south of unit). However unit backs onto naturally rising ground so intertidal not anthropogenically squeezed. Therefore unit considered favourable.	
Littoral sediment	11	47.24	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates loss in of saltmarsh - In particular, there is evidence of significant erosion over many of the marsh edges combined with loss of horizontal	Coastal squeeze, Water pollution - agriculture/run off

				extent. Intertidal extent limited by river wall under SLR. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	
Littoral sediment	12	76.97	Unfavourable declining	This unit has extensive areas of saltmarsh (dominated by invasive Spartina, with occasional sea aster and sea lavender), but is constrained by a sea wall. Duncan Smith and John Jackson Duncan Smith made an assessment of this site using GIS data provided by the Environment Agency, which shows salt marsh change between 1971-86 and 1986-1998. Along the southern section of the seawall, from where it kinks sharply towards the south, the EA data show that significant sections of the seaward edge of the saltmarsh has been eroded between 1971 and 1986 and has not accreted since then. Along much of the seaward boundary of the saltmarsh, from near to where the seawall kinks sharply to the north west, accretion occurred between 1971- 1986, and which has since become stable (18m wide in places). However, substantial parts of the creeks that were stable between 1971-86 have been eroded between 1986-98, and substantial sections have been eroded between 1971-86 and do not show sign of accretion. This erosion, together with the fact that the island to the north of the unit shows net erosion, leads us to conclude that overall, the unit is eroding, and therefore in an unfavourable condition.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	13	62.79	Favourable	Unit comprises intertidal mudflat with saltmarsh. 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates slight net decrease in extent of saltmarsh. However existing river wall has breached and	

				intertidal has formed behind this. Unit backs onto naturally rising ground so intertidal not anthropogenically squeezed. Therefore unit considered favourable.	
Littoral sediment	14	37.26	Favourable	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates loss in of saltmarsh - In particular, there is evidence of erosion over many of the marsh edges combined with loss of horizontal extent. However existing river wall has breached and intertidal has formed behind this. Unit backs onto naturally rising ground so intertidal not anthropogenically squeezed. Therefore unit considered favourable.	
Littoral sediment	15	57.82	Unfavourable declining	Assessment of saltmarsh erosion based on GIS mapping of saltmarsh conducted for University of Newcastle report to EA (2000). Erosion slightly outweighs stable and accreting areas overall.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	16	29.84	Unfavourable declining	Assessment of saltmarsh erosion based on GIS mapping of saltmarsh conducted for University of Newcastle report to EA (2000). Leading edge receding from saltmarsh to the south.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	17	58.99	Unfavourable declining	Assessment of saltmarsh erosion based on GIS mapping of saltmarsh conducted for University of Newcastle report to EA (2000). A 20m strip has been lost from the leading edge of the saltmarsh since 1971.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	18	54.26	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates loss in of saltmarsh - In particular, there is evidence of significant erosion over	Coastal squeeze, Water pollution - agriculture/run off

				many of the marsh edges combined with loss of horizontal extent. Intertidal extent limited by river wall under SLR.	
Littoral sediment	19	55.71	Unfavourable declining	Saltmarsh bounded by seawall on landward side and eroding due to coastal squeeze. EA air photograsph based data indicate the loss of a 10 m fringe since the 1970's.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	20	30.10	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates loss in of saltmarsh - In particular, there is evidence of significant erosion over many of the marsh edges combined with loss of horizontal extent. Intertidal extent limited by river wall under SLR.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	21	40.62	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998 of saltmarsh extent indicates loss in of saltmarsh - In particular, there is evidence of significant erosion over many of the marsh edges combined with loss of horizontal extent. Intertidal extent limited by river wall under SLR.	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	22	47.43	Unfavourable declining	Unit comprises intertidal mudflat with saltmarsh.'Desktop' examination of EA GIS survey data from 1971-1998 of saltmarsh extent indicates loss in of saltmarsh - In particular, there is evidence of significant erosion over many of the marsh edges combined with loss of horizontal extent. Intertidal extent limited by river wall under SLR.	Coastal squeeze, Water pollution - agriculture/run off

**Team - Norfolk And Suffolk - SSSI name - Dew's Ponds - Staff member responsible for site - Monica O-Donnell**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
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Standing open water and canals	1	0.09	Favourable	Triton House ponds are developing into a diverse 'pondscape' across the site with each pond having differing characteristics in terms of aquatic vegetation, depth, temperature etc. Juvenile great crested newt seen on survey date. New small lined pond recently dug as replacement for tank that had to be removed.	
Neutral grassland - lowland	2	4.58	Favourable	Terrestrial habitat is in excellent condition for newts. Grasslands are managed by taking haycut; some thistle present in sward but controlled by topping. Recently planted hedgerows are thriving.	
Standing open water and canals	3	0.10	Unfavourable recovering		
Neutral grassland - lowland	4	2.06	Favourable	I visited the land surrounding the ponds with Jim Foster and Deborah Procter (JNCC) in the company of the owners. The grassland surrounding the ponds was in excellent condition for newts in general, being overgrown and tussocky. Plenty of scrub on site. Land drains near the pond would provide good refuge habitat.	

**Team - Norfolk And Suffolk - SSSI name - Leiston - Aldeburgh - Staff member responsible for site - John Jackson**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Acid	1	69.57	Unfavourable	The site was inspected with binoculars from the footpath	

grassland - lowland			recovering	running along the disused railway line forming the western boundary of unit 1. From this location, and as far as the woodland, bracken was abundant as far across the unit as was visible. The bracken had been aerially sprayed with asulox in mid July 2002 , which had turned parts of the visible foliage a yellowish colour; it remained alive at the time of our visit, but Rob Mackin, RSPB site manager, believes the effects of the asulox will become apparent in 2003. - see photo of unit 2, stored under Leist-Alde/monitoring/photos, which shows the condition of the bracken adjacent to this unit. It is in the same condition throughout unit 1. Although bracken was abundant, it was evident that it has been managed in the past, as it was of a height of approximately 1m tall, and of a density that was easy to walk through. The acid grass beneath the bracken appeared in good condition.	
Acid grassland - lowland	2	0.96	Favourable	Unit 2, a disused railway line, runs along the western edge of RSPB's compartment 39, and is not part of a distinct management unit. Unit 2 is heavily overgrown, with dense areas of gorse and bracken, and frequent birch, elder and sycamore trees. There are some small clearing with heather to the north. Given its position along the boundary of Aldringham Walks and the golf course, I consider it appropriate for the SSSI overall that this unit is left unmanaged, and consequently have described this unit as FAVOURABLE. See photo, stored under Leiston-Alde/monitoring/photo.	
Acid grassland - lowland	3	38.96	Favourable	Site visit with Site Manager, Ian Willets, to discuss golf T alterations. IW showed me areas where gorse had been cut. Management appropriate to the site.	

Broadleaved, mixed and yew woodland - lowland	4	1.59	Unfavourable recovering	This unit has an open birch canopy, oak and rowan saplings, with a ground layer of dense bracken. Towards the car park at the south of the unit, the canopy is even more open, with particularly dense bracken and gorse. The RSPB manage this unit - and have removed scrub and trees adjacent to unit 4 (in the west of compartment 3), and propose to do similar work in unit 4 in 2003.	
Broadleaved, mixed and yew woodland - lowland	5	17.05	Unfavourable recovering	Mosaic of plantation wood land, more open heathland and scrub. Ongoing work to clear and maintain more open areas. Scrub on east of unit good for nightingale.	
Broadleaved, mixed and yew woodland - lowland	6	3.49	Favourable	Duncan Smith visited this unit with Emma Coombs. It is adjacent to land managed by RSPB. The canopy consists of oak, birch and rowan, with an understorey of brambles and bracken. Although the site is not of SSSI woodland quality, it forms a valuable component of the SSSI as a whole in its unmanaged condition, and for this reason I have classified it as favourable.	
Acid grassland - lowland	7	24.72	Favourable	Duncan Smith visited the site at the request of Ian Willets, Site Manager. IW had recently cleared a glade in the birch/sycamore woodland adjacent to 'House in the Sky'. Within the unit, some mature gorse had been cut back, and hoping for regeneration. Lots of rabbits, keeping turf short and maintaining woodlark habitat.	
Supralittoral sediment	8	12.45	Unfavourable recovering	SCDC wardening scheme, supported by a specific leaflet, is in place to raise awareness of the importance of vegetated shingle	

Broadleaved, mixed and yew woodland - lowland	9	14.43	Favourable	This site is used by members of the public as a recreational area. The habitat is mixed, with areas of dense mature scrub (gorse, hawthorn and brambles) interspersed with short acid grass areas, the latter occurring mainly on the frequent paths. Heather is occasionally present in grass clearings and paths. Bracken is dominant in places, and some had been sprayed in the past. The RSPB warden advises that Thorpness Common is good for migrant birds and rarities. Given its use as a public walking/recreation area, it is difficult to see that management appropriate for 'specialist' heathland birds (some scrub and bracken clearance) would be feasible, and there would inevitably be disturbance to birds should the dense scrub be cleared. It has value as complementary habitat to the rest of the SSSI.	
Fen, marsh and swamp - lowland	10	28.33	Unfavourable recovering	Duncan Smith inspected this site with Rob Macklin, as part of the RSPB's annual review process. Rob is pleased with the fen. Marsh harriers, otters and water voles use the site, and there were 2 nesting pairs of bittern this season (2002). Forthcoming management work 2002/03 includes birch pulling in the north-west corner of this unit.	
Standing open water and canals	11	28.31	Favourable	Duncan Smith inspected the Meare from adjacent paths to the east and north of the site. The reed beds and alder carr woodland look in good conditions. There is a Water Level Management Plan for North Warren and Thorpness Meare, signed in July 1998, and a Site Management Statement for Thorpness Meare, for the period 1999-2004.	
Broadleaved, mixed and yew	12	6.64	Favourable	Duncan Smith and Emma Coombs visited this site, owned by Mr Goyder and managed by RSPB. It is non-intervention wet woodland, with a canopy of salix spp, alder and some aspen.	



woodland - lowland				Sedges are frequent in the ground layer and there dead wood scattered throughout the site. Rob Mackin, RSPB site manager, reported that white mantle wainscote moth was recorded in the wet woodland on July 2002	
Acid grassland - lowland	13	58.30	Unfavourable recovering	Duncan Smith visited the site with Rob Macklin, RSPB reserver manager, and Julia Evan, RSPB's grassland ecologist. Birch had recently been removed from a 3 ha area; this has created areas of bare ground, and heather re-colonisation is underway. Rob pointed out an area of bracken to be sprayed, which will be grazed by sheep. Rob said that rabbit grazing alone was, in the past, sufficient to keep the vegetation at appropriate levels, but that due to the increase in rain-fall over the last 2 years (double to what it was before), this needs to be supplemented by sheep grazing. It was agreed that the scrub on this site would be mapped, so that its extent can be monitored. If the area of scrub is increasing, it is a problem, but if it is not expanding, then it is suitable for the site.	
Neutral grassland - lowland	14	116.95	Favourable	GC visited unit as part of site annual review. Marshes very good for lapwing. Work has been carried out since last assessment on north marshes to open up drains and gullies. Water levels kept high in winter as per spec in current management plan.	
Supralittoral sediment	15	12.41	Unfavourable recovering	'Further scrub clearance required. Grazing would be ideal. Pressure from trampling tolerable.'	
Supralittoral sediment	16	9.38	Unfavourable recovering	SCDC wardening scheme, supported by a specific leaflet, now in place to raise awareness of the importance of vegetated shingle	
Supralittoral	17	6.39	Unfavourable	SCDC wardening scheme supported by a specific leaflet now	

sediment			recovering	in place to raise awareness of the importance of vegetated shingle	
Acid grassland - lowland	18	1.47	Favourable	Footpath along route of old railwayline. Path mowed. Drainage channels run parallel to this path to its east and west; reeds. willows and birch frequent.	
Supralittoral sediment	19	6.28	Favourable	RSPB manage this scrub habitat on behalf of SCDC, which mergers into reed beds- there is a 5-10 m strip of reeds along the ditch. Scrub is mostly dense and less than 1m high. Mangement includes occassional scrub cutting for adders tongue fern. Linnets, warblers, stonechat, winchat use this habitat.	
Supralittoral sediment	20	17.50	Unfavourable recovering	SCDC wardening scheme, supported by a specific leaflet, now in place to raise awareness of the importance of vegetated shingle	
Broadleaved, mixed and yew woodland - lowland	21	14.45	Favourable	Area of Dry Reedbed surrounded by Oak & birch. Discusssion on RSPB reserve visit day over preffered management objective. Ideally kept as dry reedbed with occassional mowing and scrub clearance. i.e. Management primarily for inverts. However requires considerable labour input and therefore possible case for lowering and 'wetting up' to create wet reedbed. RSPB invert specialist will survey and advise.	
Broadleaved, mixed and yew woodland - lowland	22	4.65	Favourable	Area of predominantly scrubby willow and birch adjacent to main wet reedbed unit. Value as addition to habitat mosaic. Generally non-intervention management.	
Broadleaved,	23	40.47	Unfavourable	The management agreement in place with the RSPB provides	

mixed and yew woodland - lowland			recovering	for the introduction of trees, woodland management and alteration to trees and woodland management, including planting, felling, tree surgery, thinning, coppicing and removal of fallen timber. The woodand on the estate is for amenityh and sporting purposes, in addition to commercial timber production and is managed with a commercial outlook in order to try to maximise timber returns and income.The woodlands contribute to the maintenance of nightjar and woodlark populations, with bird using glades and rides, and temporary open space after trees are felled but before replanting. The above management activites are ageeed in principle in the Site Management Statement.	
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**Team** - Norfolk And Suffolk - **SSSI name** - Minsmere-Walberswick Heaths And Marshes - **Staff member responsible for site** - John Jackson

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Neutral grassland - lowland	1	19.95	Unfavourable recovering	Water control now in place through Heritage Management Plan - evidence of improved grazing management but further to go	
Fen, marsh and swamp - lowland	2	2.76	Favourable	Hide now in place, paths kept open, fen area cut, edge coppice. Current management- limited intervention, some edge coppicing.	
Fen, marsh and swamp - lowland	4	15.33	Favourable	SWT Reserves Manager: 'Long rotation mowing and extensive grazing.'	
Littoral	8	35.71	Unfavourable	Majority of unit intertidal mud with small amount of	Coastal squeeze,

sediment			declining	saltmarsh present. Examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates a net loss of approx 50% over this period for this unit. Estuary modelling from current estuary strategy (2005) indicates the estuary is in (slow) process of reaching an equilibrium state following historical modification. In current form estuary is ebb dominant and as such sediment accretion unlikely to occur without modification to estuary morphology. The river walls at western side of unit (A12) prevent the feature from reaching a morphological equilibrium. Therefore unit deemed unfavourable. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	Water pollution - agriculture/run off
Neutral grassland - lowland	9	14.48	Unfavourable recovering	wall nearby at Tinkers repaired Autumn 04 and sluice flap now operating correctly.	
Neutral grassland - lowland	10	47.78	Favourable	Gul/ corvid predation problem described in former assessment now resolved, as pigs have gone .	
Neutral grassland - lowland	11	76.03	Unfavourable recovering		
Broadleaved, mixed and yew woodland - lowland	13	26.81	Favourable	Area would be better left to regen to heather/acid grassland but as plantation its OK	
Dwarf shrub heath -	16	31.32	Unfavourable recovering	The unit consists of areas of acid grassland, bracken, heather, scrub and young trees. The unit is grazed by sheep,	

lowland				and forage harvested. The bracken has been sprayed this year. There are nighjar, woodlark and dartford warblers. There is a gorse invasion problem, and there is continuing management to clear the gorse and broom.	
Arable and horticulture	17	14.52	Unfavourable no change	Would be better left to revert to heathland	Agriculture - other
Broadleaved, mixed and yew woodland - lowland	18	9.17	Favourable		
Broadleaved, mixed and yew woodland - lowland	20	11.47	Favourable		
Arable and horticulture	21	11.37	Favourable	Area being manages for stone curlew and woodlark	
Broadleaved, mixed and yew woodland - lowland	30	5.42	Favourable	Site visit on Suffolk Coast and Heaths fact finding tour	
Dwarf shrub heath - lowland	34	22.75	Unfavourable recovering	A lot of birch was removed about 2 years ago. The heather is coming back really well (Calluna and Erica cinerea). Bracken is swiped. Pig runoff affected part of the unit last year.	

Dwarf shrub heath - lowland	35	47.67	Favourable	Visited eastern part of site with Adam Burrows, John Jackson, Shaun Thomas and Brenda Williams. Site looks in good condition. EN conducts scrub clearance, block clearance of heather (burning, for structural diversity) and maintains firebreaks. Currently the heather has quite an even age structure.	
Dwarf shrub heath - lowland	36	64.88	Unfavourable recovering	Still too much gorse and heather too even aged.	
Dwarf shrub heath - lowland	37	65.49	Unfavourable recovering	Duncan Smith visited this site with Merle Kemp, RSPB Heathland Reserve Warden. A considerable amount of conservation habitat management work has been undertaken, and more is programmed to be undertaken. The management work is appropriate to the site, and should lead to the attainment of favourable condition.	
Dwarf shrub heath - lowland	39	61.36	Unfavourable recovering	Duncan Smith visited this unit with Mel Kemp, RSPB Heathland Reserve Manager. This is a large unit, with a variety of management activities: pine and birch thinning/felling, soil exposure by bulldozer, rotovation to create fire break/ feeding area for woodlark/ silver studded blue butterfly. There is a grazing enclosure and a 'control' heathland plot, to assess the effects of grazing. Unit had some patches of bare ground amongst the heather, ideal for breeding nightjar.	
Broadleaved, mixed and yew woodland - lowland	40	53.87	Unfavourable recovering	Ongoing unit management, described in RSPB management plan and in the SURF management assessment. Non intervention block for bryophytes. Brich and bracken control. Heathland reversion sites within previously coniferous woodland. . Hazel coppicing and planting, to	

				create suitable habitat for nightingale and scrub warblers.	
Fen, marsh and swamp - lowland	41	26.52	Favourable	Some ponds dug out and made deeper in 1999/00, plus new dykes and ditches. Bund constructed over same 2 winters (to provided protection to eastern section of unit from sea water incursions and to increase the size of the pool). Bitterns use this reed bed as a feeding ground, but not currently for breeding. When the main Minsmere breeding ground becomes fully occupied, bitterns are expected to utilise this reed bed for breeding.	
Fen, marsh and swamp - lowland	44	25.08	Unfavourable recovering	This unit it currently managed for its floristic interest - unit has dense areas of <i>Phragmitis australis</i> , but majority of site is currently not accessible. Ian Hawkins, wetland reserve manager, is seeking advice on best way to manage this unit, which currently does not have a strong RSPB bird objective. Reeds cut on rotation at edges of site to prevent excessive willow encroachment , where access is via ladders extended onto site, and mowing conducted using a pedertrian mower. Cutting holds back encroachment of S25 into the site and increased the diversity of fen plants. Cutting is also maintaining and increasing the snipe population from 1 to 3 pairs. Ian is keen to do further mangement to benefit snipe, which he said is rarer that bittern. Infrastructure of unit would need to be improved either for cattle or for more reed cutiing. Consider opening up drains, to create more open water, but this would need careful control.	
Dwarf shrub heath - lowland	45	17.78	Unfavourable recovering	There is significant birch encroachment on the dry heathand in places, which is to be removed. The single aged mature birch canopy/bracken understorey is shading out heather	

				beneath. Management to fell and treat birch/pine to create linked glades and rides to benefit the development of ericaceous ground flora and provide additional feeding and breeding areas for nightjar. Plan to have tongues of heathland grading into adjacent wet land (unit 44).	
Broadleaved, mixed and yew woodland - lowland	46	18.80	Favourable	Oak/ birch drywoodland. Minimal management to north section of bridleway-selective removal of invasive species; some planting south of bridleway. Frequent dead wood. Eastern electricity trim below powerlines to keep wayleaves open.	
Fen, marsh and swamp - lowland	47	72.77	Favourable	Water level control, scrub management, 7 year rotational cut of reedbed, rotational ditch clearance.	
Fen, marsh and swamp - lowland	48	84.92	Unfavourable recovering	Maintain high water levels throughout reed beds from Feb-Aug. Monitor water levels and salinities - data to be used to bittern uses of reedbed and reed quality. 7 year rotational winter cutting. programme. Investigate cost effective method for maintaining open reedbed structure. Monitor reedbed quality. Rotational ditch clearance. Collect wildlife data. Extend lagoon system. Hydrological control and Island Management. Main artery ditch adjoining unit carries water from drained marshes as well as STW output to sea via minsmere sluice. If ditch were to overtop there is potential for eutrophic water in main sluice drain to flood marshes and thus threaten their conservation status. Therefore the STW's that feed into this system have been put forward for inclusion in the AMP programme (GAC nov 03)	
Neutral grassland -	49	40.80	Unfavourable recovering	Visit with Geoff Welch to inspect works done to encourage transitional zone between grazing marsh/reedbed. Works	



lowland				just completed so await results. Area to be grazed with Tarpan horses in future. Main artery ditch adjoining unit carries water from drained marshes as well as STW output to sea via minsmere sluice. If ditch were to overtop there is potential for eutrophic water in main sluice drain to flood marshes and thus threaten their conservation interest. Therefor the STW's that feed into this system have been put forward for inclusion in the AMP programme (GAC nov 03)	
Neutral grassland - lowland	53	24.44	Unfavourable recovering	Duncan Smith, Emma Coombs and John Jackson visited this unit with the land manager, who manages the site on behalf of the o/o. [ half of unit 53, the other half is managed by Suffolk Wildlife Trust] . This section is in ESA Tier 2 . Rushes are frequent throughout, but there are areas of open grazing marsh, which are grazed by cattle. The site has less rush infestation than units 50, 51 and 52, and is less of a management priority. It is to be included in a scheme to reduce the amount of rush infestation throughout all these units, over a 5 year period. Main artery ditch adjoining unit carries water from drained marshes as well as STW output to sea via minsmere sluice. If ditch were to overtop there is potential for eutrophic water in main sluice drain to flood marshes and thus threaten their conservation status. Therefor the STW's that feed into this system have been put forward for inclusion in the AMP programme (GAC nov 03)	
Neutral grassland - lowland	54	111.94	Unfavourable recovering	Duncan Smith, Emma Coombs drove across this unit with Ian Hawkins, the RSPB wetland reserver manager on the way to inspect unit 55. We did not inspect the site in detail.	

				<p>Ian told us that the site is generally too wet, which keeps the invert numbers down, which is not good for breeding waders. Also, the site has suffered from undergrazing in the past. The site was being cattle grazed during our visit, the grassland was short. Ian told us he would be keeping water levels lower, by opening up the 'gripes' (shallow footgrains) Main artery ditch adjoining unit carries water from drained marshes as well as STW output to sea via minsmere sluice. If ditch were to overtop there is potential for eutrophic water in main sluice drain to flood marshes and thus threaten their conservation status. Therefore the STW's that feed into this system have been put forward for inclusion in the AMP programme (GAC nov 03)</p>	
Dwarf shrub heath - lowland	55	4.40	Unfavourable recovering	<p>This heathland unit is under Suffolk Wildlife Trust management, and is grazed; there were 40 sheep and 1 tarpan pony on site. Bracken is mowed. The unimproved acid grassland sward is botanically diverse, but no heather was apparent. There was frequent bracken, but this was short, scattered and not of vigorous growth - the grazing regime appears to be keeping it under control.</p>	
Broadleaved, mixed and yew woodland - lowland	57	8.88	Favourable	<p>This woodland is not of SSSI quality by itself, but contributes to the mosaic of habitats within Minsmere RSPB reserve. There is secondary growth to the south of the track running through the woodland and more mature trees including oak, to the north. Canopy is closed. Sycamore is invasive and requires removal, and there is turkey oak. Generally limited management is conducted, and the wood is left to naturally regenerate. Woodland birds found here include nightengale, blackcaps, warblers. Red tipped</p>	

				<p>           cudweed is found on the perimeter of the wood. Reeves Muntjac and Red deer use the woodland, but numbers are generally kept low because of the number of visitors walking through the wood.         </p>	
Fen, marsh and swamp - lowland	58	7.06	Favourable	<p>           SWT Reserves Manager: 'long rotation mowing'         </p>	
Fen, marsh and swamp - lowland	59	9.55	Favourable	<p>           SWT Reserves Manager: 'management by long-term mowing and extensive grazing. Key breeding birds include Bittern (1, possibly 2 pairs), marsh harrier and bearded tit.'         </p>	
Littoral sediment	60	115.44	Favourable	<p>           Unit comprises mostly intertidal but with little saltmarsh (intertidal re-established after major breach event in 1953). 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates little change of area in saltmarsh over this period for the unit. Majority of unit unconstrained by river walls - intertidal □ backs onto □ rising ground. Where small section of wall still exists (at Bulcamp) saltmarsh has increased in area according to GIS data. Estuary modelling from current estuary strategy (2005) indicates the estuary is in (slow) process of reaching an equilibrium state with intertidal mud dominating, following historical modification. In current form estuary is ebb dominant and as such sediment accretion unlikely to occur without modification to estuary morphology. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.         </p>	
Littoral sediment	61	43.65	Favourable	<p>           Unit comprises mostly river channel but with some areas of saltmarsh included. 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates         </p>	

				<p>an overall loss of saltmarsh area over this period for the unit. Erosion can be clearly observed on saltmarsh fronting river walls at Delacroix and Tinkers marshes. Therefore although a proportion of unit is not constrained, the areas that are, lead to the unfavourable declining assessment. The river walls to landward side of this unit (at western end) would ultimately prevent the feature from reaching morphological equilibrium. Estuary modelling from current estuary strategy (2005) indicates the estuary is in (slow) process of reaching an equilibrium state with intertidal mud dominating, following historical modification. The estuary is currently ebb dominant and as such sediment accretion unlikely to occur without modification to overall estuary morphology. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.</p>	
Littoral sediment	62	3.79	Favourable	<p>Intertidal reedbed with natural transition into saltmarsh. 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates general stability or accretion of saltmarsh area over this period for the unit. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.</p>	
Littoral sediment	63	20.78	Favourable	<p>Unit of predominantly saltmarsh. 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates an overall loss of saltmarsh area over this period for the unit. In particular, there is evidence of erosion over much of the marsh edges combined with loss of horizontal extent. However unit unconstrained by river walls - intertidal bordered by naturally rising ground. Estuary modelling from current estuary strategy (2005) indicates the</p>	

				estuary is in (slow) process of reaching an equilibrium state with intertidal mud dominating, following historical modification. In current form estuary is ebb dominant and as such sediment accretion unlikely to occur without modification to estuary morphology. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	
Littoral sediment	64	39.15	Unfavourable declining	Unit of intertidal mud and saltmarsh. 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates a balance in terms of area of accretion and erosion over this period for the unit. However there is evidence of erosion over most of the marsh edges combined with loss of horizontal extent of saltmarsh area. The river walls will ultimately prevent the feature from reaching morphological equilibrium. In addition estuary modelling from current estuary strategy (2004) indicates the estuary is ebb dominant and as such net sediment accretion unlikely to occur without modification to estuary morphology. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	Coastal squeeze
Littoral sediment	65	20.25	Favourable	Unit of predominantly saltmarsh. 'Desktop' examination of EA GIS survey data from 1971-1998* of saltmarsh extent indicates an overall loss of saltmarsh area over this period for the unit. In particular, there is evidence of erosion over most of the marsh edges combined with loss of horizontal extent. However unit unconstrained by river walls (except v. small portion in very far north wset corner)-Otherwise intertidal bordered by naturally rising ground. Estuary modelling from current estuary strategy (2005) indicates the	

				estuary is in (slow) process of reaching an equilibrium state with intertidal mud dominating, following historical modification. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	
Dwarf shrub heath - lowland	66	1.36	Unfavourable recovering	Adjacent fields now arable reversion under ESA and grazed through assistance of SWES therefore run off problems removed.	
Broadleaved, mixed and yew woodland - lowland	67	11.96	Favourable	Woodland flora is reasonable, but could have a more diverse species composition. The unit should ideally be returned to heath.	
Dwarf shrub heath - lowland	68	50.54	Unfavourable recovering	Sheep have been grazing the unit for about 2 years. The species diversity has been increasing. The bracken is cut, and there are plans to rotovate some areas to increase the amount of open ground for invertebrates and reptiles. There are scattered trees and patches of heather.	
Dwarf shrub heath - lowland	69	21.75	Unfavourable recovering	The unit is managed by sheep grazing and bracken swiping. There is still too much bracken in some parts of the unit. The unit is mainly acid grass with heather blocks, and some gorse and birch. There is nutrient build up on part of the site due to pig runoff.	
Fen, marsh and swamp - lowland	70	2.64	Unfavourable recovering	Now in WES agreement which addresses management issues	
Fen, marsh and swamp - lowland	71	2.99	Unfavourable declining	adapted Comment from 2002: This part of the common comprises a valley head fen. Where scrub has been managed a very interesting transition zone has been	Undergrazing

				<p>maintained , dominated by <i>Eriophorum angustifolium</i>, and grading through from a narrow fringe of wet heath, to what is possibly a more calcareous fen. Curiously, <i>Eriophorum</i> and <i>Peucedanum palustre</i> ( nationally scarce, and rare in Suffolk, and also present in the adjacent unit 72) occur together in close proximity here. Difficult to tell what the bulk of the 'fen' wants to be because of rankness of vegetation, uniformly dominated by soft rush and reed. There are historical records for <i>Drosera</i> spp and for Heath spotted orchid, both wet heath transition species with extremely localised distributions in suffolk. SWT continue to open up more of the transition, to cut back the wet woodland at the head of the fen, and to clear the remaining open fen of regenerating scrub. Grazing would also be beneficial, and may be attempted, but possible could be some public opposition. Reedbed/Tall herb fen. mostly rank reed but with the nationally scarce Milk Parsley ( <i>Peucedanum palustre</i>) scattered along the central dyke. The adjacent unit 70 is a valley head fen with a range of interesting species incl. <i>Peucedanum</i>. There is a large dyke between the units and they differ in character. This unit would benefit from low intensity cattle grazing</p>	
Dwarf shrub heath - lowland	72	26.37	Unfavourable recovering	<p>To continue recovery, future management could include rotational management of the remaining European gorse scrub, and repeated cutting of cleared areas, in lieu of grazing which is not practical due to the open nature of this unit.</p>	
Broadleaved, mixed and	73	9.90	Favourable	<p>As plantation its OK but better to revert to heathland (Unit assessed as unit 15, before split into units 73, 74, 75 &amp; 76 in</p>	

yew woodland - lowland				Dec 01)	
Broadleaved, mixed and yew woodland - lowland	74	5.83	Favourable	As plantation its OK but better to revert to heathland (Unit assessed as unit 15, before split into units 73, 74, 75 & 76 in Dec 01)	
Broadleaved, mixed and yew woodland - lowland	75	2.41	Favourable	As plantation its OK but better to revert to heathland (Unit assessed as unit 15, before split into units 73, 74, 75 & 76 in Dec 01)	
Dwarf shrub heath - lowland	76	1.67	Unfavourable recovering	Scrub clearance took place feb 2005. Unit predominatly acid grassland maintained through rabbit grazing/ occassional grazing mowing if need arises.	
Fen, marsh and swamp - lowland	77	0.23	Favourable	Nn-intervention area of swamp & carr of benefit to inverts (on NNR)	
Fen, marsh and swamp - lowland	78	4.22	Favourable	The unit is reedbed with scrub and trees along the edge. It will be necessary to introduce a cutting rotation to the scrub to stop it encroaching into the reedbed any further. Unmanaged and undisturbed reedbed and scrub margins are good for invertebrates, especially moths.	
Fen, marsh and swamp - lowland	79	7.82	Favourable	Parts of the reedbed are cut every year.	



Fen, marsh and swamp - lowland	80	10.13	Favourable	Parts of the reedbed are cut every year.	
Fen, marsh and swamp - lowland	81	1.79	Favourable	Reedbed is good, and supports bearded tit, but not marsh harrier nor bittern. Parts of the reedbed are cut commercially every year. Disturbance is a factor due to the proximity to Walberswick.	
Fen, marsh and swamp - lowland	82	5.69	Favourable	Reedbed is good, and supports bearded tit, but not marsh harrier nor bittern. Parts of the reedbed are cut commercially every year. Disturbance is a factor due to the proximity to Walberswick.	
Littoral sediment	83	3.80	Favourable	This unit is a transition area between reedbed and shingle. There is some reed, but the unit is mainly saltmarsh and saline lagoons (with starlet sea anemone). There is a southern marsh orchid colony. The unit supports skylarks and meadow pipits, but there is some disturbance to breeding birds because of the proximity to access points to the beach.	
Supralittoral sediment	84	2.16	Unfavourable declining	Site visited with NNR manager. Shingle ridge profile artificially steep (bank maintained by Env Agency after storm/breach events). Shingle and any vegetation severely trampled due to high visitor numbers especially summer of 03. Trampling effect enhanced by profile of ridge. Shingle ridge profile artificially steep (bank maintained by Env Agency after storm/breach events).	Inappropriate coastal management, <b>Public access/disturbance</b>
Supralittoral sediment	85	2.82	Unfavourable declining	Site visited with NNR manager. Coastal vegetation severely trampled due to high visitor numbers especially summer of 03. Trampling effect enhanced by profile of ridge. Shingle	Inappropriate coastal management,

				ridge profile artificially steep (bank maintained by Env Agency after storm/breach events).	Public access/disturbance
Supralittoral sediment	86	8.85	Unfavourable declining	Site visited with NNR manager. Coastal vegetation severely trampled due to high visitor numbers especially summer of 03. Trampling effect enhanced by profile of ridge. Shingle ridge profile artificially steep (bank maintained by Env Agency after storm/breach events).	Inappropriate coastal management, Public access/disturbance
Supralittoral sediment	87	6.58	Unfavourable declining	Site visited with NNR manager. Coastal vegetation severely trampled due to high visitor numbers especially summer of 03. Vegetation on back of ridge more spp. diverse, but on top severely disturbed. Trampling effect enhanced by profile of ridge. Shingle ridge profile artificially steep (bank maintained by Env Agency after storm/breach events).Disturbance to Little Tern colonies attempting to breed on shingle 'fans' on back of ridge - no successes after major public disturbance May B/Hols '03.	Inappropriate coastal management, Public access/disturbance
Fen, marsh and swamp - lowland	88	30.69	Favourable	Re-assessed in discussion with NNR Site Manager - grazing would not be appropriate.	
Fen, marsh and swamp - lowland	89	6.68	Favourable	Rin discussion with NNR Site Manager - grazing would not be appropriate	
Fen, marsh and swamp - lowland	90	127.86	Favourable	Meeting Objectives (Unit assessed as unit 24, before split into units 90 & 91 in Dec 01)	
Dwarf shrub heath - lowland	91	4.29	Favourable	The unit is a transition zone, and is mainly mowing marsh with Juncus spp.	

Dwarf shrub heath - lowland	92	63.74	Unfavourable recovering	Some parts of the unit are areas of recovering acid grass and heath being managed by sheep grazing and bracken swiping. Woodlark and nightjar are present. But a large part of the unit has become dominated by birch woodland. Some of the birch should be removed. Parts of the unit have suffered because of pig runoff this year.	
Fen, marsh and swamp - lowland	93	19.29	Favourable	Meeting Objectives (Unit assessed as unit 23, before split into units 93 & 97 in Dec 01)	
Dwarf shrub heath - lowland	94	26.56	Unfavourable recovering	The northern part of the unit supports woodlark, nightjar and silver studded blue, and is mainly old acid grassland with anthills, with patches of heather. There is some scrub, and the bracken has been sprayed. The southern part of the unit still has too much bracken, and has some older birch wood.	
Broadleaved, mixed and yew woodland - lowland	95	11.68	Favourable	A variable unit including heath, acid grassland, woodland, and open/bare habitats. Scrub needs keeping an eye on.	
Dwarf shrub heath - lowland	96	10.65	Unfavourable recovering	Scrub and bracken being removed. (Unit assessed as unit 22, before split into units 94, 95 & 96 in Dec 01)	
Dwarf shrub heath - lowland	97	5.95	Favourable	Extensive area of non-intervention wet woodland grading from scrub on dry heath through birch-molinia and alder-carex paniculata woodland, to reedbed of westwood marshes. Exceptional invert fauna. Breeding Redstarts.	
Fen, marsh	98	52.84	Favourable	Meeting Objectives (Unit assessed as unit 25, before	

and swamp - lowland				changing into unit 98 in Dec 01)	
Dwarf shrub heath - lowland	99	4.54	Unfavourable recovering	Excessive gorse cover preventing acid grassland regeneration. Management agreement set up to clear gorse.	
Fen, marsh and swamp - lowland	100	1.99	Unfavourable recovering	Excessive gorse scrub. Management agreement to fence unit to allow grazing established in late 2002.	
Dwarf shrub heath - lowland	101	6.22	Unfavourable recovering	Sheep doing good job. Some gorse needs removing. (Unit assessed as unit 29, before split into units 99, 100 & 101 in Dec 01)	
Neutral grassland - lowland	102	78.85	Unfavourable recovering	Site managed by SWT. Flooded dec 2003 (depleted fish populations).	
Coastal lagoon	103	16.89	Favourable	Unit now managed by SWT/RSPB/EN (Suffolk Coast NNR). Saline laggons and brackish marsh interface to freshwater westwood marshes.	
Supralittoral sediment	104	21.27	Unfavourable declining	Site visited with NNR manager. Coastal vegetation severely trampled due to high visitor numbers especially summer of 03. Trampling effect enhanced by profile of ridge. Shingle ridge profile artificially steep (bank maintained by Env Agency after storm/breach events).	Inappropriate coastal management, <b>Public access/disturbance</b>
Supralittoral sediment	105	5.05	Unfavourable declining	Site visited with NNR manager. Coastal vegetation severely trampled due to high visitor numbers especially summer of 03. Trampling effect enhanced by profile of ridge. Shingle ridge profile artificially steep (bank maintained by Env Agency after storm/breach events).	Inappropriate coastal management, <b>Public access/disturbance</b>

Neutral grassland - lowland	106	7.69	Unfavourable recovering	Unit managed by SWT. (Flooded dec 2003)	
Dwarf shrub heath - lowland	107	3.58	Unfavourable recovering	Site being managed in accordance with management agreement and ongoing control of scrub regrowth being carried out	
Dwarf shrub heath - lowland	108	14.63	Unfavourable recovering	Good quality bell heather-western gorse heathland (NVC H8). Lack of management means the heather is even aged with bracken dominated areas and large quantities of birch scrub threatening its integrity. A management agreement was established in 03, with scrub clearance in winter 03/04, bracken spraying in july 04, and more scrub clearance planned for winter 04-05. Further scrub clearance, bracken spraying and rotational mowing planned, as appropriate. The heath is starting to turn around and is recovering condition.	
Dwarf shrub heath - lowland	109	84.97	Favourable	This unit is owned and managed by the National Trust. It is a large unit, and the NT's managment plan divides it up into several management compartments. My overall assessent is that the unit is favourable, but there are areas where mangement can enhance the interest - eg creating a more diverse heather structure. The coastal strip of heathland is low growing, with a good variety of heathland vegetation eg western gorse, Calluna vulgaris and Erica tetralix. The cliff edge is eroding, and the site warden estimates that in 50 years the cliff will be at the level of the coastguard cottages (which is part of rationale for the NT purchasing, with RSPB, the arable reversion land at Mount Pleasant Farm). The NT site warden considers that bramble is a problem on	

				the site	
Supralittoral sediment	110	9.00	Unfavourable declining	Site visited with Tim Collins (Head of Marine Conservation) and Professor Julian Orford of Belfast University. The unit continues to suffer considerable erosion, particularly at a 'pinch point' between Coney Hill and Minsmere Cliffs. The provision of brushwood sea defences at this point, to prevent overtopping of the outer bund and the natural evolution of the vegetated beach and foreshore area, indicates that the unit is now in an unfavourable condition. as a result of coastal squeeze.	Coastal squeeze, <b>Public access/disturbance</b>
Supralittoral sediment	111	3.32	Favourable	Zonation from Marram dominated through to lichen/sand sedge dominated communities. Vegetation structure varied, some scrub present mainly gorse; Noted spp: Sea bindweed locally frequent; lady's bedstraw; sheeps bit & harebell (rare); Some veg shingle plants e.g. sea pea within seaward marram dominated communities away from main pathways through unit. 'dune' narrows and flattens toward north of this unit	
Supralittoral sediment	112	40.13	Favourable	Zonation from Marram dominated through to lichen/sand sedge dominated communities, with short grassland communities around paths that run through unit. Vegetation structure varied, some scrub present mainly gorse; Noted spp: Sea bindweed locally frequent; lady's bedstraw; sheeps bit & harebell (rare); Southern end of this unit the 'dunes' wider and higher than at northern end.	
Supralittoral sediment	113	8.34	Unfavourable declining	Vegetation better developed although indicator species (as defined in CSM) for Annual and perennial veg either absent or rare. Evidence of trampling- less heavy than unit 110 but still significant. Beach wider with some ridge formation,	Coastal squeeze, <b>Public access/disturbance</b>

				therefore more potential habitat for shingle veg although still bounded by sea wall and therefore subject to coastal squeeze.	
Neutral grassland - lowland	114	20.38	Unfavourable recovering	Duncan Smith, John Jackson and Emma Coombs visited the site with , Farm Manager for the oo. Also present was Claire Bains, ESA advisor. This unit was very important for breeding waterfowl such as snipe, redshank, gadwell, shoveler and black-tailed godwit, but the RSPB have reported to DS that since 1997, breeding waders have all but disappeared on the site. Unit 114 is a very large unit, and the o/o's interest is within 2 ESA tiers. The southern section of the unit is in tier 1, and is drier, with less rush infestation. The northern sections of unit 114 are in tier 2, wetter, and have heavy rush infestation. As a consequence of this infestation, the o/o is seeking an ESA derogation to allow him to graze with cattle, top the rushes and weedwipe with glyphosate during period when this would normally be prohibited under ESA restrictions. DS agreed that these are acceptable control techniques to re-establish control of the rushes, after which grazing and topping should be used. The o/o will manage his site over a 5 year period, co-ordinating it with his cattle farming. Several of the surrounding water courses were cleared during Oct/Nov 2001, and control of the water levels has been regained. The o/o is keen to work the ESA/EN to restore the site to favourable condition.	
Neutral grassland - lowland	115	21.49	Unfavourable declining	Continued undergrazing on majority of fields within this unit.	Undergrazing
Broadleaved,	116	4.06	Favourable	The wet alder woodland is not managed, but appears in	

mixed and yew woodland - lowland				favourable condition.	
Neutral grassland - lowland	117	15.14	Unfavourable declining	Grazing marshes continue to be undergrazed in majority of fields.	Undergrazing
Neutral grassland - lowland	118	5.96	Unfavourable recovering	Duncan Smith and Clare Bains (ESA) visited unit 118 as part of the ESA renewal process. This unit is owned by o/o, but is cattle grazed in an informal agreement by another party. Grazer put 21 cattle on the site in May 2002, and they have kept down the soft rush and sedge growth significantly, opening up the sward for diverse wetland plants. The sward is looking good. Further ditch clearance work is required (re-profiling), which o/o hope to get done in the next 2 months. Some sapling alders are establishing close to the NE-SW border, and we agreed that these should be removed (cut, with the stumps treated) to prevent succession - to be included under ESA prescriptions. Overall, DS and CB were very satisfied with the way this site is being managed, and the positive working relationship with both grazer and o/o.	
Neutral grassland - lowland	119	1.37	Unfavourable recovering	Duncan Smith and Clare Bains (ESA) visited unit 119 with grazer as part of the ESA renewal process. This unit is cattle grazed by a different grazer to the owner. The grazer grazes both unit 119 and 118 under an informal agreement. The grazer put 21 cattle on units 118/119 in May 2002, and they have kept down the soft rush and sedge growth significantly, opening up the sward for diverse wetland	



				plants. The sward is looking good. Overall, DS and CB were very satisfied with the way this site is being managed, and the positive working relationship with both owner and grazier.	
Dwarf shrub heath - lowland	120	66.24	Unfavourable recovering	This unit has been created following discussions on site with RSPB Minsmere and is an amalgamation of units 42 and 43. Both these former units supported heathland as the primary feature. This amalgamation forms part of the RSPB's continuing efforts to extend and restore the area of heathland at this site through the clearance of invasive scrub/secondary woodland.	

**Team - Norfolk And Suffolk - SSSI name - Orwell Estuary - Staff member responsible for site - John Jackson**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Littoral sediment	1	42.94	Unfavourable no change	Narrow area of saltmarsh adjacent to road -cliffed at edge clear signs of erosion. Important pre roost for birds	Coastal squeeze, Water pollution - agriculture/run off
Littoral sediment	2	48.72	Favourable	site visit while meeting Ransomes Europark to look at Surface water discharge proposal. Saltmarsh is eroding but also colonising on the foreshore.	
Littoral sediment	3	79.68	Favourable	Saltmarsh accretion. Some disturbance at bridgewood which might become an issue in the future.	
Littoral sediment	4	58.81	Favourable		
Littoral	5	51.77	Favourable	Visited with Mick Wright. Salt marsh accretion.	

sediment					
Littoral sediment	6	55.73	Favourable		
Littoral sediment	7	85.06	Favourable	see comments for unit 9. Unit mostly covered by high spring tide at time of survey. Strandline of seaweed fairly sparse.	
Littoral sediment	8	66.57	Unfavourable declining	Visited with Mick Wright. The most extensive area of saltmarsh remaining on the estuary, but experiencing severe erosion (See digital photographs on file) due to coastal squeeze. Relatively low disturbance here as not served by footpaths. 9-10 pairs redshank breed annually. Good plant structure in marsh, vegetation generally short and not rank with spartina or couch. Shrubby Sea-blight (Nationally scarce) seen, not recorded here previously.	Coastal squeeze
Littoral sediment	9	51.42	Favourable	Visited shore to consider a notice from a third party to remove seaweed for organic vegetable growing purposes. The tide was in and was a high spring tide so most of unit was covered at time of survey. Small eroding cliff present between amenity grassland and intertidal shore. It was my opinion that this did not render the site in unfavourable condition. It appeared that the tidal scour was too great to permit saltmarsh development; gravelly substrate present. High tide 'strandline' of seaweed was not extensive.	
Neutral grassland - lowland	10	40.14	Unfavourable recovering	Undergrazing problem addressed. Sward recovering	
Littoral sediment	11	49.00	Unfavourable no change		Coastal squeeze

Littoral sediment	12	36.59	Unfavourable declining	Visited by John Jackson, Glen Cooper and Emma Coombs. There was evidence of erosion of saltmarsh.	Coastal squeeze
Littoral sediment	13	47.77	Unfavourable declining	Visited with Mick Wright. Small remaining area of saltmarsh is continuing to erode (1-2m pa) and has almost all gone now. Extensive mudflat appears stable.	Coastal squeeze
Neutral grassland - lowland	14	47.59	Favourable	Visited owner with Claire Baines (RDS) to discuss water level mmt. Discussed possible methods for lowering the scrape to get more water in to hold water levels. Potential for works under CP 2004	
Littoral sediment	15	34.23	Unfavourable declining		Coastal squeeze
Littoral sediment	16	10.13	Unfavourable declining	Visited with Mick Wright. This unit has improved because of sand/shingle placements, however, it is still experiencing erosion overall.	Coastal squeeze
Littoral sediment	18	418.61	Favourable	See Marine Nature Conservation Review Sector 6 (JNCC) for detailed survey information (1996)	
Neutral grassland - lowland	19	14.16	Favourable		
Littoral sediment	21	16.69	Favourable		
Standing open water and canals	22	18.00	Favourable		
Standing open water	23	61.90	Favourable		

and canals					
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**Team** - Norfolk And Suffolk - **SSSI name** - Pakefield To Easton Bavents - **Staff member responsible for site** - Patrick Robinson

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Earth heritage	1	44.09	Unfavourable recovering	Desk assessment based on fact that EA enforcement means no more material going on bund and the bund is eroding, which will lead to exposure of geological faces in time.	
Earth heritage	2	8.14	Favourable		
Earth heritage	3	15.45	Favourable		
Earth heritage	4	65.97	Favourable		
Earth heritage	5	48.69	Favourable		
Earth heritage	6	19.80	Favourable		
Earth heritage	7	56.74	Unfavourable declining	There was evidence of vehicles accessing the site and driving around the unit. There was evidence of tyre tracks across this unit. There has been some disturbance of turf in the southern sections adjacent to the holiday park. The shingle ridges have been damaged by the driving of vehicles across the shingle. Tracks were also observed in	Vehicles - other

				the northern section as well.	
Earth heritage	8	22.23	Favourable		
Fen, marsh and swamp - lowland	9	16.84	Unfavourable declining		
Fen, marsh and swamp - lowland	10	45.40	Unfavourable declining		Inappropriate coastal management, Inappropriate water levels, Inappropriate weirs dams and other structures
Coastal lagoon	11	22.86	Favourable		
Coastal lagoon	12	43.37	Favourable		
Coastal lagoon	13	1.80	Favourable		
Fen, marsh and swamp - lowland	14	23.63	Unfavourable recovering		
Fen, marsh and swamp - lowland	15	35.25	Unfavourable recovering		

Fen, marsh and swamp - lowland	16	0.49	Favourable		
Fen, marsh and swamp - lowland	17	0.05	Unfavourable recovering		
Fen, marsh and swamp - lowland	18	1.83	Unfavourable recovering		
Fen, marsh and swamp - lowland	19	19.57	Unfavourable recovering		
Broadleaved, mixed and yew woodland - lowland	20	2.49	Unfavourable recovering		
Broadleaved, mixed and yew woodland - lowland	21	0.13	Favourable		
Broadleaved, mixed and yew woodland - lowland	22	4.37	Favourable		

Fen, marsh and swamp - lowland	23	1.23	Favourable		
Fen, marsh and swamp - lowland	24	1.21	Favourable		
Fen, marsh and swamp - lowland	25	1.86	Favourable		
Fen, marsh and swamp - lowland	26	9.35	Unfavourable no change		
Broadleaved, mixed and yew woodland - lowland	27	1.38	Favourable		
Fen, marsh and swamp - lowland	28	1.99	Favourable		
Broadleaved, mixed and yew woodland - lowland	29	1.88	Favourable		
Fen, marsh and swamp -	30	1.80	Unfavourable no change		

lowland					
Broadleaved, mixed and yew woodland - lowland	31	0.42	Favourable		
Fen, marsh and swamp - lowland	32	3.48	Unfavourable recovering	Ditching work now underway.	
Fen, marsh and swamp - lowland	33	4.02	Unfavourable declining		
Dwarf shrub heath - lowland	34	10.46	Favourable		
Broadleaved, mixed and yew woodland - lowland	35	7.68	Unfavourable no change		Deer grazing/browsing, Forestry and woodland management
Broadleaved, mixed and yew woodland - lowland	36	29.14	Unfavourable no change		Deer grazing/browsing, Forestry and woodland management
Broadleaved, mixed and	37	3.06	Unfavourable recovering		



yew woodland - lowland					
Broadleaved, mixed and yew woodland - lowland	38	1.94	Unfavourable recovering		
Fen, marsh and swamp - lowland	39	23.33	Favourable		
Fen, marsh and swamp - lowland	40	6.99	Favourable		
Broadleaved, mixed and yew woodland - lowland	41	15.13	Favourable		
Broadleaved, mixed and yew woodland - lowland	42	7.52	Favourable		
Broadleaved, mixed and yew woodland -	43	4.96	Favourable		

lowland					
Broadleaved, mixed and yew woodland - lowland	44	6.79	Favourable		
Broadleaved, mixed and yew woodland - lowland	45	5.74	Favourable		
Broadleaved, mixed and yew woodland - lowland	46	34.97	Unfavourable recovering		
Broadleaved, mixed and yew woodland - lowland	47	8.38	Unfavourable recovering		
Broadleaved, mixed and yew woodland - lowland	48	9.13	Favourable		
Broadleaved, mixed and	49	3.40	Favourable		

yew woodland - lowland					
Broadleaved, mixed and yew woodland - lowland	50	26.69	Favourable		
Bracken	51	3.35	Favourable		

**Team - Norfolk And Suffolk - SSSI name - Sandlings Forest - Staff member responsible for site - Monica O-Donnell**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Coniferous woodland	1	1053.40	Favourable	Assessed from FE maps showing age class stands	
Coniferous woodland	2	1430.37	Favourable	Assessed using FE stock maps showing age classes	

**Team - Norfolk And Suffolk - SSSI name - Snape Warren - Staff member responsible for site - Monica O-Donnell**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Dwarf shrub heath -	1	47.96	Unfavourable recovering	Broom cleared from area on southern end of unit, Bracken helicopter sprayed July 04 very good conditions on day of	

lowland				spray so expect resultant kill of bracken next year. More scrub management works sheduled for this forthcoming winter. March 07 - Emily Spencer and Tim Sloane visited the site. WES works underway. Good progress being made re. scrub removal. Some areas still to be cleared.	
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**Team** - Norfolk And Suffolk - **SSSI name** - Sprat's Water And Marshes, Carlton Colville - **Staff member responsible for site** - Patrick Robinson

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Fen, marsh and swamp - lowland	1	9.15	Unfavourable declining	The Review of Consents Stage 3 report has identified that the water in Oulton Broad which floods parts of this unit, exceeds the phosphate levels identified for the Habitat Directive features. The dredged silt deposits are still present on the site causing the area to be drier than required, scrub invasion (esp willows and buddleia)	Inappropriate scrub control, Other - specify in comments, Water pollution - agriculture/run off
Fen, marsh and swamp - lowland	2	1.21	Unfavourable no change	The Review of Consents Stage 3 report has identified that the water in Oulton Broad which floods this unit, exceeds the phosphate levels identified for the Habitat Directive features.	Inappropriate scrub control
Fen, marsh and swamp - lowland	3	15.79	Unfavourable no change	The Review of Consents Stage 3 report has identified that the water in Oulton Broad which floods this unit, exceeds the phosphate levels identified for the Habitat Directive features.	
Fen, marsh and swamp - lowland	4	2.84	Unfavourable no change	The Review of Consents Stage 3 report has identified that the water in Oulton Broad which floods this unit, exceeds the	Other - specify in comments

lowland				phosphate levels identified for the Habitat Directive features.	
Neutral grassland - lowland	5	4.92	Favourable	Met the manager to look at slubbing out several ditches on the marsh. The vegetation on the marsh was quite high (2-3ft) in places as no stock had been on yet this summer. The ditches that had been slubbed roughly four years ago seemed to be fine and to have recolonised well. One, the Landspring Drain was already filling with reed and needed work on the north side. The marsh itself has clumps of rush on it but this has apparently responded well to being topped followed by grazing with cattle. Sections of the marsh, particularly in the western end near the shed were quite thistly. Thistles did not appear to be a problem on those areas where slubbings had been deposited.	
Neutral grassland - lowland	6	7.12	Unfavourable recovering	Rush control undertaken by SWT. Position clarified in meeting 9 Feb 06.	
Neutral grassland - lowland	7	9.58	Unfavourable recovering	Rush control undertaken by SWT. Position clarified in meeting 9 Feb 06.	
Standing open water and canals	9	0.09	Unfavourable no change	Loss of species due to smothering growth of algae/epiphytic diatoms. Productivity shifts towards algae/diatoms. Macrophytes represented by one or two pollution tolerant species particularly those that are not rooted such as Ceratophyllum demersum and Lemna spp. Productivity exceptionally high. Chris Newbolds comments	Water pollution - agriculture/run off
Standing open water and canals	10	0.24	Unfavourable no change	Loss of species due to smothering growth of algae/epiphytic diatoms. Productivity shifts towards algae/diatoms. Macrophytes represented by one or two pollution tolerant	Water pollution - agriculture/run

				species particularly those that are not rooted such as Ceratophyllum demersum and Lemna spp. Productivity exceptionally high.	off
Standing open water and canals	11	0.10	Unfavourable no change	Loss of species due to smothering growth of algae/epiphytic diatoms. Productivity shifts towards algae/diatoms. Macrophytes represented by one or two pollution tolerant species particularly those that are not rooted such as Ceratophyllum demersum and Lemna spp. Productivity exceptionally high	Water pollution - agriculture/run off
Fen, marsh and swamp - lowland	12	6.10	Favourable	This unit used to be unit 7 before the freshwater lakes were removed from it to form their own units. At the last assessment before the unit was separated (dated 17/06/2005) the terrestrial habitats were identified as being favourable.	

**Team** - Norfolk And Suffolk - **SSSI name** - Staverton Park And The Thicks, Wantisden - **Staff member responsible for site** - Patrick Robinson

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Broadleaved, mixed and yew woodland - lowland	1	62.00	Favourable	Extent and number of ancient trees attribute: there has been no loss of veteran trees or the area of the unit. Natural processes attribute: size class structure/dead wood is maintained. Regeneration potential: the repollarding of maidens has been successful with about 80% showing good regrowth. Composition attribute: presence of site-native trees species maintained.	

				Characteristic features attribute: dead-wood inverts and lignicolous/corticolous lichens could not be surveyed but habitats suitable for them are maintained. Also: nesting shelduck	
Broadleaved, mixed and yew woodland - lowland	2	19.54	Favourable	Extent and distribution attribute: the area of ancient woodland in the Thicks is maintained. Natural processes and structural development attribute: age/size class structure and fallen dead wood maintained. Regeneration potential: no repollarding required in this unit; tree seedling germination present. Composition attribute: presence of site-native species maintained although extensive deer browse-line at base of hollies. Characteristic features: dead-wood inverts and lichens not surveyed but dead wood habitats etc required to support them are present. Ground flora referable to NVC type but evidence of trampling by deer in more shaded areas.	
Broadleaved, mixed and yew woodland - lowland	3	2.74	Favourable	Extent attribute: no loss of area or numbers of veteran trees. Natural processes and structure: size class structure maintained. Composition: presence of site-native species maintained; no obvious replacement of native species. Characteristic features: dead-wood inverts and lichens not surveyed; dead-wood and other micro-habitats supporting these species present. Ground flora referable to W10 mainly.	

**Team** - Norfolk And Suffolk - **SSSI name** - Sutton And Hollesley Heaths - **Staff member responsible for site** - Monica O-Donnell

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Dwarf shrub	1	11.80	Unfavourable	SWT Reserves Manager: 'Will need to come into management	Inappropriate

heath - lowland			no change	to prevent long term decline. Just about holding own at present. Silver studded blue butterfly discovered on site.'	scrub control
Dwarf shrub heath - lowland	2	52.16	Unfavourable recovering	Scrub and bracken management ongoing through Countryside Stewardship and additional management through WES and Sheep WES.	
Dwarf shrub heath - lowland	3	40.00	Unfavourable recovering	Scrub and bracken management ongoing through Countryside Stewardship with additional management through WES and Sheep WES.	
Dwarf shrub heath - lowland	4	23.32	Unfavourable declining	This unit has multiple ownership. Some areas have scrub and tree clearance work programmed under CSS and WES. Other areas managed independently by o/o. Other part of the unit remain as unmanaged stands of plantation.	Inappropriate scrub control
Dwarf shrub heath - lowland	5	23.08	Unfavourable recovering	Management works programmed through CSS wth additional WES.	
Dwarf shrub heath - lowland	6	45.16	Unfavourable recovering	Some Bracken management, litter clearance and scrub removal has taken place. CSS with additional WES funding(2004) for continued bracken and scrub management.	
Dwarf shrub heath - lowland	7	60.63	Unfavourable recovering	Scrub and bracken management through Countryside Stewardship and additional management through 2004 WES.	
Dwarf shrub heath - lowland	8	40.13	Unfavourable recovering	SWT reserves manager " grazing , scrub and bracken control"	
Dwarf shrub heath - lowland	9	59.41	Unfavourable recovering		



Dwarf shrub heath - lowland	10	39.19	Unfavourable recovering	SWT Reserves Manager: 'Scrub and bracken control.'	
Dwarf shrub heath - lowland	11	44.86	Unfavourable recovering	Unit managed through CSS with additional works under WES as of 2004. New stock fence will allow grazing.	
Dwarf shrub heath - lowland	12	43.50	Unfavourable recovering	SWT reserves manager "tree, scrub and bracken control + stock fenced to allow grazing".	

**Team - Norfolk And Suffolk - SSSI name - Tunstall Common - Staff member responsible for site - Monica O-Donnell**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Dwarf shrub heath - lowland	1	36.60	Unfavourable recovering	Site Visited 25 July 03 with D Mason (SWT) & Liz Bridges(EN). Extensive Scrub removal & regrowth treatment taken place. Some further felling scrub clearance scheduled for winter 03/04	

Condition of SSSI units

Compiled: 01 Apr 2009

County: Essex

**Team - Four Counties - SSSI name - Colne Estuary - Staff member responsible for site - Carol Reid**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Littoral sediment	1	321.63	Favourable		
Earth heritage	2	1.64	Favourable	The cliff profile is exposed indicating that erosive processes are operating on the cliff face. Full report and photos on file.	
Littoral sediment	3	5.72	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze, Water pollution - agriculture/run off
Improved grassland	4	16.21	Favourable	This unit is managed as wildfowl pasture to support birds in winter and breeding birds. It is managed by mowing and aftermath grazing, and water levels are raised by a water control structure on the central drainage ditch where it discharges into the borrow dyke. There is surface water in the lower areas of marsh and rush and dock vegetation in wetted areas adjacent to the ditch. 100+ wigeon were present - grazing within the marsh and on the water of the central ditch. A charm of about 40 goldfinches were	

				feeding within the site. 50 + lapwing were also present. Full report and photos on file.	
Littoral sediment	5	95.53	Unfavourable declining	Sheep have access to this marsh all year round from adjacent pasture and sea wall. Heavy grazing and trampling has reduced the level of the marsh. On a falling tide it was four or five inches below the water line as compared to the ungrazed saltmarsh to the east which was above the water line. The grazing regime has been going on for @ ten years, according the the ranger of the adjacent country park. The pasture land adjacent to the SSSI is in the Essex Coast Environmentally Sensitive Area, likewise the borrow dyke and sea wall (the latter two features are within the SSSI). The reed bed in the borrow dyke used to support bearded tit but heavy grazing has inhibited reed growth. Action: CR to contact ESA ecologist.	Coastal squeeze
Littoral sediment	6	94.89	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	7	123.23	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Neutral grassland - lowland	8	66.57	Favourable		

Littoral sediment	9	78.35	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Coastal lagoon	10	25.71	Favourable	visit with Mod; sea wall condition giving concern	
Neutral grassland - lowland	11	188.56	Favourable	visit with Mod; grazing and water levels well sorted out	
Boundary and linear features	12	5.28	Favourable		
Improved grassland	13	86.03	Favourable	visit with Mod; grazing and water levels sorted out	
Littoral sediment	14	273.89	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Broadleaved, mixed and yew woodland - lowland	15	31.82	Favourable		
Littoral sediment	16	114.59	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	17	26.04	Favourable	Assessed using EA's commissioned report 'Erosion of	

				the saltmarshes of Essex between 1988 and 1998' (Jan 2000) - Confirmed by CO	
Littoral sediment	18	22.00	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Fen, marsh and swamp - lowland	19	3.76	Favourable	No scrub encroachment seen.	
Littoral sediment	20	22.29	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	21	25.10	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Neutral grassland - lowland	22	11.16	Favourable		
Littoral sediment	23	179.58	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Neutral grassland	24	48.91	Favourable		

- lowland					
Neutral grassland - lowland	25	33.32	Favourable		
Neutral grassland - lowland	26	3.25	Favourable		
Littoral sediment	27	43.45	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	28	38.69	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	29	14.73	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	30	47.40	Favourable	visit with entec	
Neutral grassland - lowland	31	5.39	Favourable	Not managed, therefore scrub will dominate the mosaic and reduce the potential for invertebrate biodiversity. The owner of part of the site was not contacted prior to the visit to arrange access to the site, attempts were made to contact the owner by phone and by visiting on the day of the visit. The site was viewed from the	

				opposite side of the creek. The site appeared to be dominated by coarse grasses and tall herb growth. No prospect of grazing. The grazing marsh at the North end of the creek is now red bed. Although of benefit to invertebrates this section of the site will ultimately decline as the reedbed dries out and is invaded by scrub.	
Neutral grassland - lowland	32	60.08	Favourable	visit with ewt; grazing and water levels looking good	
Littoral sediment	33	13.23	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Broadleaved, mixed and yew woodland - lowland	34	1.71	Favourable	Dry woodland adjacent to site still supporting a heronry (3 nests noted, herons displaying and showing interest in nesting at time of visit.	
Littoral sediment	35	43.54	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	36	44.70	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze

Littoral sediment	37	72.01	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Boundary and linear features	38	11.74	Favourable	10% scrub encroachment NE section of sea wall but not damaging to integrity of site.	
Littoral sediment	39	265.73	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	40	6.94	Unfavourable declining	Assessed using EA's commissioned report 'Erosion of the saltmarshes of Essex between 1988 and 1998 (Jan 2000). Intertidal foreshore subject to coastal squeeze, a long term trend reported by the Essex Coast Coastal Habitat Management Plan (Sept 2002).	Coastal squeeze
Littoral sediment	41	65.05	Favourable		
Earth heritage	43	81.61	Favourable	Widespread erosion exposing underlying clay beds. Alluvial gravels deposited by the proto Thames are evident in the upper shore. Full report and photos on file.	
Littoral sediment	44	152.51	Favourable	No visit required. This unit is subtidal and does not therefore support any criteria features. The subtidal area is at least being maintained through no active management.	
Littoral sediment	45	112.92	Favourable	No visit required. This unit is subtidal and does not	



				therefore support any criteria features. The subtidal area is at least being maintained through no active management.	
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**Team - Four Counties - SSSI name - Hamford Water - Staff member responsible for site - Ian Black**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Littoral sediment	1	225.05	Favourable	Indications from fishermen, particularly oyster fishermen, say that there have been no significant changes to supporting habitat since last condition assessment.	
Littoral sediment	2	56.02	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast.	Coastal squeeze
Littoral sediment	3	167.55	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast.	Coastal squeeze
Littoral sediment	4	19.53	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast. The saltmarsh is fronted by a rollover dune system which is also	Coastal squeeze

				declining due to erosion.	
Littoral sediment	5	488.21	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast. Mud also eroding across site. The eastern edge of this unit is mobile roll-over sand dunes which are in decline due to erosion. This unit holds the majority of the breeding common seals and occasional grey seal.	Coastal squeeze
Littoral sediment	6	168.69	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast.	Coastal squeeze
Littoral sediment	7	134.51	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast.	Coastal squeeze
Littoral sediment	8	202.29	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast. Works have been carried out to reinforce the saltmarsh in the northern section by the introduction of recharge material (muds). This is at present being monitored and vegetation is starting to colonise the new muds.	Coastal squeeze

Littoral sediment	9	119.21	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast.	Coastal squeeze
Broadleaved, mixed and yew woodland - lowland	10	34.15	Favourable	This unit is under the management of Essex Wildlife Trust. Extensive scrub control has been carried out in the last couple of years to allow the expansion of one of the largest concentrations of sea hoggs fennell and its dependent moth. This management will be ongoing to maintain the expansion of the rare plant on the island.	
Supralittoral sediment	11	55.40	Unfavourable declining	Although the plant structure and variety of the saltmarsh is in place, there are strong indications, i.e. cliffing, throughout the system indicating erosion continuing throughout the unit. The last survey (1998) demonstrated that the Walton Backwaters exhibited the greatest loss of saltmarsh on the Essex coast. The saltmarsh is fronted by a rollover dune system that was enhanced by recharge in the past few years, from a local port dredge, which is now also declining due to erosion. At the northern end of this unit a coastal lagoon has developed between old seawalls.	Coastal squeeze
Supralittoral sediment	12	150.17	Unfavourable declining	This unit consists of a mixed mud and sand substrate. The area has in the past received recharge material that has since migrated to other areas of the SSSI. The unit is subject to strong tidal currents removing any soft sediments leaving just the harder clays beneath.	Coastal squeeze
Supralittoral sediment	13	14.92	Favourable	This unit has been radically adjusted through various sea defence schemes including sunken barges to deflect wave energy and the introduction of a sand and shingle bank backed	

				by the introduction of pumped muds. The shingle bank has become an important breeding site for coastal breeding birds. While the muds pumped behind have developed saltmarsh vegetation. This unit also comes under severe north easterly storms and is very vulnerable to erosive forces.	
Coastal lagoon	14	6.56	Favourable	Good structure of beach communities, regular overtopping on spring tides providing good water exchange in lagoon. Oystercatcher and ringed plover nested in small numbers during breeding period. Regular visits from wildfowl and waders.	
Neutral grassland - lowland	15	17.16	Favourable	This unit consists of uncultivated ancient grazing marsh bisected by water-filled ditches maintained by a wind pump. Very important for summer breeding birds and wintering waterfowl. Management by grazing and water control.	
Neutral grassland - lowland	16	15.34	Favourable	Seawall - maintained by annual mowing creating a mixed structure due to cutting regime being split between top and bottom of the seawall. Grazing marsh - low grazing density creating a mosaic of grassland height structures. Believed breeding short-eared owls this year on marshes. Water levels in ditches have been maintained at highest possible level.	
Neutral grassland - lowland	17	3.95	Favourable	Scrub control has been undertaken. Grass cutting in open areas on regular basis. Good structure throughout. Regular use by migrant birds in spring and autumn.	
Neutral grassland - lowland	18	10.19	Favourable	Scrub control has been undertaken. Grass cutting in open areas on regular basis. Good structure throughout.	
Neutral grassland -	19	6.07	Favourable	Unit consist of semi-improved grazing marshes with water-filled ditches. Management by grazing. Important for wintering	

lowland				waterfowl.	
Neutral grassland - lowland	20	13.25	Favourable	Unit consist of semi-improved grazing marshes with water-filled ditches. Management by grazing. Important for wintering waterfowl.	
Neutral grassland - lowland	21	59.85	Favourable	This unit consists of a large variety of habitats including grassland, extensive reedbeds and oak woodland. It is one of the most important sites in the country for sea hoggs fennell and its associated rare moth. The reedbeds contain breeding marsh harrier. Management, carried out by the owners, includes grass cutting and scrub control.	
Neutral grassland - lowland	22	13.61	Favourable	This unit consists of grazing marsh and water bodies supporting wintering and breeding waterfowl, throughout the year. Management is through grazing by cattle.	
Neutral grassland - lowland	23	57.58	Favourable	Semi-improved grassland holding a number of ponds and waterways. Management by grazing and water controls. Very important wintering areas for waterfowl particularly dark-bellied brent geese and wigeon.	
Neutral grassland - lowland	24	59.13	Favourable	Seawall - maintained by annual mowing creating a mixed structure due to cutting regime being split between top and bottom of the seawall.	
Neutral grassland - lowland	25	20.75	Favourable	Seawalls within this unit are cut and maintained by the owner. Provides a mixed diversity of habitats on the site.	
Neutral grassland - lowland	26	18.57	Favourable	The grazed seawalls of Horsey Island have provided an important breeding area for waders, particularly oystercatcher. It holds a large proportion of the Essex breeding population of this bird. Throughout the length of the unit there is a mixed	

				structure from heavily grazed to taller vegetation. One of the main populations of sea hogs fennell in the country is found in this unit. Protection for this species is provided by fencing to prevent grazing.	
Neutral grassland - lowland	27	5.68	Favourable	Seawall - maintained by annual mowing creating a mixed structure due to cutting regime being split between top and bottom of the seawall. Sea hogs fennell also found in this unit.	
Arable and horticulture	28	42.40	Favourable	Improved grassland and arable fields used extensively by feeding dark-bellied brent geese. Arable rotation on the fields creates good breeding habitat for ringed plover and lapwing. Management by mowing and field rotation.	

**Team - Four Counties - SSSI name - Stour Estuary - Staff member responsible for site - Carol Reid**

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Littoral sediment	1	44.81	Unfavourable declining	Erosion (while partly natural) is partly attributable to coastal squeeze; also possible contribution from recreational disturbance, water quality factors, and maintenance dredging. Agreed mitigation is in place in respect of maintenance dredging, and subject to comprehensive monitoring which is reported to EN and other regulators; however, although English Nature has no reason to assume it is not working, the monitoring results are not able as yet to confirm that it is working as indicated by modelling. It is expected that such confirmation is unlikely to be available until the end of the	Coastal squeeze, Water pollution - agriculture/run off

				second five-year review in 2010. In the event that it is not after an appropriate period possible to demonstrate that mitigational sediment replacement is working, or if further investigation indicates that adverse effects are arising from unmitigated maintenance dredging requirements arising from dredges previous to 1998-2000, it is likely that dredging will be then indicated as a reason for unfavourability.	
Littoral sediment	3	374.97	Unfavourable declining	Erosion (while partly natural) is partly attributable to coastal squeeze; also possible contribution from recreational disturbance, water quality factors, and maintenance dredging. Agreed mitigation is in place in respect of maintenance dredging, and subject to comprehensive monitoring which is reported to EN and other regulators; however, although English Nature has no reason to assume it is not working, the monitoring results are not able as yet to confirm that it is working as indicated by modelling. It is expected that such confirmation is unlikely to be available until the end of the second five-year review in 2010. In the event that it is not after an appropriate period possible to demonstrate that mitigational sediment replacement is working, or if further investigation indicates that adverse effects are arising from unmitigated maintenance dredging requirements arising from dredges previous to 1998-2000, it is likely that dredging will be then indicated as a reason for unfavourability.	Coastal squeeze
Earth heritage	7	2.77	Favourable		
Littoral sediment	9	84.04	Unfavourable declining	Erosion (while partly natural) is partly attributable to coastal squeeze; also possible contribution from recreational disturbance, water quality factors, and maintenance dredging.	Coastal squeeze

				<p>Agreed mitigation is in place in respect of maintenance dredging, and subject to comprehensive monitoring which is reported to EN and other regulators; however, although English Nature has no reason to assume it is not working, the monitoring results are not able as yet to confirm that it is working as indicated by modelling. It is expected that such confirmation is unlikely to be available until the end of the second five-year review in 2010. In the event that it is not after an appropriate period possible to demonstrate that mitigational sediment replacement is working, or if further investigation indicates that adverse effects are arising from unmitigated maintenance dredging requirements arising from dredges previous to 1998-2000, it is likely that dredging will be then indicated as a reason for unfavourability.</p>	
Littoral sediment	10	472.93	Unfavourable declining	<p>Erosion (while partly natural) is partly attributable to coastal squeeze; also possible contribution from recreational disturbance, water quality factors, and maintenance dredging. Agreed mitigation is in place in respect of maintenance dredging, and subject to comprehensive monitoring which is reported to EN and other regulators; however, although English Nature has no reason to assume it is not working, the monitoring results are not able as yet to confirm that it is working as indicated by modelling. It is expected that such confirmation is unlikely to be available until the end of the second five-year review in 2010. In the event that it is not after an appropriate period possible to demonstrate that mitigational sediment replacement is working, or if further investigation indicates that adverse effects are arising from unmitigated maintenance dredging requirements arising from dredges previous to 1998-2000, it is likely that dredging will be then</p>	Coastal squeeze



				indicated as a reason for unfavourability.	
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**Team** - Norfolk And Suffolk - **SSSI name** - Stanley And Alder Carrs, Aldeby - **Staff member responsible for site** - Adrian Gardiner

Main habitat	Unit number	Unit area (ha)	Assessment description	Condition assessment comment	Reason for adverse condition
Fen, marsh and swamp - lowland	1	19.40	Unfavourable no change	Sis a good management condition, however water quality in the river Waveney an increasing concern. AMP4 projects now proposed for point sources, however diffuse pollution is likely also to be contributing to nutrient loading.	Water abstraction, Water pollution - agriculture/run off, Water pollution - discharge
Fen, marsh and swamp - lowland	2	8.25	Unfavourable no change	Site primarily impacted by excessive nutrients.	Water abstraction, Water pollution - agriculture/run off, Water pollution - discharge
Fen, marsh and swamp - lowland	3	15.00	Unfavourable no change	Site impacted by excessive plant nutrients.	Water abstraction, Water pollution - agriculture/run off, Water pollution -

					discharge
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# ***Appendix 4***



<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
	<b>Core Policy</b>			
	<b>Strategic Spatial Approach</b>			
<b>CS1</b>	<b>Sustainable Development and Climate Change</b>	Yes	<p>The approach is to place considerable weight on environmental issues throughout the framework. This should reflect the contribution Ipswich makes to national and international issues. The overall approach will have a positive effect on the Stour and Orwell Estuaries SPA and RAMSAR site.</p> <p>The proposed measures stated in sub paragraphs f and g of CS1 need to be assessed to see if they have an impact on the SPA and RAMSAR site. These support the implementation of the Ipswich Flood Defence Strategy and requiring building and infrastructure design to incorporate water conservation, capture, recycling and efficiency measures and sustainable urban drainage systems. These measures will be covered in further detail in DC4 Development and Flood Risk.</p>	No
<b>CS2</b>	<b>The Approach to the Location and Nature of Development</b>	Yes (positive, through enhancement of the river corridor)	<p>This approach to the location of development is centred primarily on the town centre, Ipswich Village and the Waterfront, and secondly on the town's district centres. With the exception of industrial uses which should be focussed on the town's, major out of centre employment areas and open space, which is to be dispersed throughout the town. This overall approach to the locational strategy is unlikely to have an impact on the Stour</p>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			and Orwell Estuaries SPA and RAMSAR site. Sub paragraphs d and g promote the strategic employment site at cranes and a proposal to enhance the river corridor. The strategic employment site will be assessed in detail under DC23, to see if it is likely to cause any negative impact on the Estuaries. Sub paragraph g. the enhancement of the river corridor is likely to have a positive impact on the Estuaries.	
<b>CS3</b>	<b>IP-One Area Action Plan</b>	No	Policy CS3 proposes an area action plan for central Ipswich, IP-One Area Action Plan. This will guide development in the town centre, Ipswich Village, Waterfront and Education Quarter. This policy area is unlikely to have an impact on designation of the Stour and Orwell Estuaries SPA and RAMSAR site. However an Appropriate Assessment will be undertaken separately of the IP-One AAP.	No
<b>CS4</b>	<b>Protecting Our Assets</b>	Yes (positive)	In terms of the natural environment, the Council recognises the importance of following national guidelines set out in PPS9. Policy Area CS4 stated at sub paragraph e. that the Council will prepare management plans for Council owned wildlife sites. This policy is likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>CS5</b>	<b>Urban Design</b>	No	Policy Area CS5 is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			site. If any the impact it is most likely to be positive by through supporting sustainable development and promoting and enhancing the character and distinctiveness of Ipswich.	
<b>CS6</b>	<b>Improving Accessibility</b>	No	This policy area supports development located and designed to minimise the need to travel, encouraging greater use of walking, cycling and public transport modes. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>CS7</b>	<b>The Ipswich Policy Area</b>	Yes (positive)	Ipswich Borough Council recognises the importance of joint working and coordination of planning policies around the fringes of Ipswich, in order to deliver appropriate development. This includes the designation of the Stour and Orwell Estuaries SPA and RAMSAR site, which lies within three authorities boundaries Ipswich BC, Suffolk Coastal DC and Babergh DC. This joint approach will have a positive impact on the Estuaries designation.	No
	<b>Live</b>			
<b>CS8</b>	<b>The Amount of Housing Required</b>	Yes	CS7 states that the Council will allocate land to provide an additional 4,940 dwellings to 2021. Sites will be identified through the IP-One Area Action Plan and the Site Allocations and Policies Development Plan Document in accordance with the spatial strategy in the Core Strategy. Further	Yes

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>broad locations for development will be identified for the period from 2021 to 2025 to accommodate at least 3,320 dwellings. Housing allocations will be made and released in three phases.</p> <p>Some of the sites allocated are expected to lie in proximity to the Stour and Orwell Estuaries SPA and RAMSAR, and therefore should be assessed as part of the appropriate assessment for the IP-One Area Action plan and Site Allocation and Policies document. The overall scale of growth planned for the town will need to be considered in relation to its potential impact on the estuary, in particular the increase in number of visitors to the SPA for recreation purposes.</p>	
<b>CS9</b>	<b>The Balance Between Flats and Houses</b>	No	<p>A mix of dwelling types is to be provided in order to achieve mixed and sustainable communities. With high density in the town centre, waterfront and Ipswich Village, medium density for sites in or within 800m of district centres and sites elsewhere low density. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No
<b>CS10</b>	<b>Previously Developed Land Target</b>	Potential Yes	<p>A target is set for 70% of all new housing to be developed on previously developed land. This reflects the locational strategy set out in Policy area 2, which focuses development primarily into central Ipswich. This policy may have the impact</p>	Yes



<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			on the Stour and Orwell Estuaries SPA and RAMSAR site, as the population growth is to be focussed in the central area of Ipswich, this could lead to an increase of visitors to the SPA.	
<b>CS11</b>	<b>Ipswich Northern Fringe</b>	No	The Council is proposing that land at the Northern Fringe of Ipswich, to the east of Henley Road and the east of Westerfield Road, will form the main source of supply of housing land in Ipswich after 2021. However the delivery of up to 1,000 of those dwellings will be expected to commence during the plan's second phase (2015 to 2021) on land to the east of Henley Road and south of the railway line. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>CS12</b>	<b>Gypsy and Traveller Accommodation</b>	No	The Council will work with neighbouring authorities to identify and deliver additional permanent sites for Gypsies and Travellers in the wider Ipswich area, where need is proved. The policy requires that any site should not impact adversely on various matters including sites designated to protect their nature conservation, geological, historic or landscape qualities. This will seek to ensure that there is no adverse impact on the on the Stour and Orwell Estuaries SPA and RAMSAR site. If this policy has any impact it is likely to be positive, in protecting the conservation interests. Any Sites specific allocations will be assessed as	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			part of the appropriate assessment for the Site Allocation and Policies and IP-One Area Action Plans document.	
<b>CSPA20</b>	<b>Delivering Infrastructure</b>	Yes (positive)	The Council will require all new developments to contribute on and off site infrastructure requirements needed to support the development and mitigate the impact of the development on the existing community and environment. This could include contribution to be made to support conservation infrastructure. This policy is therefore likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>CS13</b>	<b>Affordable Housing</b>	No	<p>This policy states that the Council will work with partners to provide affordable housing to meet identified needs in Ipswich. All new developments of 10 dwellings or more (or on housing sites of 0.3ha or more) are required to include provision for affordable housing as follows:</p> <ul style="list-style-type: none"> <li>a. 40% affordable housing provision on greenfield sites in schemes of 15 or more dwellings or 0.5ha or more;</li> <li>b. 35% affordable housing provision on previously developed sites in schemes of 15 or more dwellings or 0.5ha or more; and</li> <li>c. 20% affordable housing provision in</li> </ul>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>schemes of between 10 and 14 dwellings or 0.3 to 0.49 ha.</p> <p>At least 70% of affordable housing provision should consist of social rented housing.</p> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	
	<b>Work</b>			
<b>CS14</b>	<b>The Number of Jobs to be Planned For</b>	Yes	<p>The Council will promote sustainable economic growth in Ipswich. It will enable the provision of 18,000 jobs between 2001 and 2021 through various measures and a further 900 per year to 2025.</p> <p>The only strategic site identified in the Core Strategy is at the former Cranes factory at Nacton Road. This should be assessed to see if it is likely to have an impact on the SPA. All other sites allocations, which lie in proximity to the Stour and Orwell Estuaries SPA and RAMSAR site, will need to be assessed as part of the appropriate assessment for the IP-One Area Action Plan and Site Allocation and Policies document.</p>	Yes
<b>CS15</b>	<b>The Implications for Different Employment Sectors</b>	No	<p>The policy area states that the Council will make land allocations for employment development in the IP-One Area Action Plan and Site Allocations and Policies Development Plan Document that provide a range of employment sites by size,</p>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			location and expected use class. In doing so, the Council will cater for the forecast net change in jobs identified through the Haven Gateway Employment Land Study to 2021. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site. However the specific proposals in IP-One Area Action Plan and Site Allocation and Policies will themselves be subject of a separate appropriate assessment.	
<b>CS16</b>	<b>Strategic Employment Sites</b>	Yes	This policy allocates 16.7ha of land at the site of the former Cranes factory at Nacton Road as a strategic employment site. Access will be from Nacton Road (or Ransomes Way?). This site needs to be assessed for any potential impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	Yes
<b>CS17</b>	<b>Retail Development</b>	No	Improving the retail offer in Ipswich is an important objective of the Council. It is recognised that this needs to be done in as sustainable a manner as possible having regard to transport issues and the importance of increasing the vitality and viability of the central area and key district centres. The policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
	<b>Learn</b>			
<b>CS18</b>	<b>Education Provision</b>	No	The policy supports the further development of educational facilities at Suffolk New College and	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>University Campus Suffolk, specifically the existing campus site and Phase 3 of the University scheme of development, will be identified and safeguarded for education use through the IP-One Area Action Plan.</p> <p>The development of a new 14-19 centre outside the Borough at Copdock, to serve the western half of Ipswich is also supported.</p> <p>The policy supports the upgrading of education facilities through the Building Schools for the Future programme and will seek to ensure that community access to facilities is maximized through any regeneration works.</p> <p>New primary schools will be needed to meet the demands of growth. Sites for a new primary school in east Ipswich and one in west Ipswich will be identified through the IP-One Area Action Plan and/or Site Allocations and Policies document.</p> <p>Any additional nursery and children's centre provision will be encouraged to locate within or adjacent to District and Local Centres in order to facilitate linked trips by parents.</p> <p>Any education needs associated with development at the Northern Fringe will be identified and sites safeguarded through the development brief to be</p>	

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			prepared as a supplementary planning document. These proposals are unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	
	<b>Play</b>			
<b>CS19</b>	<b>Green Infrastructure, Sport and Recreation</b>	Yes (positive)	This policy seeks to protect, enhance and extend the network of green corridors, open spaces, sport and recreation facilities for the benefit of biodiversity and people. A subsequent amendment to the submission draft supports the green rim around the town. This policy is likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
	<b>Infrastructure</b>			
<b>CS21</b>	<b>Strategic Flood Defence</b>	Yes	This policy states that the Council will work with partners to implement the Ipswich Flood Management Strategy as a key piece of infrastructure needed to support regeneration in Ipswich. This policy links closely with policy CS13 as the flood defences are a key piece of strategic infrastructure needed to enable the continued growth and regeneration of the town. The tidal barrier and flood defences should be considered in regard to their potential impact on the Stour and Orwell Estuaries SPA and RAMSAR	Yes

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			site, as they could affect the river flow.	
<b>CS22</b>	<b>Provision of Health Services</b>	No	<p>The Council supports the bringing together of health sector facilities onto the Heath Road Hospital Site. In the case of the St Clements Hospital site, the Council supports the principle of its partial re-use for residential purposes. A detailed site allocation will be made in the Site Allocations and Policies document.</p> <p>Where other sites currently in health use become surplus to requirements over the plan period, the Council will only permit their redevelopment for non-health purposes provided certain criteria are met.</p> <p>Proposals to develop additional local health facilities such a GP Surgeries will be acceptable provided that they are located in or within 800m of the town centre or a district or local centre. These proposals are unlikely to have any impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No
<b>CS23</b>	<b>East-West Transport Capacity</b>	Yes (Possible)	This policy supports in principle the 'Ipswich: Transport Fit for the 21st Century' scheme. This will improve bus station provision, passenger information, shuttle bus provision and pedestrian links between the town centre and the railway station and Waterfront.	Yes

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>In the longer term, the Council also supports the provision of significant alternative east-west transport capacity. To this end, it will lobby to promote a Wet Dock Crossing through a review of the local transport plan.</p> <p>The Council will also actively encourage key partners to investigate the possibility of a northern by pass to address the issue of east-west movement.</p> <p>The Council does not support the provision of an East Bank Link Road during this plan period.</p> <p>These proposals in particular the Wet Dock crossing should be considered for potential impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	
<b>CS24</b>	<b>Electricity Capacity</b>	No	<p>The policy supports the provision of a larger primary electricity sub station in the Turret Lane area to support further development in the town centre. A site will be identified through the IP-One Area Action Plan. Delivery will be funded by EDF and developer contributions for strategic infrastructure. The need has also been flagged up in the Haven Gateway Integrated Development Plan and therefore Growth Point funding may also be available.</p> <p>This policy is unlikely to cause an impact the</p>	No



<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			Stour and Orwell Estuaries SPA and RAMSAR site.	
	<b>Key Diagram</b>	Yes (positive)	The Key Diagram is an important part of the Core Strategy document. It diagrammatically illustrates the spatial strategy, the policy areas and DC policies. It includes the SPA, the green rim and the river corridor. It also identifies key development locations, the general direction for future strategic growth, strategic employment locations, the main transport infrastructure proposals. The Key Diagram supports the Stour and Orwell Estuaries SPA and RAMSAR site designation and conservation interest through its designation on the plan. It will therefore have a positive impact on the Estuary designation.	No
	<b>Development Control Policies</b>			
<b>DC1</b>	<b>Sustainable Development</b>	Yes (positive)	The policy states that all new residential and non-residential buildings shall be required to achieve a high standard of environmental sustainability. This policy assists in protecting the environment and therefore is likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>DC2</b>	<b>Decentralised Renewable or Low Carbon Energy</b>	Yes (positive)	All new build development of 10 or more dwellings or in excess of 1000sqm of other residential or non-residential floorspace shall provide at least	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			15% of their energy from decentralised and renewable or low-carbon sources unless it can be clearly demonstrated that this is either not feasible or not viable. This policy assists in protecting the environment and therefore is likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	
<b>DC3</b>	<b>Provision of private outdoor amenity space in new developments</b>	No	This policy seeks to ensure that new residential developments deliver a suitably high quality and environmentally sustainable living environment all such developments will be required to incorporate well designed and located private outdoor amenity space of an appropriate type and amount, in order to ensure that, provision will be in accordance with the stated standards. This policy is not likely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>DC4</b>	<b>Development and Flood Risk</b>	Yes	<p>This policy states that development will only be approved where it can be demonstrated that the proposal satisfies all the following criteria:</p> <ul style="list-style-type: none"> <li>a. It reduces the overall risk of flooding in the area through the layout and form of the development and appropriate application of Sustainable Urban Drainage Systems (SUDS);</li> <li>b. It will be adequately protected from flooding</li> </ul>	Yes

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>in accordance with adopted standards wherever practicable;</p> <p>c. It is and will remain safe for people for the life time of the development;</p> <p>d. It includes water efficiency measures such as rainwater harvesting, or use of local land drainage water where practicable.</p> <p>This policy may have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	
<b>DC5</b>	<b>Urban Design Quality</b>	No	All new development will be required to achieve high standards of design. It will need to meet specified design criteria. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>DC6</b>	<b>Tall Buildings</b>	No	Planning permission for tall buildings will only be granted within the arc of land to the south-west of the town centre in the vicinity of Civic Drive and the Northern Quays of the Waterfront, and provided the design addresses specified criteria. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>DC6b</b>	<b>Public Art</b>	No	This policy states that planning permission for major developments will only be granted subject to the inclusion of a public art proposal equivalent to 1% of the construction contract value of the	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			development scheme. Proposals must be fully integrated into the proposed development at the design stage. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	
<b>DC7</b>	<b>Conservation Areas</b>	No	This policy seeks to protect and enhance the character and appearance of Conservation Areas through adopted Conservation Area Appraisals and Management Plans. These will be used to inform the Council's decisions when assessing the impact of proposals for planning permission. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>DC8</b>	<b>Buildings of townscape interest</b>	No	The policy has a presumption in favour of retaining and repairing buildings of local townscape interest. Proposals involving the loss of such buildings will only be permitted if it can be demonstrated by thorough analysis in the Design and Access Statement that the replacement building(s) is of an equal or higher standard of design and incorporates sustainability features. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>DC9</b>	<b>The Protection of Trees</b>	Yes (positive)	The Council will protect and retain trees in the interests of amenity by making Tree Preservation	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>Orders and only granting consent for felling, topping, lopping or uprooting if a sound arboricultural reason is provided. Trees whether viewed individually or collectively from a distance trees make an important contribution to the environmental quality of Ipswich. They contribute to the townscape, biodiversity and air quality and intercept rainfall so slow down run-off. This policy is therefore likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	
<b>DC10</b>	<b>Ipswich Skyline</b>	No	<p>Central Ipswich is circled by a wooded skyline, which is particularly important to the setting of the central area including Ipswich Village and the Waterfront. Developments will only be permitted where they do not seriously disrupt this setting, especially when viewed from sensitive locations. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No
<b>DC11</b>	<b>Extensions to dwelling houses and the provision of ancillary buildings</b>	No	<p>This policy states that development within the curtilage of dwelling houses shall;</p> <ol style="list-style-type: none"> <li>a. Ensure that sufficient garden space is retained; and</li> <li>b. Not lead to the creation of a terracing effect where there are not already terraces; and</li> <li>c. Ensure that an acceptable standard of</li> </ol>	No

Policy Areas No.	Proposed Submission Core Strategy and Policies June 2009	Likely Significant Impact?	Comments	Is an Appropriate Assessment required?
			<p>drainage is provided; and</p> <p>d. Not detract from the amenity of neighbouring residents particularly in terms of privacy, light or overbearing impact.</p> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site. If there is any impact it is likely to be positive as a result of the requirement to ensure acceptable drainage to be provide.</p>	
DC12	Small scale infill or backland residential developments	No	<p>This policy states that development involving small scale infill or backland residential developments shall meet the following criteria;</p> <ul style="list-style-type: none"> <li>a. not be sited in locations where they would be disturbed by other land uses,</li> <li>b. establish a safe and secure environment,</li> <li>c. not detract from the amenity of neighbouring residents particularly in terms of privacy, light or overbearing impact,</li> <li>d. have safe and convenient access, and</li> <li>e. have secure and lit bicycle storage and facilities for the storage of refuse, recycling and garden waste containers.</li> </ul> <p>•</p> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
DC13	The subdivision of family dwellings	No	This policy states that development involving the conversion of houses into flats, bedsits or houses in multiple occupation shall met specified criteria. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
DC14	Travel Demand Management	Yes (positive)	<p>This policy applies to developments of 10 or more dwellings or 1,000 square metres or more of non-residential floorspace, or where more than 50 people will be employed. It requires the following:</p> <ul style="list-style-type: none"> <li>- A transport assessment to be undertaken including an assessment of the impact on the local highway network with appropriate mitigation measures secured by a planning obligation;</li> <li>- Where likely to have an impact on or be located in an Air Quality Management Area or other sensitive area, an assessment of the air quality impacts of the development with appropriate mitigation measures proposed as necessary;</li> <li>- Where located in a noise sensitive area or likely to have an impact on these areas, a suitable PPG24 and/or BS4142 survey;</li> <li>- A travel plan outlining how the development will ensure high levels of cycling and walking together with public transport use;</li> </ul>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<ul style="list-style-type: none"> <li>- The minimisation of the use and ownership of the car by providing an integrated solution which could include car clubs, well-designed cycle and pedestrian routes, high quality secure cycle storage and good access to public transport within 200 metres of the development; and</li> <li>- For non-residential developments, high quality shower facilities and lockers to ensure that a modal shift can occur.</li> </ul> <p>This policy could have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site, in particular by assessing noise and air quality impacts of development.</p>	
<b>DC15</b>	<b>Sustainable Modes</b>	No	<p>The policy for considering proposals for all other developments not included in Policy DC14, expects the following:</p> <ul style="list-style-type: none"> <li>- Good access to public transport within 200 metres of the site; and</li> <li>- High quality, secure cycle storage (see also Policy Area 35 Parking).</li> </ul> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No
<b>DC16</b>	<b>Car Parking</b>	No	<p>This policy sets car parking standards for all developments.</p> <p>This policy is unlikely to have an impact on the</p>	No



<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			Stour and Orwell Estuaries SPA and RAMSAR site.	
<b>DC17</b>	<b>Cycle Parking</b>	No	This policy requires a minimum standard of cycle parking to be met for all new residential and major non-residential development proposals. This cycle parking is expected to be of a high quality and secure. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>DC18</b>	<b>The Central Shopping Area</b>	No	This policy supports the town's vitality and viability by promoting and enhancing appropriate development in the Central Shopping Area. It seeks to control the non-A1 retail uses in the Central Shopping Area, through frontage criteria. It also supports mixed use development, including B1 office, C1 hotel, A2 financial and professional services, C3 housing or any combination of these uses will be supported in the Central Shopping Area provided there is a ground floor retail frontage. This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.	No
<b>DC19</b>	<b>District and Local Centres</b>	No	This policy supports the retention of local shops in District and Local Centres and supports the	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>provision of key facilities within a 400m straight-line distance of these centres. It seeks to control the non-A1 retail uses in the District and Local Centres, through frontage criteria. Key facilities will be permitted within 400m distance of the centre and in centre when certain criteria are satisfied. Proposals for additional food shops in District and Local Centres will be permitted where they do not exceed 1,500 sq m gross floorspace, provided the development meets the needs of the catchment of the District or Local Centre they are serving, rather than the area as a whole, and the applicant has demonstrated that the proposal is acceptable in terms of PPS6.</p> <p>Proposals for use of upper floorspace to B1 office, A2 professional services and C3 housing will be supported in the centres provided there is a ground floor retail frontage.</p> <p>Two new district shopping centres are proposed within the plan period, 1) Sproughton Road and 2) Duke Street. These centres will support retail units appropriate to serve their catchment area. If development takes place at the Northern Fringe, a new District Centre will also be required there.</p> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
DC20a	Retail Use Outside defined Shopping Centres	No	<p>This policy states that within the Town Centre but outside the Central Shopping Area, the development of non-retail town centre uses, including leisure, culture and tourism facilities, will be supported. B1 office uses and mixed use schemes including housing will also be encouraged, however industrial uses (Classes B2 and B8) will not be permitted.</p> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No
DCb	Major Retail Proposals Outside Defined Centres	No	<p>Major shopping proposals for more than 200 sq m gross floorspace in locations outside Defined Centres (and not allocated in up-to-date development plan) will not be permitted, in order to protect the vitality and viability of the existing centres, unless the proposal can be demonstrated to be acceptable under the terms of PPS6. Particular regard should be given to specified criteria.</p> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No
DC21	Loss of Residential accommodation	No	<p>This policy will only allow proposals which would lead to a net loss of residential units when the proposal is for a community facility or if the existing</p>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>residential unit is unsuitable for continued residential use. Any proposed use must be compatible with its surroundings.</p> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	
<b>DC22</b>	<b>Affordable Housing</b>	No	<p>This policy states that affordable housing provision will be required in accordance with Core Policy CS14.</p> <p>The presumption will be in favour of on site provision rather than the payment of commuted sums in lieu of provision.</p> <p>The Council will require that the affordable housing:</p> <ul style="list-style-type: none"> <li>- is designed and built to the highest standards including the appropriate level of the Code for Sustainable Homes at the time;</li> <li>- is integrated into developments and from external appearance should be indistinguishable from the market housing;</li> <li>- should not generally grouped in clusters of more than 12-15 units; and</li> <li>- has car parking provided at the same ratio as for the development as a whole.</li> </ul>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>The appropriate type, size, mix and tenure will be determined by the findings of the Borough's Housing Needs Survey and Strategic Housing Market Assessment, which will updated over time, and the particular characteristics of the site.</p> <p>The Council will only consider reducing the requirement for the proportion of affordable housing in an open market development where an independent assessment of the applicant's development costs is carried out at the applicant's expense.</p> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	
<b>DC23</b>	<b>Protection of employment land</b>	Yes (positive)	<p>This policy seeks to safeguard employment land. Permission for the conversion, change of use or redevelopment of business, general industrial or distribution sites or premises for non-Class B1, B2 and B8 purposes, as defined by the Use Classes Order 1987 (as amended), will only be permitted where:</p> <ul style="list-style-type: none"> <li>• The proposed use is compatible with the surrounding uses; and</li> </ul>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<ul style="list-style-type: none"> <li>• It can be demonstrated to the Council's satisfaction that the alternative uses are employment uses with no reasonable prospect of locating elsewhere within the Borough; or</li> <li>• The existing use is generating unacceptable adverse environmental impact.</li> </ul> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site. However the last clause which permits existing uses to change to non-Class B1, B2 and B8 purposes where the existing use is generating and unacceptable adverse environmental impact, this could have a positive impact on the SPA and RAMSAR site.</p>	
<b>DC24</b>	<b>Protection of Amenity</b>	Yes (positive)	<p>This policy states that development which could lead to serious adverse effects on the amenity or environment of neighbouring uses will not be permitted. Development, which could itself be seriously adversely affected by the conduct of established or potentially noisy or polluting uses nearby, will not be permitted.</p> <p>Exceptions will only be made where satisfactory mitigation measures can be secured through the</p>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>use of planning conditions or Section 106 planning agreements.</p> <p>This policy is likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site, by requiring that the development should not adversely affect nearby uses in terms of potential noise or pollution.</p>	
<b>DC25</b>	<b>Non-residential uses in residential areas</b>	No	<p>Non-residential uses in residential areas will be permitted where the proposed development</p> <ul style="list-style-type: none"> <li>a. would not involve the loss of a dwelling unless the use provides a necessary community facility; and</li> <li>b. is compatible with the size and scale of housing in the surrounding area and would not have a harmful effect on that area through traffic generation and general activity as a result of excessive numbers of people calling at the premises throughout the day and night; and</li> <li>c. can be satisfactorily accessed and serviced.</li> </ul> <p>This policy is unlikely to have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No
<b>DC26</b>	<b>Residential Infrastructure</b>	Yes (positive)	This policy requires a contribution, based on	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
	<b>Contributions</b>		<p>number of bedrooms, on all proposals that involve a net increase in the number of dwellings across the whole Borough. The contribution will be payable on all new dwellings including flats, affordable housing and student accommodation*, subject to viability considerations.</p> <p>Contributions will be calculated based on projects identified in the Borough's Infrastructure Strategy and Delivery Plan and Supplementary Planning Document relating to the areas of:-</p> <ul style="list-style-type: none"> <li>(a) transport</li> <li>(b) education</li> <li>(c) health</li> <li>(d) environment</li> <li>(e) culture</li> <li>(f) sport and recreation</li> <li>(g) community</li> <li>(h) emergency services</li> <li>(i) conservation</li> <li>(j) economic development</li> </ul> <p>The contributions will consist of a proportion to be pooled centrally to aid delivery of major capital projects associated with growth and the remainder allocated to specific identified projects.</p> <p>This policy is therefore likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site, as it includes contributions towards conservation and environment interests.</p>	



<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
DC27	<b>Non-residential Infrastructure contributions</b>	Yes (positive)	<p>This policy will require a contribution based on use class on all proposals that involve a gross increase in non-residential internal floorspace of 100m<sup>2</sup> or more, subject to viability considerations. The contribution will be payable on proposals for extensions to existing developments as well as new development proposals and will apply to each 100m<sup>2</sup> or part there-of new development. The contributions raised will consist of a proportion to be pooled centrally to aid delivery of major capital projects associated with growth and the remainder allocated to specific projects relating to the areas of:-</p> <ul style="list-style-type: none"> <li>(a) transport</li> <li>(b) environment</li> <li>(c) sport and recreation</li> <li>(d) emergency services</li> </ul> <p>These projects will be identified through the Borough's Infrastructure Delivery Plan and Supplementary Planning Document.</p> <p>This policy is therefore likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site, as it includes contributions towards environment interest.</p>	No
DC28	<b>Protection of Open Space, Sport and Recreation Facilities</b>	Yes (positive)	This policy states that the development involving the loss of open space, sports or recreation	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>facilities will only be permitted if:</p> <ul style="list-style-type: none"> <li>a. The site or facility is surplus in terms of all the functions an open space can perform, <u>and</u> is of low value and poor quality, as shown by the Ipswich Open Space, Sport and Recreation Facilities Study 2009; or</li> <li>b. Alternative and improved provision would be made in a location well related to the users of the existing facility.</li> </ul> <p>This policy is likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site, as it will ensure there is sufficient provision of open space, sport and recreation facilities, which could in turn reduce pressure on the recreational use of the SPA and RAMSAR site.</p>	
<b>DC29</b>	<b>Provision of New Open Spaces, and Sport and Recreation Facilities</b>	Yes (positive)	<p>This policy states that all new residential developments, and non-residential developments of 1000 sq m floorspace or more, will be required to provide and/or contribute to open spaces and sport and recreation facilities, to meet the needs of their occupiers.</p> <p>The level of provision will vary according to the size of the proposed development and the quantity and quality of existing open spaces and sports and recreation facilities within the catchment area of</p>	No

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>the site, as identified by the Ipswich Open Space, Sport and Recreation Study 2009 and subsequent monitoring. Provision will be made in accordance with the standards set out in appendix X.</p> <p>In all major developments (10 dwellings or 1000m2 non-residential or more), at least 10% of the site area should consist of green space (useable by the public in relation to residential schemes)</p> <p>In relation to children's play, the presumption will be in favour of on-site provision.</p> <p>The following types of development will be exempt from the requirements of the policy, because they are likely to have a minimal impact on demand for facilities:</p> <ul style="list-style-type: none"> <li>a. one for one replacement dwellings, and</li> <li>b. domestic extensions or annexes.</li> </ul> <p>In addition, only certain types of open space will be required for elderly persons' accommodation and nursing homes.</p> <p>The requirement will apply to affordable housing schemes, unless it can be demonstrated that this would lead to the scheme being unviable. In such cases, a reduced level of provision will be negotiated with the applicant.</p>	

Policy Areas No.	Proposed Submission Core Strategy and Policies June 2009	Likely Significant Impact?	Comments	Is an Appropriate Assessment required?
			This policy is likely to have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site, as it will ensure there is sufficient provision of open space, sport and recreation facilities, which could in turn reduce pressure on the recreational use of the SPA and RAMSAR site.	
DC30	Policy on Housing Density	No	<p>This policy states that the density of new housing development in Ipswich will be as follows:</p> <ul style="list-style-type: none"> <li>a. Within the town centre, Ipswich Village and Waterfront, development will be expected to achieve a high density of at least 90 dwellings per hectare;</li> <li>b. Within District Centres and an 800m area around them, development will be expected to achieve a medium density of at least 45 dwellings per hectare; and</li> <li>c. Elsewhere in Ipswich low density development will be required achieving a density of at least 35 dwellings per hectare.</li> </ul> <p>Exceptions to this policy are specified. This policy is unlikely to have a direct impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	No
SUGGESTED ADDITIONS STILL UNDER CONSIDERATION				
NE14	Nature Conservation	Yes (positive)	NE14 The Council will seek to conserve the nature conservation interest of the County Wildlife Sites and Local Wildlife Sites identified on the Proposals	

<b>Policy Areas No.</b>	<b>Proposed Submission Core Strategy and Policies June 2009</b>	<b>Likely Significant Impact?</b>	<b>Comments</b>	<b>Is an Appropriate Assessment required?</b>
			<p>Map by controlling the type and intensity of development. The Council will not grant planning permission for development which would be likely to result in the destruction of or damage to County Wildlife Sites and Local Wildlife Sites or other sites of high wildlife and nature conservation importance.</p> <p>This policy is will have a positive impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	
<b>CF1/2</b>	Community Facilities	No	<p>The Council will work with partners to ensure that a range of local community facilities is made available and retained to meet local needs. Where possible and appropriate, opportunities will taken to provide shared space for the delivery of community services.</p> <p>Major new development will be required to provide for community facilities to meet the future needs of residents, employees and visitors generated by such developments.</p> <p>The redevelopment or change of use of community facilities to non-community uses will only be permitted where the applicant can demonstrate to the Council's satisfaction that the facility is genuinely redundant and surplus to current and future requirements, or where appropriate</p>	

Policy Areas No.	Proposed Submission Core Strategy and Policies June 2009	Likely Significant Impact?	Comments	Is an Appropriate Assessment required?
			<p>alternative provision is proposed. This policy is unlikely to have a direct impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	
RL4		Yes	<p>RL4 Development proposals including changes of use on sites which abut or relate closely to the banks of a river or waterway will be required to provide for the improvement of public access including appropriate landscaping works along the length of the site boundary fronting or relating to the river or waterway.  This policy could have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	Yes
T1		Yes	<p>T1 Development proposals will be assessed in terms of their effect upon the environment and transport systems. Where, as a result of development proposals environmental and transport infrastructure improvements are considered to be necessary, developers will be expected to make appropriate contributions (need to amend to fit with standard charge).  This policy could have an impact on the Stour and Orwell Estuaries SPA and RAMSAR</p>	Yes

Policy Areas No.	Proposed Submission Core Strategy and Policies June 2009	Likely Significant Impact?	Comments	Is an Appropriate Assessment required?
			site.	
T8		Yes	<p>T8 Development proposals will be expected to take account of pedestrian accessibility to the site as well as the wider effects of the development upon pedestrian movement. The line of existing and proposed pedestrian routes should be respected and development generating high levels of pedestrian flows will be expected to provide or contribute towards the improvement of pedestrian facilities.</p> <p>This policy could have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	Yes
T20		Yes	<p>T20 Each development proposal will be assessed in terms of its impact on the road network in respect of traffic capacity, safety and environmental impact of generated traffic. The Council will require mitigating measures to be provided to the satisfaction of the highway authority where necessary.</p> <p>This policy could have an impact on the Stour and Orwell Estuaries SPA and RAMSAR site.</p>	Yes





# ***Appendix 5***



Ipswich Borough Council / Suffolk Coastal District Council  
Survey of site managers of SAC / SPA land in the Suffolk / Essex coast



Introduction

The Landscape Partnership is currently assessing the impact of new housing developments in Ipswich and Suffolk Coastal District on SAC and SPA in and near their respective areas. These housing developments are currently published within the Councils' Local Development Framework policy documents and an appropriate assessment is required before the policies can be agreed.

Part of the assessment is a study on the impact of recreational disturbance, particularly to birds. Data on visitor numbers to particular sites is not always available, and the impact of those visitors is not usually quantified.

This survey is to allow site managers to provide their opinion about any harm might be being caused to SAC or SPA land by visitors and if there are ways of reducing or preventing harm. Your views will be very useful to the Councils.

Please note that filling in this survey does not commit you or your organisation to any course of action. We will treat the answers as a guide rather than definitive, as we expect you to fill in this form quickly and therefore your answers are not expected to be precise.

Background questions

- 1. Name of respondent..... MICK WRIGHT
- 2. Organisation..... SUFFOLK WILDLIFE TRUST (SITE MANAGER)  
BRITISH TRUST FOR ORNITHOLOGY (REGIONAL REP.)
- 3. Name of site managed.. HAZELWOOD MARSHES LEWINGTON / ALSO  
SNAPE MARSHES TRIMLEY MARSHES / ACTIVE IN THE  
CAPTAINS WOOD / COUNTRYSIDE  
NEWBOURNE SPRINGS
- 4. Are you aware of the SAC and SPA designations on your land, and what they are? 24/7.  
Yes / ~~NO~~ YES.
- 5. Have you got any data for visitor numbers at your site and an indication of the origin of these visitors? OLD REPORT FOR TRIMLEY - WITH SEDC.  
Yes / ~~NO~~ DISTURBANCE TO WATERBIRDS WINTERING IN THE  
STOUR - ORWELL ESTUARIES SPA.

If yes, please could you send a copy with this survey or give details of where we could get a copy with SWT. LOCAL PEOPLE  
IF CAR PARK PRESENT - FROM ANYWHERE.

Visitor impacts at present

- 6. Are you aware of any existing harmful impacts caused by visitors to SAC and SPA features on your site?  
Yes / No YES.

7. If you have answered 'Yes' above, please briefly describe the harmful impacts

NOISE,  
DISTURBANCE TO NESTING BIRDS; FEEDING & ROOSTING WINTERING WATERBIRDS.  
DOGS OFF LEADS & NOT UNDER CONTROL  
NATURE RESERVES, SENSITIVE SITES SUCH AS REED BED, MUDFLATS, SALT MARSH USED AS RECREATIONAL AREAS ESPECIALLY BY DOGS

PEOPLE FAIL TO REALIZE THAT A DOG IS A PREDATOR WHEN IT IS RUNNING FREE.

PEOPLE WANDERING WAY OFF FOOTPATHS & CREATING THEIR OWN WALKS (OWN PURPOSE).

DOG OWNERS NOT FENCED, LEAVE STOCK GATES OPEN (MANY HAVE TO BE CLOSED NOW). THEY CONSTANTLY TEND DOWN INTERPRETIVE SIGNS

POUNING BY DOGS

PLASTIC BAGS WITH DOG EXCREMENT THROWN IN HEDGES ETC.

MOUNTAIN BIKES ON PUBLIC FOOTPATHS / MODFLAS ETC

THE SHEAR VOLUME OF PEOPLE AT SOME LOCATIONS

IS IMPACTING ON WILDLIFE & FABRIC OF THE COUNTRYSIDE  
i.e. eroding areas such as saltmarshes.

### Visitor impacts with higher numbers of visitors

We are currently calculating the theoretic increase in population from proposed development, for example how the number of additional visits your site might receive from the increased number of people living in Ipswich as a result of the proposed 15,000 new houses in Ipswich.

8. Would the following increase in visitor numbers cause harm to SAC or SPA features on your site?

proportionate increase in visitors	harm caused by increase?	Brief description of harm
1%	Yes / <del>No</del>	DEPENDS ON SITE / SOME SITES - PROBLEMS / IMPACTS ALREADY / PRESENT FOR REASONS GIVEN ABOVE
5%	Yes / <del>No</del>	_____ u _____
10%	Yes / <del>No</del>	_____ u _____
20%	Yes / <del>No</del>	_____ u _____
30%	Yes / <del>No</del>	IT DOES NOT BEAR THINKING ABOUT
50%	Yes / <del>No</del>	_____ u _____

WE NEED TO BE ADDRESSING THE PRESENT PROBLEMS & IMPACTS AS WELL AS PLANNING FOR THE FUTURE.

IT IS ILLEGAL FOR A DOG TO BE RUNNING FREE ON 'OPEN ACCESS LAND' YET IS GOING UNNAMED. AUTHORITIES ARE COMPLACENT

IN MANY AREAS THESE DAYS THE PLEASURE & AMBIENCE OF A COUNTRYSIDE WALK IS SPOILT (FOR A VARIETY OF REASONS)

IS THIS A JOKE. THERE IS  
NONE IN THE WIDER  
COUNTRYSIDE.

**Mitigation**

9. Would additional money help you reduce or remove the impact of additional visitors, for example move or upgrade footpaths, provide additional wardening, move or upgrade car parks, provide leaflets and signage, etc?

Yes /

10. Can you give a brief description of mitigation works that would be helpful at your site and rough costs?

N.

SOLUTIONS MUST BE FOUND TO ENSURE THAT VISITORS CONTINUE TO ENJOY THE HIGHLY VALUED LANDSCAPE AND WILDLIFE OF THE COUNTRYSIDE WHILST ENSURING THAT THE FRAGILE ECOLOGY IS NOT DAMAGED.

1. WE NEED TO DEVELOP A RECREATIONAL MANAGEMENT STRATEGY FOR THE COUNTRYSIDE TO TACKLE THE GROWING NEEDS OF THE PUBLIC FOR INFORMAL RECREATIONAL PURSUITS.

11. Any other comments? 2. WE NEED TO FORMULATE A DOG MANAGEMENT POLICY.

3. DEVELOPE NEW COUNTRY PARKS & PUBLIC OPEN SPACES

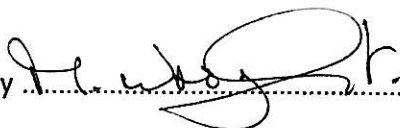
4. WARDENING WITH BACK UP FROM THE AUTHORITIES.

**Thank you for your help.**

Please tick as appropriate

- I am happy for my answers to this survey to be made public.
- I would like my survey to be used in summaries / ~~analyses but not made public as the views expressed are simply provisional and not precise.~~
- I would like feedback on the results of this survey

Signed by .....



Date:

5/6/2009

Please return as soon as possible to Nick Sibbett, The Landscape Partnership, Ancient House Mews, Church Street, Woodbridge, Suffolk IP12 1DH

## **Ipswich Borough Council / Suffolk Coastal District Council**

### **Survey of site managers of SAC / SPA land in the Suffolk / Essex coast**

#### **Introduction**

The Landscape Partnership is currently assessing the impact of new housing developments in Ipswich and Suffolk Coastal District on SAC and SPA in and near their respective areas. These housing developments are currently published within the Councils' Local Development Framework policy documents and an appropriate assessment is required before the policies can be agreed.

Part of the assessment is a study on the impact of recreational disturbance, particularly to birds. Data on visitor numbers to particular sites is not always available, and the impact of those visitors is not usually quantified.

This survey is to allow site managers to provide their opinion about any harm might be being caused to SAC or SPA land by visitors and if there are ways of reducing or preventing harm. Your views will be very useful to the Councils.

Please note that filling in this survey does not commit you or your organisation to any course of action. We will treat the answers as a guide rather than definitive, as we expect you to fill in this form quickly and therefore your answers are not expected to be precise.

#### **Background questions**

1. Name of respondent.....

**Nick Collinson**

2. Organisation.....

**Suffolk Coast and Heaths**

3. Name of site managed.....

**AONB**

4. Are you aware of the SAC and SPA designations on your land, and what they are?

**Yes – there are several in the AONB**

5. Have you got any data for visitor numbers at your site and an indication of the origin of these visitors?

**Yes – Nick Sibbett getting data from ETB**

If yes, please could you send a copy with this survey or give details of where we could get a copy

**– Nick Sibbett getting data from ETB**

#### **Visitor impacts at present**

6. Are you aware of any existing harmful impacts caused by visitors to SAC and SPA features on your site?

**Yes – lots of work done on Stour and Orwell- very possible similar effects on other estuaries. Concern over Adastral Park and impact on Deben SPA. Also Little Terns and disturbance on the beaches, shingle plants and trampling. Lots of information**

**available. Also recreational impacts, wash erosion on estuaries. There is lots of evidence out there.**

7. If you have answered 'Yes' above, please briefly describe the harmful impacts

**Visitor impacts with higher numbers of visitors**

We are currently calculating the theoretic increase in population from proposed development, for example how the number of additional visits your site might receive from the increased number of people living in Ipswich as a result of the proposed 15,000 new houses in Ipswich.

8. Would the following increase in visitor numbers cause harm to SAC or SPA features on your site?

**Given existing impacts and damage caused by current visitor numbers- any increase in visitors (and we can probably assume that an increase in residents within Haven Gateway will bring more people to the AONBs SPAs and SACs) has the potential to cause harm if not managed properly. Developers need to recognise the sensitivity of the environment in which they intend to build. LPAs need to hold developers to account in terms of their responsibilities. S106 should be used more to ensure appropriate mitigation.**

proportionate increase in visitors	harm caused by increase?	Brief description of harm
1%	Yes	
5%	Yes	
10%	Yes	
20%	Yes	
30%	Yes	
50%	Yes	



## Mitigation

9. Would additional money help you reduce or remove the impact of additional visitors, for example move or upgrade footpaths, provide additional wardening, move or upgrade car parks, provide leaflets and signage, etc?

**Yes**

10. Can you give a brief description of mitigation works that would be helpful at your site and rough costs?

As suggested above. From developer contributions. Other Districts and Counties are taking a roof levy from developers to help fund things like green infrastructure.

**Wardening, leaflets, signage, path infrastructure (gates, fencing etc), temporary exclosures etc etc**

11. Any other comments?

**Thank you for your help.**

Please tick as appropriate

**Yes** I am happy for my answers to this survey to be made public.

I would like my survey to be used in summaries / analyses but not made public as the views expressed are simply provisional and not precise.

**Yes** I would like feedback on the results of this survey

Signed by ...Nick Collinson..... Date: 04/06/2009

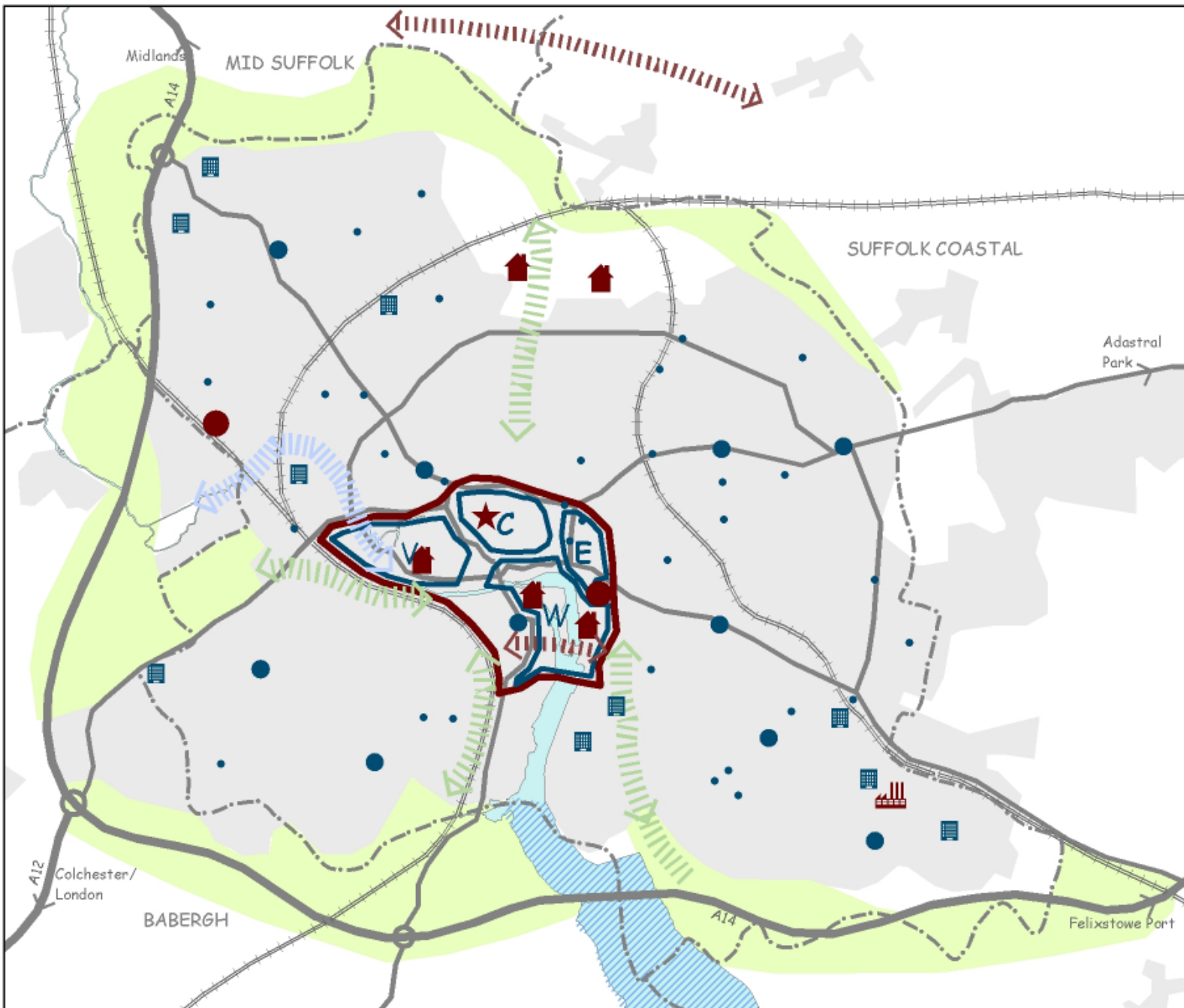
Please return as soon as possible to Nick Sibbett, The Landscape Partnership, Ancient House Mews, Church Street, Woodbridge, Suffolk IP12 1DH

# ***Appendix 6***



# Ipswich Local Development Framework

## Core Strategy Key Diagram



- Proposed District Centre
- Existing District Centre
- Existing Local Centre
- Strategic Employment Site
- Existing Major Employment Area
- Proposed Major Housing
- ★ Focus for additional Retail Devt
- Exploration of additional E-W capacity
- IP-One - Focus for Regeneration
- Conservation of Historic Core
- Ipswich Village
- Education Quarter
- Waterfront
- River Corridor
- Green Corridors
- Green Rim
- Special Protection Area

June 2009

# ***Appendix 7***





[Home](#) | [by Pollutant](#) | [by Habitat](#) | [by Issue](#) | [by Location](#) | [Biomonitoring](#) | [Glossary](#) | [Comments](#)

## Simple Site-Based Assessment - Results

Habitat: Saltmarsh

Pollutant: N Deposition

Grid Reference: TM170415

Easting: 615 to nearest 5 km SW corner (617000 nearest km)

Northing: 240 to nearest 5 km SW corner (241000 nearest km)

Critical Load Range: ⓘ

1. Pioneer and low-mid salt marshes: 30-40 kg N/ha/year

Deposition: 19.3 kg N/ha/year ⓘ ⓘ

Exceedance Ranges: ⓘ

1. Pioneer and low-mid salt marshes [-10.7] to [-20.7] kg N/ha/year

### **Uncertainties**

[« Back](#)

Note: The Simple Site-Based Assessment should be used only to assist the user in obtaining a broad indication of the likely pollutant impact at a specific location. Where this method suggests likely significant pollutant impact, a detailed site-based assessment should be conducted. The Simple Site-Based Assessment only provides a quick tool to screen-out queries where there is clearly little risk of air pollution impact on a habitat at a specified location.

Mon Jun 22 09:21:49 UTC+0100 2009

[Disclaimer](#)

# ***Appendix 8***





Ipswich

Note:- Projections for intervening years should always be forward from the nearest available year of mapped background data.

		µg/m <sup>3</sup>																	
X	Y	NOx 2001	NOx 2005	NOx 2010	NO2 2001	NO2 2005	NO2 2010	PM10 2001	PM10 2004	PM10 2010	PM10 seco	SO2 2001	Benzene 2001	Benzene 2005	Benzene 2010	CO 2001	13-butadiene 2001	13-butadiene 2003	ugm-3 annual mean
613500	246500	42.8	35.6	28.9	25.7	22.6	19.6	21.1	20.3	18.6	8.51	3.46	0.466	0.414	0.326	0.309	0.186	0.149	
613500	247500	40.1	33.2	26.4	24.5	21.5	18.4	20.6	19.7	18.1	8.51	3.38	0.422	0.376	0.298	0.293	0.171	0.138	
614500	242500	53	43.7	34.8	29.7	26	22.3	21.8	20.8	19	8.51	3.86	0.54	0.477	0.37	0.346	0.221	0.177	
614500	243500	54.2	45.1	37.2	30.2	26.6	23.3	22.2	21.3	19.5	8.51	3.62	0.586	0.518	0.403	0.356	0.232	0.185	
614500	244500	54.2	46.3	42.7	30.2	27.1	25.6	23.5	22.8	21	8.51	3.46	0.61	0.54	0.42	0.36	0.233	0.187	
614500	245500	52.2	44.4	39.3	29.4	26.3	24.2	22.8	22	20.2	8.51	3.75	0.602	0.532	0.413	0.358	0.231	0.184	
614500	246500	47.7	40	33	27.7	24.5	21.5	21.7	20.8	19.1	8.51	3.53	0.558	0.494	0.383	0.345	0.217	0.173	
614500	247500	41.8	34.6	27.9	25.2	22.2	19.1	20.8	19.9	18.3	8.51	3.25	0.452	0.402	0.317	0.304	0.182	0.146	
615500	242500	50.3	42.2	34.1	28.7	25.4	21.9	21.7	20.7	18.9	8.51	4.2	0.591	0.522	0.406	0.349	0.222	0.179	
615500	243500	51.4	43.4	35.5	29.1	25.9	22.5	21.9	21	19.2	8.51	3.8	0.647	0.572	0.447	0.362	0.236	0.19	
615500	244500	50.1	42.8	35.9	28.6	25.6	22.7	22.1	21.2	19.4	8.51	3.79	0.676	0.598	0.466	0.37	0.241	0.194	
615500	245500	51.2	43.9	36.9	29	26.1	23.2	22.2	21.3	19.6	8.51	3.79	0.667	0.59	0.459	0.37	0.241	0.192	
615500	246500	48.4	41.1	33.7	27.9	24.9	21.8	21.7	20.9	19.1	8.51	3.59	0.595	0.527	0.411	0.354	0.224	0.178	
615500	247500	41.8	35	28.2	25.2	22.4	19.2	20.8	19.9	18.3	8.51	3.44	0.471	0.419	0.331	0.308	0.184	0.148	
615500	248500	37.9	31.8	25.4	23.6	20.9	17.9	20.2	19.4	17.8	8.51	2.94	0.404	0.36	0.285	0.288	0.163	0.132	
616500	242500	51.1	43	34.7	29	25.7	22.2	21.8	20.8	19	8.51	4.63	0.647	0.573	0.447	0.36	0.234	0.189	
616500	243500	52.2	44.1	35.7	29.4	26.2	22.7	21.9	21	19.2	8.51	5.26	0.714	0.633	0.495	0.377	0.252	0.203	
616500	244500	52.5	44.8	36.7	29.5	26.5	23.1	22.2	21.3	19.4	8.51	4.17	0.782	0.692	0.54	0.4	0.277	0.23	
616500	245500	51.6	44.3	36.3	29.2	26.3	22.9	22.2	21.3	19.4	8.51	3.79	0.761	0.674	0.526	0.393	0.27	0.223	
616500	246500	47.8	40.8	33.4	27.7	24.8	21.6	21.9	21	19.2	8.51	3.6	0.663	0.587	0.459	0.373	0.247	0.204	
616500	247500	40.5	34.3	27.8	24.7	22	19.1	20.9	20	18.3	8.51	3.29	0.522	0.464	0.366	0.321	0.201	0.17	
617500	241500										8.51		5.2						
617500	242500	51	42.9	34.5	29	25.7	22.1	21.4	20.5	18.7	8.51	5.36	0.655	0.58	0.451	0.365	0.238	0.192	
617500	243500	52.1	44	35.6	29.4	26.2	22.6	21.7	20.7	18.9	8.51	15.7	0.723	0.64	0.499	0.382	0.257	0.206	
617500	244500	52.3	44.5	36.2	29.5	26.4	22.8	21.9	20.9	19.1	8.51	5.17	0.777	0.687	0.535	0.401	0.278	0.231	
617500	245500	50.9	43.6	35.6	28.9	26	22.6	21.8	20.9	19	8.51	4.17	0.748	0.662	0.516	0.391	0.266	0.22	
617500	246500	47	40.1	32.6	27.4	24.5	21.3	21.5	20.6	18.8	8.51	3.77	0.647	0.572	0.446	0.37	0.243	0.201	
618500	241500	42.2	35.1	28.2	25.4	22.4	19.2	20.5	19.7	18.1	8.51	4.47	0.487	0.432	0.34	0.305	0.185	0.151	
618500	242500	48.3	40.6	32.7	27.9	24.7	21.3	21.2	20.3	18.6	8.51	4.72	0.61	0.539	0.421	0.35	0.224	0.181	
618500	243500	50.4	42.4	34.3	28.7	25.5	22	21.5	20.6	18.8	8.51	5.68	0.668	0.591	0.461	0.366	0.241	0.194	
618500	244500	49.1	41.7	34.1	28.2	25.2	21.9	21.5	20.6	18.8	8.51	5.1	0.707	0.625	0.488	0.379	0.257	0.214	
618500	245500	47.3	40.4	32.8	27.5	24.7	21.4	21.4	20.4	18.7	8.51	4.38	0.676	0.598	0.468	0.368	0.243	0.203	
618500	246500	43.7	37.2	30.1	26	23.3	20.2	21.1	20.2	18.5	8.51	5.37	0.584	0.517	0.404	0.349	0.222	0.185	
619500	241500	40.6	33.7	27.1	24.7	21.8	18.7	20.4	19.5	18	8.51	4.65	0.462	0.41	0.323	0.295	0.175	0.143	
619500	242500	43.9	36.7	29.6	26.1	23.1	19.9	20.8	19.9	18.3	8.51	4.33	0.53	0.471	0.37	0.318	0.195	0.158	
619500	243500	46.3	38.8	31.5	27.1	24	20.8	21.1	20.2	18.5	8.51	4.48	0.586	0.521	0.41	0.334	0.213	0.172	
619500	244500	46.9	40.6	37.2	27.3	24.8	23.3	21.1	20.2	18.4	8.51	5.37	0.621	0.551	0.434	0.345	0.226	0.189	
619500	245500	43.5	37.1	30.4	25.9	23.3	20.3	21	20.1	18.4	8.51	4.14	0.596	0.53	0.418	0.336	0.216	0.182	
620500	241500	39.6	32.6	26.1	24.3	21.3	18.2	20.3	19.5	17.9	8.54	5.03	0.427	0.381	0.302	0.289	0.168	0.138	

downloaded from [http://www.airquality.co.uk/laqm/tools/133\\_2001.csv](http://www.airquality.co.uk/laqm/tools/133_2001.csv) pn 22 June 2009.

## ***Appendix 9***



Five year summary for Custom consolidation

**Table 1: Total Counts - All Species Combined.**

*Peak monthly total = maximum of the sum of the counts of all species within each month.*

*Seasonal peaks = sum of the maximum counts of all species within each season.*

Year	Peak Monthly Total	Autumn Peak	Winter Peak	Spring Peak
02/03	18067 (JAN)	17852	23709	6270
03/04	24208 (FEB)	20286	29037	6159
04/05	14917 (DEC)	16354	18008	7717
05/06	19552 (AUG)	23886	21221	10508
06/07	23933 (FEB)	21679	27656	7777
MEAN		20011	23926	7686

Stour and Orwell Estuaries SPA

Data provided by the British Trust for Ornithology on behalf of The Wetland Bird Survey.

*These tabulations are based exclusively on data collected as part of the monthly Core Counts.*

*For some species (e.g. wintering geese) data collected by other surveys may be more appropriate for the purpose of site assessment.*

*Missing or unexpectedly low counts for gulls and terns should be treated with caution - counting these groups is optional and determination of count effort not always possible.*

*The Wetland Bird Survey is a partnership between the British Trust for Ornithology, The Wildfowl and Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee, the latter on behalf of Natural England, Scottish Natural Heritage, the Countryside Council for Wales and the Environment and Heritage Service in Northern Ireland.*

**Table2: Five-year average monthly counts of each species.**  
 Figure in parentheses give number of complete and incomplete counts upon which the average is based.  
 Incomplete counts are excluded from calculation where, if included, they would depress the mean.

Species	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Mute Swan	67(5,.)	67(4,1)	70(4,1)	49(4,1)	40(5,.)	33(3,2)	42(3,2)	28(5,.)	48(3,2)	28(5,.)	52(5,.)	68(5,.)
Whooper Swan	0(5,.)	0(5,.)	0(4,1)	1(4,1)	9(2,3)	5(2,3)	5(3,2)	7(5,.)	24(2,3)	5(5,.)	0(5,.)	0(5,.)
Greylag Goose (Icelandic population)	0(3,2)	16(5,.)	52(4,1)	42(5,.)	11(5,.)	0(2,3)	46(5,.)	28(5,.)	42(5,.)	56(5,.)	0(5,.)	0(5,.)
Canada Goose	0(3,2)	55(5,.)	9(4,1)	1(5,.)	10(5,.)	3(5,.)	9(5,.)	0(5,.)	1(2,3)	0(4,1)	0(5,.)	0(5,.)
Barnacle Goose (Greenland population)	0(5,.)	0(5,.)	0(3,2)	2(4,1)	0(2,3)	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(5,.)	0(5,.)
Shelduck	140(3,2)	58(5,.)	38(3,2)	79(4,1)	131(2,3)	131(2,3)	245(2,3)	314(2,3)	405(3,2)	319(4,1)	334(5,.)	310(5,.)
Wigeon	0(5,.)	2(4,1)	295(4,1)	824(3,2)	795(5,.)	893(2,3)	796(3,2)	843(4,1)	665(3,2)	145(5,.)	1(5,.)	3(5,.)
Gadwall	0(5,.)	0(5,.)	0(4,1)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(5,.)	0(3,2)	0(4,1)	0(5,.)	0(5,.)
Teal	16(3,2)	33(5,.)	248(4,1)	348(5,.)	628(5,.)	827(5,.)	589(5,.)	899(5,.)	405(4,1)	274(4,1)	0(5,.)	3(5,.)
Green-winged Teal	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)
Mallard	377(3,2)	617(4,1)	692(4,1)	807(3,2)	494(5,.)	526(4,1)	405(3,2)	448(4,1)	204(3,2)	150(4,1)	163(5,.)	330(5,.)
Pintail	0(5,.)	0(3,2)	2(3,2)	7(4,1)	14(2,3)	18(2,3)	14(2,3)	9(4,1)	4(3,2)	1(5,.)	0(5,.)	0(5,.)
Garganey	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(5,.)
Shoveler	0(3,2)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(4,1)	0(4,1)	0(5,.)	0(4,1)	0(4,1)	0(5,.)	0(5,.)
Hybrid duck	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)
Pochard	0(5,.)	0(5,.)	0(4,1)	0(4,1)	0(5,.)	0(4,1)	0(3,2)	0(4,1)	0(5,.)	0(5,.)	0(5,.)	0(5,.)
Tufted Duck	0(3,2)	0(5,.)	0(3,2)	0(5,.)	0(5,.)	1(4,1)	7(2,3)	1(4,1)	0(2,3)	0(5,.)	0(5,.)	0(5,.)
Scaup	0(5,.)	0(3,2)	0(3,2)	3(4,1)	0(5,.)	1(2,3)	8(2,3)	12(4,1)	29(3,2)	43(4,1)	6(5,.)	0(5,.)
Eider	1274(4,1)	2106(3,2)	2110(1,4)	832(5,.)	1015(5,.)	1471(2,3)	1315(1,4)	895(4,1)	339(1,4)	166(5,.)	113(5,.)	512(5,.)
Long-tailed Duck	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(2,3)	1(2,3)	0(3,2)	1(2,3)	0(2,3)	0(5,.)	0(5,.)	0(5,.)
Common Scoter	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(2,3)	2(2,3)	1(3,2)	0(2,3)	0(3,2)	1(5,.)	0(5,.)	12(5,.)
Goldeneye	5(5,.)	21(5,.)	29(4,1)	14(4,1)	50(2,3)	103(2,3)	118(3,2)	380(4,1)	255(1,4)	105(5,.)	2(5,.)	2(5,.)
Red-breasted Merganser	132(4,1)	95(3,2)	98(3,2)	62(4,1)	50(2,3)	55(2,3)	57(2,3)	96(2,3)	61(,5)	107(5,.)	61(5,.)	65(5,.)
Goosander	0(5,.)	3(4,1)	1(4,1)	1(4,1)	0(5,.)	2(3,2)	2(3,2)	1(5,.)	1(4,1)	2(5,.)	1(5,.)	1(5,.)
Red-throated Diver	2(4,1)	4(3,2)	15(3,2)	48(4,1)	28(2,3)	33(2,3)	110(2,3)	97(2,3)	31(,5)	91(5,.)	28(5,.)	6(5,.)
Black-throated Diver	0(5,.)	0(5,.)	0(3,2)	0(4,1)	0(2,3)	0(4,1)	0(1,4)	0(2,3)	0(1,4)	0(5,.)	0(5,.)	0(5,.)
Great Northern Diver	0(5,.)	0(5,.)	0(3,2)	0(4,1)	0(2,3)	1(2,3)	1(3,2)	0(2,3)	0(2,3)	0(5,.)	0(5,.)	0(5,.)
Little Grebe	1(5,.)	1(4,1)	4(4,1)	9(4,1)	10(5,.)	12(3,2)	8(3,2)	9(5,.)	3(4,1)	1(5,.)	1(5,.)	0(5,.)
Great Crested Grebe	73(4,1)	148(3,2)	140(3,2)	84(4,1)	79(2,3)	79(2,3)	101(3,2)	107(2,3)	34(2,3)	10(5,.)	2(5,.)	6(5,.)
Slavonian Grebe	0(4,1)	0(3,2)	1(3,2)	6(4,1)	9(2,3)	8(2,3)	26(3,2)	38(2,3)	23(2,3)	5(5,.)	0(5,.)	0(5,.)
Cormorant	145(4,1)	285(5,.)	389(1,4)	381(5,.)	236(5,.)	209(4,1)	213(2,3)	138(4,1)	137(2,3)	106(5,.)	69(5,.)	80(5,.)
Shag	18(3,2)	31(5,.)	103(1,4)	92(5,.)	77(2,3)	75(2,3)	151(1,4)	67(4,1)	30(2,3)	35(5,.)	18(5,.)	17(5,.)
Grey Heron	37(5,.)	50(5,.)	57(4,1)	56(4,1)	33(5,.)	36(4,1)	29(4,1)	18(5,.)	8(3,2)	14(5,.)	21(5,.)	25(5,.)
Water Rail	1(5,.)	1(5,.)	2(5,.)	1(5,.)	3(5,.)	2(5,.)	0(5,.)	3(5,.)	1(4,1)	1(5,.)	1(5,.)	1(5,.)
Moorhen	2(5,.)	3(5,.)	1(5,.)	3(5,.)	1(5,.)	2(5,.)	2(5,.)	1(5,.)	1(5,.)	1(5,.)	1(5,.)	0(5,.)
Coot	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(2,3)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)
Oystercatcher	2094(5,.)	2569(4,1)	3310(4,1)	3260(4,1)	3533(5,.)	3169(2,3)	2735(2,3)	2991(2,3)	1907(2,3)	923(5,.)	669(5,.)	897(5,.)
Ringed Plover	22(4,1)	49(5,.)	102(1,4)	44(5,.)	39(5,.)	56(2,3)	32(2,3)	31(4,1)	9(3,2)	24(5,.)	42(5,.)	14(5,.)
Golden Plover	0(5,.)	0(4,1)	1(3,2)	0(4,1)	0(2,3)	0(2,3)	0(3,2)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)
Grey Plover	0(5,.)	0(3,2)	0(3,2)	1(4,1)	0(2,3)	0(2,3)	0(3,2)	1(2,3)	0(2,3)	0(5,.)	0(5,.)	0(5,.)
Lapwing	774(5,.)	898(4,1)	1154(4,1)	1109(5,.)	1725(5,.)	1850(5,.)	1396(5,.)	693(5,.)	16(3,2)	6(4,1)	11(5,.)	268(5,.)
Knot	0(4,1)	17(3,2)	9(3,2)	0(4,1)	1(2,3)	0(2,3)	3(3,2)	1(2,3)	0(2,3)	0(5,.)	0(5,.)	0(5,.)

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**Table2: Five-year average monthly counts of each species.**  
 Figure in parentheses give number of complete and incomplete counts upon which the average is based.  
 Incomplete counts are excluded from calculation where, if included, they would depress the mean.

Species	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Sanderling	0(4,1)	0(3,2)	0(3,2)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(5,.)	0(2,3)	0(4,1)	0(5,.)	0(5,.)
Dunlin	14(4,1)	29(4,1)	41(4,1)	79(4,1)	212(5,.)	284(4,1)	539(1,4)	520(4,1)	1(2,3)	6(4,1)	54(5,.)	1(5,.)
Ruff	0(4,1)	1(5,.)	0(4,1)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)
Jack Snipe	0(5,.)	0(5,.)	0(4,1)	0(5,.)	1(5,.)	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(5,.)	0(5,.)
Snipe	1(5,.)	7(5,.)	30(5,.)	68(5,.)	64(5,.)	72(5,.)	61(5,.)	53(5,.)	29(5,.)	4(5,.)	0(5,.)	0(5,.)
Black-tailed Godwit	2(2,3)	1(5,.)	27(4,1)	7(5,.)	6(5,.)	1(5,.)	0(5,.)	0(5,.)	1(4,1)	12(5,.)	1(5,.)	0(5,.)
Bar-tailed Godwit	1(4,1)	1(3,2)	9(3,2)	2(4,1)	11(2,3)	11(2,3)	15(3,2)	27(2,3)	10(2,3)	6(5,.)	0(5,.)	0(5,.)
Whimbrel	2(4,1)	1(3,2)	0(3,2)	0(5,.)	0(2,3)	0(2,3)	0(3,2)	0(5,.)	0(2,3)	3(4,1)	10(5,.)	0(5,.)
Curlew	1115(4,1)	1663(3,2)	1437(3,2)	1485(4,1)	954(2,3)	1115(2,3)	904(3,2)	1167(2,3)	1218(1,4)	699(5,.)	140(5,.)	312(5,.)
Common Sandpiper	9(5,.)	4(5,.)	1(4,1)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(2,3)	1(5,.)	3(5,.)	4(5,.)
Green Sandpiper	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(5,.)	0(5,.)
Spotted Redshank	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(4,1)	1(5,.)	0(5,.)	0(5,.)
Greenshank	4(5,.)	6(5,.)	10(4,1)	6(4,1)	9(5,.)	8(4,1)	4(4,1)	4(4,1)	2(3,2)	3(5,.)	0(5,.)	0(5,.)
Redshank	359(3,2)	802(5,.)	1137(4,1)	1479(5,.)	1293(5,.)	1713(4,1)	1255(4,1)	1478(4,1)	1088(3,2)	877(4,1)	7(5,.)	20(5,.)
Turnstone	2(4,1)	11(5,.)	11(1,4)	11(5,.)	4(5,.)	11(4,1)	11(2,3)	5(4,1)	7(1,4)	7(5,.)	3(5,.)	0(5,.)
Kittiwake	0(4,1)	0(3,2)	0(4,1)	0(5,.)	0(2,3)	0(2,3)	0(1,4)	0(2,3)	0(1,4)	14(5,.)	0(5,.)	0(5,.)
Black-headed Gull	1383(5,.)	4252(4,1)	2150(3,2)	1380(4,1)	1849(5,.)	2328(3,2)	4323(3,2)	3516(4,1)	1783(3,2)	906(5,.)	361(5,.)	608(5,.)
Common Gull	660(4,1)	1065(3,2)	928(3,2)	378(2,3)	398(2,3)	635(2,3)	871(2,3)	4975(2,3)	587(1,4)	216(5,.)	227(5,.)	331(5,.)
Lesser Black-backed Gull	679(4,1)	565(4,1)	355(3,2)	228(4,1)	29(5,.)	19(5,.)	20(2,3)	94(4,1)	202(2,3)	298(5,.)	261(5,.)	245(5,.)
Herring Gull	463(4,1)	643(4,1)	558(1,4)	395(4,1)	457(4,1)	561(2,3)	353(2,3)	990(2,3)	327(,5)	480(5,.)	317(5,.)	287(5,.)
Great Black-backed Gull	11(5,.)	19(4,1)	27(1,4)	19(5,.)	17(4,1)	17(4,1)	17(1,4)	19(4,1)	11(1,4)	11(5,.)	8(5,.)	7(5,.)
Sandwich Tern	58(4,1)	91(3,2)	39(3,2)	0(4,1)	0(2,3)	0(5,.)	0(5,.)	0(5,.)	0(1,4)	13(4,1)	8(5,.)	6(5,.)
Common Tern	68(5,.)	43(3,2)	0(3,2)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(2,3)	0(5,.)	33(5,.)	60(5,.)
Arctic Tern	0(4,1)	0(5,.)	0(3,2)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(5,.)
Kingfisher	0(5,.)	0(5,.)	1(1,4)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(4,1)	0(5,.)	0(5,.)

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**Table3: Five-year peak monthly counts of each species.**

Species	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Mute Swan	83	116	112	69	85	44	52	50	76	36	82	91
Whooper Swan	0	0	0	2	18	11	9	21	40	24	0	0
Greylag Goose (Icelandic population)	0	33	110	128	33	1	120	115	212	280	0	0
Canada Goose	1	138	32	5	29	12	24	0	2	0	0	2
Barnacle Goose (Greenland population)	0	0	0	12	0	0	0	0	0	0	0	0
Shelduck	166	71	73	132	180	182	263	456	494	420	431	351
Wigeon	0	6	374	1109	913	1029	893	938	732	252	4	6
Gadwall	0	0	0	1	0	1	0	0	0	0	0	0
Teal	45	73	538	463	976	1051	827	1249	590	580	1	12
Green-winged Teal	0	0	0	0	0	0	0	1	0	0	0	0
Mallard	472	688	809	866	576	692	573	651	230	180	212	419
Pintail	0	0	8	14	16	25	28	22	8	6	0	0
Garganey	0	0	0	0	0	0	0	0	0	0	1	0
Shoveler	0	0	0	1	1	1	0	0	0	1	1	1
Hybrid duck	0	0	0	0	0	1	0	0	0	0	0	0
Pochard	0	0	1	0	0	0	0	0	0	0	0	0
Tufted Duck	0	0	0	0	1	3	14	2	1	0	0	0
Scaup	0	0	1	9	1	3	14	17	66	56	29	0
Eider	1627	2616	2657	1030	1452	2054	1315	1349	406	250	149	664
Long-tailed Duck	0	0	0	0	0	1	1	2	0	0	0	0
Common Scoter	0	0	0	0	2	5	2	0	0	4	0	61
Goldeneye	8	43	58	39	82	167	170	655	496	288	6	5
Red-breasted Merganser	252	195	132	87	63	77	63	130	128	176	132	110
Goosander	2	8	4	3	1	5	3	2	3	4	3	6
Red-throated Diver	3	6	19	84	36	40	130	158	115	151	125	22
Black-throated Diver	0	0	0	1	0	0	0	0	0	0	0	0
Great Northern Diver	0	0	0	0	0	1	1	0	0	0	0	0
Little Grebe	2	2	6	24	14	27	12	19	9	2	2	1
Great Crested Grebe	106	163	168	115	93	94	134	128	59	17	7	8
Slavonian Grebe	0	1	3	16	13	14	29	41	45	24	0	0
Cormorant	171	385	429	467	328	247	244	199	159	173	107	98
Shag	25	45	171	165	93	118	151	164	52	67	41	29
Grey Heron	47	83	73	80	42	42	48	25	10	27	31	34
Water Rail	2	2	3	2	13	4	2	10	2	2	3	3
Moorhen	4	5	2	5	3	3	4	3	3	3	2	1
Coot	1	0	0	0	0	0	0	0	0	0	0	0
Oystercatcher	3105	2834	4800	4344	4372	3515	2901	3364	1941	1288	836	1098
Ringed Plover	63	106	102	79	65	95	62	74	10	52	66	24
Golden Plover	0	0	2	0	2	1	0	0	0	0	0	0
Grey Plover	0	0	0	4	1	1	0	2	0	0	0	0
Lapwing	994	1192	1628	1501	2409	2387	1884	1340	43	8	23	414
Knot	0	43	16	0	2	0	8	2	0	0	0	0
Sanderling	0	1	0	0	0	0	0	0	0	1	2	0
Dunlin	50	45	73	145	737	862	610	785	5	23	195	5

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*Table3: Five-year peak monthly counts of each species.*

Species	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<b>Ruff</b>	0	3	1	1	0	0	0	0	0	0	0	0
<b>Jack Snipe</b>	0	0	0	1	3	1	2	2	0	0	0	0
<b>Snipe</b>	3	18	77	91	122	120	101	99	74	8	0	0
<b>Black-tailed Godwit</b>	5	2	61	15	25	5	2	1	2	52	2	0
<b>Bar-tailed Godwit</b>	2	4	15	7	13	16	23	39	22	17	1	0
<b>Whimbrel</b>	5	3	1	0	0	1	0	0	0	11	31	2
<b>Curlew</b>	1329	1994	1717	1925	1119	1397	1403	1546	1218	1239	254	559
<b>Common Sandpiper</b>	23	11	2	0	1	0	0	0	0	3	7	6
<b>Green Sandpiper</b>	0	1	0	0	0	0	0	0	0	0	0	0
<b>Spotted Redshank</b>	0	1	0	0	0	0	1	1	1	1	0	0
<b>Greenshank</b>	11	11	13	10	14	10	8	9	3	7	0	0
<b>Redshank</b>	573	1166	1839	1902	1493	1926	1419	1856	1293	1959	12	35
<b>Turnstone</b>	5	16	35	17	10	17	18	7	10	16	12	0
<b>Kittiwake</b>	1	0	0	2	0	0	0	0	0	53	0	0
<b>Black-headed Gull</b>	2091	8535	2399	1843	2088	2897	5931	4736	2413	1969	568	763
<b>Common Gull</b>	945	1441	1010	515	421	693	1106	7315	587	313	356	486
<b>Lesser Black-backed Gull</b>	1203	663	521	313	41	26	27	270	340	419	531	314
<b>Herring Gull</b>	794	808	894	462	573	862	509	1307	502	1139	393	431
<b>Great Black-backed Gull</b>	16	39	41	41	26	20	24	31	16	16	12	11
<b>Sandwich Tern</b>	157	115	108	0	0	0	0	0	0	44	15	15
<b>Common Tern</b>	102	124	0	0	0	0	0	0	0	1	45	79
<b>Arctic Tern</b>	0	0	0	0	0	0	0	0	0	0	1	0
<b>Kingfisher</b>	0	1	1	1	0	0	0	1	1	0	0	0

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**Table4a: Five-year autumn peak counts, and month in which this was recorded, of each species.**

Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Mute Swan	(116) (AUG)	71 (JUL)	54 (AUG)	(69) (OCT)	83 (JUL)	81
Whooper Swan	0	0	0	0	2 (OCT)	0
Greylag Goose (Icelandic population)	0	18 (AUG)	0	96 (SEP)	128 (OCT)	48
Canada Goose	3 (AUG)	56 (AUG)	138 (AUG)	79 (AUG)	32 (SEP)	62
Barnacle Goose (Greenland population)	0	0	0	(12) (OCT)	0	2
Shelduck	166 (JUL)	(164) (JUL)	132 (OCT)	(83) (JUL)	162 (JUL)	156
Wigeon	1109 (OCT)	597 (OCT)	766 (OCT)	345 (SEP)	(675) (OCT)	704
Gadwall	1 (OCT)	0	0	0	0	0
Teal	270 (OCT)	463 (OCT)	405 (OCT)	230 (SEP)	538 (SEP)	381
Mallard	854 (OCT)	866 (OCT)	(732) (SEP)	775 (SEP)	809 (SEP)	826
Pintail	14 (OCT)	4 (OCT)	(8) (SEP)	(2) (OCT)	8 (OCT)	9
Shoveler	0	(0)	1 (OCT)	(0)	0	0
Pochard	0	0	(1) (SEP)	1 (SEP)	0	0
Scaup	9 (OCT)	0	3 (OCT)	(4) (OCT)	1 (OCT)	3
Eider	(1575) (AUG)	(2657) (SEP)	1539 (AUG)	(1460) (AUG)	2164 (AUG)	2120
Goldeneye	4 (SEP)	32 (AUG)	39 (OCT)	58 (SEP)	45 (SEP)	36
Red-breasted Merganser	132 (SEP)	79 (JUL)	82 (OCT)	252 (JUL)	195 (AUG)	148
Goosander	4 (SEP)	0	3 (OCT)	2 (AUG)	8 (AUG)	3
Red-throated Diver	84 (OCT)	51 (OCT)	22 (OCT)	(15) (OCT)	33 (OCT)	48
Black-throated Diver	0	0	1 (OCT)	0	0	0
Little Grebe	1 (JUL)	4 (SEP)	24 (OCT)	(6) (OCT)	9 (OCT)	10
Great Crested Grebe	(154) (AUG)	(168) (SEP)	160 (AUG)	153 (SEP)	114 (AUG)	150
Slavonian Grebe	3 (OCT)	4 (OCT)	16 (OCT)	0	3 (SEP)	5
Cormorant	387 (OCT)	357 (OCT)	372 (OCT)	(429) (SEP)	467 (OCT)	402
Shag	(171) (SEP)	(138) (SEP)	165 (OCT)	(70) (SEP)	81 (OCT)	139
Grey Heron	80 (OCT)	73 (SEP)	59 (AUG)	83 (AUG)	(72) (OCT)	74
Water Rail	2 (JUL)	2 (AUG)	3 (SEP)	1 (AUG)	2 (JUL)	2
Moorhen	4 (OCT)	5 (OCT)	5 (AUG)	4 (JUL)	2 (SEP)	4
Coot	0	0	0	0	1 (JUL)	0
Oystercatcher	2801 (OCT)	3266 (OCT)	2629 (OCT)	4800 (SEP)	4344 (OCT)	3568
Ringed Plover	(83) (SEP)	72 (AUG)	42 (OCT)	106 (AUG)	102 (SEP)	81
Golden Plover	2 (SEP)	0	0	0	0	0
Grey Plover	0	4 (OCT)	0	0	0	1
Lapwing	1501 (OCT)	1334 (OCT)	1192 (AUG)	849 (SEP)	1628 (SEP)	1301
Knot	2 (SEP)	43 (AUG)	8 (AUG)	10 (SEP)	9 (SEP)	14
Sanderling	0	1 (AUG)	(0)	0	0	0
Dunlin	50 (JUL)	45 (AUG)	145 (OCT)	111 (OCT)	73 (SEP)	85
Ruff	0	3 (AUG)	1 (OCT)	0	1 (SEP)	1
Jack Snipe	0	0	0	0	1 (OCT)	0
Snipe	65 (OCT)	74 (OCT)	68 (OCT)	40 (OCT)	91 (OCT)	68

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**Table4a: Five-year autumn peak counts, and month in which this was recorded, of each species.**

*Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.*

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Black-tailed Godwit	4 (OCT)	26 (SEP)	(5) (JUL)	61 (SEP)	22 (SEP)	28
Bar-tailed Godwit	4 (SEP)	(7) (SEP)	4 (AUG)	7 (SEP)	15 (SEP)	8
Whimbrel	1 (SEP)	3 (AUG)	1 (AUG)	2 (JUL)	5 (JUL)	2
Curlew	1925 (OCT)	1719 (AUG)	1275 (AUG)	1394 (SEP)	1994 (AUG)	1661
Common Sandpiper	11 (AUG)	7 (JUL)	23 (JUL)	4 (JUL)	10 (JUL)	11
Green Sandpiper	0	0	1 (AUG)	0	0	0
Spotted Redshank	0	0	0	1 (AUG)	0	0
Greenshank	10 (SEP)	13 (SEP)	11 (AUG)	6 (OCT)	13 (SEP)	11
Redshank	1233 (OCT)	1259 (OCT)	1902 (OCT)	1414 (SEP)	1839 (SEP)	1529
Turnstone	14 (AUG)	11 (AUG)	17 (OCT)	(35) (SEP)	13 (OCT)	18
Kittiwake	0	0	(1) (JUL)	0	2 (OCT)	1
Black-headed Gull	(2413) (AUG)	4338 (AUG)	(1790) (SEP)	8535 (AUG)	2520 (AUG)	5131
Common Gull	1010 (SEP)	614 (JUL)	1441 (AUG)	881 (SEP)	1271 (AUG)	1043
Lesser Black-backed Gull	492 (JUL)	612 (AUG)	428 (JUL)	663 (AUG)	1203 (JUL)	680
Herring Gull	(894) (SEP)	808 (AUG)	490 (AUG)	519 (AUG)	632 (AUG)	669
Great Black-backed Gull	41 (OCT)	(41) (SEP)	(22) (SEP)	17 (OCT)	17 (SEP)	29
Sandwich Tern	(83) (AUG)	(108) (SEP)	74 (AUG)	157 (JUL)	115 (AUG)	115
Common Tern	70 (JUL)	68 (JUL)	54 (JUL)	45 (JUL)	124 (AUG)	72
Kingfisher	0	1 (AUG)	0	0	1 (SEP)	0

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**Table4b: Five-year winter peak counts, and month in which this was recorded, of each species.** 8

Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Mute Swan	85 (NOV)	50 (FEB)	(29) (JAN)	53 (NOV)	33 (JAN)	55
Whooper Swan	40 (MAR)	(31) (MAR)	2 (DEC)	(7) (DEC)	15 (FEB)	22
Greylag Goose (Icelandic population)	15 (NOV)	16 (JAN)	120 (JAN)	90 (JAN)	212 (MAR)	91
Canada Goose	29 (NOV)	0	21 (JAN)	12 (NOV)	24 (JAN)	17
Shelduck	348 (MAR)	476 (MAR)	300 (MAR)	194 (FEB)	(494) (MAR)	362
Wigeon	938 (FEB)	(1029) (DEC)	834 (DEC)	(1027) (DEC)	908 (FEB)	947
Gadwall	0	0	0	0	1 (DEC)	0
Teal	746 (DEC)	1037 (FEB)	657 (FEB)	1249 (FEB)	1153 (FEB)	968
Green-winged Teal	0	0	0	0	1 (FEB)	0
Mallard	651 (FEB)	692 (DEC)	568 (NOV)	475 (DEC)	538 (DEC)	585
Pintail	28 (JAN)	(25) (DEC)	14 (DEC)	9 (FEB)	12 (NOV)	18
Shoveler	0	0	0	1 (NOV)	1 (DEC)	0
Hybrid duck	0	0	0	1 (DEC)	0	0
Tufted Duck	14 (JAN)	0	(1) (MAR)	3 (DEC)	1 (NOV)	5
Scaup	(35) (MAR)	66 (MAR)	17 (FEB)	8 (FEB)	(22) (MAR)	32
Eider	(997) (JAN)	(2054) (DEC)	697 (DEC)	1349 (FEB)	1662 (DEC)	1441
Long-tailed Duck	(2) (FEB)	(0)	(0)	(0)	1 (DEC)	2
Common Scoter	(5) (DEC)	(2) (NOV)	(0)	(0)	2 (DEC)	4
Goldeneye	(260) (MAR)	(496) (MAR)	130 (MAR)	601 (FEB)	655 (FEB)	471
Red-breasted Merganser	(80) (MAR)	(128) (MAR)	(62) (MAR)	62 (FEB)	130 (FEB)	107
Goosander	1 (NOV)	1 (NOV)	(3) (JAN)	0	5 (DEC)	2
Red-throated Diver	(115) (MAR)	(31) (JAN)	(27) (FEB)	36 (FEB)	158 (FEB)	103
Great Northern Diver	1 (JAN)	(0)	(0)	(0)	1 (DEC)	1
Little Grebe	12 (JAN)	9 (NOV)	12 (DEC)	(27) (DEC)	14 (FEB)	15
Great Crested Grebe	134 (JAN)	(72) (DEC)	54 (DEC)	(88) (DEC)	128 (FEB)	105
Slavonian Grebe	45 (MAR)	(20) (JAN)	4 (DEC)	35 (FEB)	41 (FEB)	31
Cormorant	226 (NOV)	244 (JAN)	328 (NOV)	247 (DEC)	238 (NOV)	257
Shag	93 (NOV)	(73) (DEC)	(35) (NOV)	(73) (DEC)	164 (FEB)	129
Grey Heron	42 (NOV)	41 (DEC)	38 (DEC)	42 (DEC)	48 (JAN)	42
Water Rail	2 (NOV)	2 (MAR)	2 (DEC)	10 (FEB)	13 (NOV)	6
Moorhen	3 (NOV)	4 (JAN)	3 (DEC)	3 (DEC)	3 (JAN)	3
Oystercatcher	4372 (NOV)	(3364) (FEB)	3515 (DEC)	4200 (NOV)	2919 (NOV)	3752
Ringed Plover	(95) (DEC)	(57) (DEC)	60 (DEC)	(53) (DEC)	21 (JAN)	57
Golden Plover	0	(2) (NOV)	(0)	(0)	0	1
Grey Plover	0	(1) (NOV)	(0)	2 (FEB)	0	1
Lapwing	2409 (NOV)	1553 (DEC)	1827 (DEC)	2387 (DEC)	2145 (NOV)	2064
Knot	(2) (FEB)	(2) (NOV)	(0)	8 (JAN)	0	4
Dunlin	(862) (DEC)	(610) (JAN)	468 (FEB)	785 (FEB)	731 (FEB)	712
Jack Snipe	2 (JAN)	0	1 (DEC)	2 (FEB)	3 (NOV)	2
Snipe	101 (JAN)	78 (NOV)	120 (DEC)	79 (FEB)	122 (NOV)	100

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**Table4b: Five-year winter peak counts, and month in which this was recorded, of each species.** 9

*Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.*

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Black-tailed Godwit	2 (JAN)	4 (NOV)	0	25 (NOV)	3 (NOV)	7
Bar-tailed Godwit	(34) (FEB)	(22) (MAR)	(12) (FEB)	39 (FEB)	9 (FEB)	27
Whimbrel	0	(1) (DEC)	(0)	(0)	0	0
Curlew	(1397) (DEC)	(1403) (JAN)	(1100) (MAR)	788 (FEB)	1546 (FEB)	1284
Common Sandpiper	1 (NOV)	0	0	0	0	0
Spotted Redshank	0	0	0	1 (JAN)	1 (JAN)	0
Greenshank	14 (NOV)	10 (NOV)	9 (DEC)	13 (NOV)	10 (DEC)	11
Redshank	(1552) (DEC)	1926 (DEC)	1913 (DEC)	1650 (FEB)	1856 (FEB)	1836
Turnstone	(11) (JAN)	18 (JAN)	9 (NOV)	(8) (JAN)	10 (NOV)	12
Black-headed Gull	5931 (JAN)	4558 (JAN)	3357 (FEB)	(2664) (JAN)	4736 (FEB)	4646
Common Gull	1106 (JAN)	(7315) (FEB)	(1105) (FEB)	1754 (FEB)	5856 (FEB)	4008
Lesser Black-backed Gull	270 (FEB)	175 (MAR)	55 (MAR)	34 (NOV)	(340) (MAR)	175
Herring Gull	573 (NOV)	(1307) (FEB)	(475) (MAR)	1008 (FEB)	654 (FEB)	886
Great Black-backed Gull	28 (FEB)	(31) (FEB)	(24) (JAN)	19 (DEC)	16 (FEB)	24
Kingfisher	0	1 (FEB)	0	0	0	0

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**Table4c: Five-year spring peak counts, and month in which this was recorded, of each species.** 10

Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Mute Swan	91 (JUN)	53 (JUN)	70 (JUN)	59 (MAY)	75 (JUN)	70
Whooper Swan	0	24 (APR)	0	0	0	5
Greylag Goose (Icelandic population)	0	0	2 (APR)	0	280 (APR)	56
Canada Goose	2 (JUN)	0	0	0	(0)	1
Shelduck	351 (JUN)	431 (MAY)	290 (MAY)	341 (MAY)	333 (JUN)	349
Wigeon	41 (APR)	16 (APR)	243 (APR)	252 (APR)	172 (APR)	145
Teal	181 (APR)	59 (APR)	275 (APR)	580 (APR)	(263) (APR)	274
Mallard	303 (JUN)	340 (JUN)	274 (JUN)	316 (JUN)	419 (JUN)	330
Pintail	0	0	6 (APR)	0	0	1
Garganey	0	0	0	0	1 (MAY)	0
Shoveler	0	0	0	0	(1) (APR)	0
Scaup	23 (APR)	32 (APR)	52 (APR)	51 (APR)	(56) (APR)	43
Eider	664 (JUN)	384 (JUN)	504 (JUN)	379 (JUN)	628 (JUN)	512
Common Scoter	61 (JUN)	4 (APR)	0	0	0	13
Goldeneye	10 (APR)	0	159 (APR)	288 (APR)	66 (APR)	105
Red-breasted Merganser	80 (APR)	89 (APR)	81 (APR)	132 (MAY)	176 (APR)	112
Goosander	0	2 (APR)	2 (APR)	6 (JUN)	3 (MAY)	3
Red-throated Diver	32 (APR)	121 (APR)	9 (APR)	151 (APR)	141 (APR)	91
Little Grebe	1 (MAY)	1 (APR)	1 (APR)	2 (APR)	2 (MAY)	1
Great Crested Grebe	7 (JUN)	17 (APR)	9 (APR)	16 (APR)	10 (APR)	12
Slavonian Grebe	0	0	2 (APR)	24 (APR)	0	5
Cormorant	98 (JUN)	173 (APR)	75 (APR)	107 (MAY)	112 (APR)	113
Shag	21 (JUN)	28 (APR)	16 (APR)	49 (APR)	67 (APR)	36
Grey Heron	31 (MAY)	34 (JUN)	20 (JUN)	20 (MAY)	26 (JUN)	26
Water Rail	0	3 (JUN)	0	0	3 (MAY)	1
Moorhen	1 (MAY)	3 (APR)	0	0	3 (APR)	1
Oystercatcher	990 (JUN)	891 (JUN)	1098 (JUN)	864 (APR)	1288 (APR)	1026
Ringed Plover	28 (MAY)	52 (APR)	21 (MAY)	66 (MAY)	42 (MAY)	42
Lapwing	219 (JUN)	285 (JUN)	414 (JUN)	204 (JUN)	220 (JUN)	268
Sanderling	0	1 (APR)	0	0	2 (MAY)	1
Dunlin	5 (MAY)	23 (APR)	5 (JUN)	195 (MAY)	70 (MAY)	60
Snipe	0	3 (APR)	1 (APR)	6 (APR)	8 (APR)	4
Black-tailed Godwit	0	52 (APR)	2 (APR)	2 (APR)	3 (APR)	12
Bar-tailed Godwit	11 (APR)	1 (MAY)	0	0	17 (APR)	6
Whimbrel	2 (APR)	11 (APR)	31 (MAY)	0	16 (MAY)	12
Curlew	680 (APR)	240 (JUN)	1180 (APR)	1239 (APR)	319 (JUN)	732
Common Sandpiper	5 (JUN)	3 (APR)	6 (JUN)	5 (MAY)	7 (MAY)	5
Spotted Redshank	1 (APR)	0	1 (APR)	1 (APR)	1 (APR)	1
Greenshank	0	0	4 (APR)	7 (APR)	5 (APR)	3
Redshank	433 (APR)	124 (APR)	992 (APR)	1959 (APR)	(654) (APR)	877

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**Table4c: Five-year spring peak counts, and month in which this was recorded, of each species.** 11

Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Turnstone	9 (APR)	0	0	8 (APR)	16 (APR)	7
Kittiwake	0	53 (APR)	0	3 (APR)	12 (APR)	14
Black-headed Gull	507 (APR)	794 (APR)	763 (JUN)	1969 (APR)	915 (APR)	990
Common Gull	326 (JUN)	356 (MAY)	358 (JUN)	486 (JUN)	353 (MAY)	376
Lesser Black-backed Gull	419 (APR)	212 (MAY)	271 (APR)	307 (JUN)	531 (MAY)	348
Herring Gull	546 (APR)	1139 (APR)	394 (JUN)	335 (JUN)	359 (MAY)	555
Great Black-backed Gull	12 (APR)	16 (APR)	9 (JUN)	12 (APR)	8 (MAY)	11
Sandwich Tern	7 (APR)	44 (APR)	15 (MAY)	10 (JUN)	15 (JUN)	18
Common Tern	72 (JUN)	44 (MAY)	62 (JUN)	57 (JUN)	79 (JUN)	63
Arctic Tern	0	1 (MAY)	(0)	0	0	0

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**Table5: National and International importance of the site for each species.**

Figures given indicate the percentage of the relevant qualifying level represented by the five year mean peak count for the species in question e.g. 50% indicates that the five year mean peak count is half that required for the site to qualify as nationally or internationally important as appropriate for the species in question. Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question.

Asterisks indicate that the percentage presented has been derived using a value of 1% of the national population that is less than 50 (50 is normally used as a minimum threshold for designation of sites).

Species	Autumn cf National Threshold	Winter cf National Threshold	Spring cf National Threshold	Autumn cf International Threshold	Winter cf International Threshold	Spring cf International Threshold	Autumn 5yr mean of peaks	Winter 5yr mean of peaks	Spring 5yr mean of peaks
Mute Swan	22%	15%	19%	25%	17%	22%	81	55	70
Whooper Swan	0%	39%	9%	0%	10%	2%	0	22	5
Greylag Goose (Icelandic population)	6%	11%	7%	6%	10%	6%	48	91	56
Canada Goose	N/A	N/A	N/A	N/A	N/A	N/A	62	17	1
Barnacle Goose (Greenland population)	1%	0%	0%	1%	0%	0%	2	0	0
Shelduck	20%	46%	45%	5%	12%	12%	156	362	349
Wigeon	17%	23%	4%	5%	6%	1%	704	947	145
Teal	20%	50%	14%	8%	19%	5%	381	968	274
Mallard	23%	17%	9%	4%	3%	2%	826	585	330
Pintail	3%	6%	0%	2%	3%	0%	9	18	1
Tufted Duck	0%	1%	0%	0%	0%	0%	0	5	0
Scaup	4%	42%	57%	0%	1%	1%	3	32	43
Eider	290%	197%	70%	16%	11%	4%	2120	1441	512
Long-tailed Duck	0%	1%	0%	0%	0%	0%	0	2	0
Common Scoter	0%	1%	3%	0%	0%	0%	0	4	13
Goldeneye	14%	189%	42%	0%	4%	1%	36	471	105
Red-breasted Merganser	151%	109%	114%	9%	6%	7%	148	107	112
Goosander	2%	1%	2%	0%	0%	0%	3	2	3
Red-throated Diver	*98%	*210%	*186%	2%	3%	3%	48	103	91
Great Northern Diver	*0%	*3%	*0%	0%	2%	0%	0	1	0
Little Grebe	13%	19%	1%	0%	0%	0%	10	15	1
Great Crested Grebe	94%	66%	8%	4%	3%	0%	150	105	12
Slavonian Grebe	*71%	*443%	*71%	9%	56%	9%	5	31	5
Cormorant	175%	112%	49%	34%	21%	9%	402	257	113
Shag	N/A	N/A	N/A	7%	6%	2%	139	129	36
Grey Heron	N/A	N/A	N/A	3%	2%	1%	74	42	26
Water Rail	N/A	N/A	N/A	0%	0%	0%	2	6	1
Moorhen	0%	0%	0%	0%	0%	0%	4	3	1
Oystercatcher	112%	117%	32%	35%	37%	10%	3568	3752	1026
Ringed Plover	25%	17%	13%	11%	8%	6%	81	57	42
Golden Plover	0%	0%	0%	0%	0%	0%	0	1	0
Grey Plover	0%	0%	0%	0%	0%	0%	1	1	0
Lapwing	7%	10%	1%	7%	10%	1%	1301	2064	268
Knot	1%	0%	0%	0%	0%	0%	14	4	0
Sanderling	0%	0%	0%	0%	0%	0%	0	0	1
Dunlin	2%	13%	1%	1%	5%	0%	85	712	60

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**Table5: National and International importance of the site for each species.**

Figures given indicate the percentage of the relevant qualifying level represented by the five year mean peak count for the species in question e.g. 50% indicates that the five year mean peak count is half that required for the site to qualify as nationally or internationally important as appropriate for the species in question. Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question.

Asterisks indicate that the percentage presented has been derived using a value of 1% of the national population that is less than 50 (50 is normally used as a minimum threshold for designation of sites).

Species	Autumn cf National Threshold	Winter cf National Threshold	Spring cf National Threshold	Autumn cf International Threshold	Winter cf International Threshold	Spring cf International Threshold	Autumn 5yr mean of peaks	Winter 5yr mean of peaks	Spring 5yr mean of peaks
Ruff	*14%	*0%	*0%	0%	0%	0%	1	0	0
Jack Snipe	N/A	N/A	N/A	N/A	N/A	N/A	0	2	0
Snipe	N/A	N/A	N/A	0%	1%	0%	68	100	4
Black-tailed Godwit	19%	5%	8%	6%	1%	3%	28	7	12
Bar-tailed Godwit	1%	4%	1%	1%	2%	1%	8	27	6
Whimbrel	N/A	N/A	N/A	0%	0%	0%	2	0	12
Curlew	111%	86%	49%	20%	15%	9%	1661	1284	732
Common Sandpiper	N/A	N/A	N/A	0%	0%	0%	11	0	5
Spotted Redshank	N/A	N/A	N/A	0%	0%	0%	0	0	1
Greenshank	*183%	*183%	*50%	0%	0%	0%	11	11	3
Redshank	127%	153%	73%	55%	66%	31%	1529	1836	877
Turnstone	4%	2%	1%	1%	1%	0%	18	12	7
Kittiwake	N/A	N/A	N/A	0%	0%	0%	1	0	14
Black-headed Gull	27%	24%	5%	26%	23%	5%	5131	4646	990
Common Gull	12%	45%	4%	5%	20%	2%	1043	4008	376
Lesser Black-backed Gull	136%	35%	70%	12%	3%	6%	680	175	348
Herring Gull	15%	20%	12%	11%	15%	9%	669	886	555
Great Black-backed Gull	7%	6%	3%	1%	1%	0%	29	24	11
Sandwich Tern	N/A	N/A	N/A	7%	0%	1%	115	0	18
Common Tern	N/A	N/A	N/A	4%	0%	3%	72	0	63

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# ***Appendix 10***

## Five year summary for Orwell Estuary - Area 6

### *Table 1: Total Counts - All Species Combined.*

*Peak monthly total = maximum of the sum of the counts of all species within each month.*

*Seasonal peaks = sum of the maximum counts of all species within each season.*

Year	Peak Monthly Total	Autumn Peak	Winter Peak	Spring Peak
02/03	( )	N/C	N/C	N/C
03/04	396 (MAR)	N/C	396	N/C
04/05	987 (NOV)	N/C	1283	129
05/06	1152 (FEB)	411	1331	N/C
06/07	556 (NOV)	0	580	0
MEAN		206	898	65

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**Table2: Five-year average monthly counts of each species.**  
 Figure in parentheses give number of complete and incomplete counts upon which the average is based.  
 Incomplete counts are excluded from calculation where, if included, they would depress the mean.

Species	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Canada Goose			0(1,.)	6(2,.)	0(1,.)	0(2,.)	0(2,.)	15(2,.)	0(1,.)			
Dark-bellied Brent Goose			0(1,.)	55(2,.)	5(1,.)	0(,2)	13(1,1)	40(2,.)	0(,1)			
Shelduck			0(1,.)	16(2,.)	31(1,.)	19(2,.)	37(1,1)	57(2,.)	54(,1)			
Wigeon			88(1,.)	38(2,.)	41(1,.)	51(2,.)	54(2,.)	22(2,.)	0(1,.)			
Mallard			0(1,.)	8(2,.)	11(1,.)	7(2,.)	2(2,.)	3(2,.)	0(1,.)			
Pintail			0(1,.)	0(2,.)	1(1,.)	5(2,.)	2(2,.)	2(2,.)	0(1,.)			
Goldeneye			0(1,.)	0(2,.)	0(1,.)	8(2,.)	2(2,.)	0(2,.)	0(1,.)			
Great Crested Grebe			0(1,.)	3(2,.)	2(1,.)	4(2,.)	2(2,.)	1(2,.)	2(1,.)			
Cormorant			2(1,.)	2(2,.)	0(1,.)	0(2,.)	0(2,.)	0(2,.)	0(1,.)			
Little Egret			1(1,.)	3(2,.)	1(1,.)	1(2,.)	0(2,.)	1(2,.)	0(1,.)			
Moorhen			0(1,.)	0(2,.)	0(1,.)	1(2,.)	0(2,.)	0(2,.)	0(1,.)			
Oystercatcher			2(1,.)	0(2,.)	0(1,.)	0(2,.)	1(2,.)	0(2,.)	0(1,.)			
Golden Plover			0(1,.)	1(2,.)	0(1,.)	0(2,.)	0(2,.)	0(2,.)	0(1,.)			
Grey Plover			0(1,.)	0(2,.)	0(1,.)	1(2,.)	252(2,.)	1(2,.)	0(1,.)			
Lapwing			15(1,.)	25(2,.)	50(1,.)	0(,2)	15(2,.)	1(2,.)	0(1,.)			
Knot			0(1,.)	0(2,.)	0(1,.)	0(2,.)	205(2,.)	60(2,.)	0(1,.)			
Dunlin			0(1,.)	100(2,.)	50(1,.)	4(2,.)	35(2,.)	0(2,.)	0(1,.)			
Ruff			0(1,.)	0(2,.)	0(1,.)	0(2,.)	0(2,.)	2(2,.)	0(1,.)			
Curlew			0(1,.)	287(2,.)	24(1,.)	0(,2)	4(1,1)	100(2,.)	0(1,.)			
Redshank			2(1,.)	35(2,.)	150(1,.)	21(2,.)	22(2,.)	20(2,.)	70(1,.)			
Turnstone			0(1,.)	35(2,.)	80(1,.)	3(2,.)	40(1,1)	35(2,.)	3(,1)			
Black-headed Gull		0(2,.)	150(2,.)	150(2,.)	0(3,.)	63(2,.)	0(2,.)	0(3,.)	0(2,.)			0(1,.)
Common Gull		0(2,.)	0(2,.)	4(2,.)	0(3,.)	2(2,.)	0(2,.)	0(3,.)	0(2,.)			0(1,.)
Herring Gull		0(2,.)	0(2,.)	8(2,.)	0(3,.)	1(2,.)	0(2,.)	0(3,.)	0(2,.)			0(1,.)
Kingfisher			1(1,.)	0(2,.)	0(1,.)	0(2,.)	0(2,.)	0(2,.)	0(1,.)			

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**Table3: Five-year peak monthly counts of each species.**

Species	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Canada Goose			0	11	0	0	0	30	0			
Dark-bellied Brent Goose			0	110	5	0	25	75	0			
Shelduck			0	22	31	27	45	57	54			
Wigeon			88	38	41	56	72	41	0			
Mallard			0	8	11	14	2	6	0			
Pintail			0	0	1	10	2	4	0			
Goldeneye			0	0	0	12	4	0	0			
Great Crested Grebe			0	3	2	4	3	2	2			
Cormorant			2	3	0	0	0	0	0			
Little Egret			1	3	1	1	0	1	0			
Moorhen			0	0	0	2	0	0	0			
Oystercatcher			2	0	0	0	2	0	0			
Golden Plover			0	1	0	0	0	0	0			
Grey Plover			0	0	0	2	500	2	0			
Lapwing			15	50	50	0	30	1	0			
Knot			0	0	0	0	400	120	0			
Dunlin			0	200	50	7	70	0	0			
Ruff			0	0	0	0	0	3	0			
Curlew			0	400	24	0	4	200	0			
Redshank			2	70	150	41	44	40	70			
Turnstone			0	70	80	5	40	39	3			
Black-headed Gull		0	300	300	0	125	0	0	0			0
Common Gull		0	0	8	0	3	0	0	0			0
Herring Gull		0	0	15	0	2	0	0	0			0
Kingfisher			1	0	0	0	0	0	0			

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**Table4a: Five-year autumn peak counts, and month in which this was recorded, of each species.** 4

*Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.*

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Wigeon	N/C	N/C	N/C	88 (SEP)	N/C	88
Cormorant	N/C	N/C	N/C	2 (SEP)	N/C	2
Little Egret	N/C	N/C	N/C	1 (SEP)	N/C	1
Oystercatcher	N/C	N/C	N/C	2 (SEP)	N/C	2
Lapwing	N/C	N/C	N/C	15 (SEP)	N/C	15
Redshank	N/C	N/C	N/C	2 (SEP)	N/C	2
Black-headed Gull	N/C	N/C	N/C	300 (SEP)	0	150
Kingfisher	N/C	N/C	N/C	1 (SEP)	N/C	1

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**Table4b: Five-year winter peak counts, and month in which this was recorded, of each species.** 5

Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Canada Goose	N/C	30 (MAR)	11 (NOV)	0	0	10
Dark-bellied Brent Goose	N/C	75 (MAR)	110 (NOV)	(25) (FEB)	0	62
Shelduck	N/C	57 (MAR)	56 (MAR)	(45) (FEB)	10 (JAN)	42
Wigeon	N/C	2 (MAR)	72 (FEB)	45 (JAN)	56 (JAN)	44
Mallard	N/C	0	11 (DEC)	14 (JAN)	8 (NOV)	8
Pintail	N/C	0	4 (MAR)	10 (JAN)	0	4
Goldeneye	N/C	0	4 (FEB)	12 (JAN)	3 (JAN)	5
Great Crested Grebe	N/C	2 (MAR)	3 (NOV)	4 (JAN)	4 (JAN)	3
Cormorant	N/C	0	3 (NOV)	0	0	1
Little Egret	N/C	0	2 (NOV)	0	3 (NOV)	1
Moorhen	N/C	0	0	2 (JAN)	0	1
Oystercatcher	N/C	0	0	2 (FEB)	0	1
Golden Plover	N/C	0	1 (NOV)	0	0	0
Grey Plover	N/C	0	3 (FEB)	500 (FEB)	0	126
Lapwing	N/C	0	50 (NOV)	(0)	0	17
Knot	N/C	0	120 (MAR)	400 (FEB)	0	130
Dunlin	N/C	0	200 (NOV)	70 (FEB)	0	68
Ruff	N/C	0	3 (MAR)	0	0	1
Curlew	N/C	200 (MAR)	400 (NOV)	(4) (FEB)	173 (NOV)	258
Redshank	N/C	0	150 (DEC)	44 (FEB)	0	49
Turnstone	N/C	30 (MAR)	80 (DEC)	(24) (FEB)	0	37
Black-headed Gull	N/C	0	0	125 (JAN)	300 (NOV)	106
Common Gull	N/C	0	0	3 (JAN)	8 (NOV)	3
Herring Gull	N/C	0	0	2 (JAN)	15 (NOV)	4

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**Table4c: Five-year spring peak counts, and month in which this was recorded, of each species.** 6

*Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question. Incomplete counts are excluded from calculation where, if included, they would depress the mean. When all counts are considered to be incomplete the maximum replaces the mean.*

Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Shelduck	N/C	N/C	(54) (APR)	N/C	N/C	(54)
Great Crested Grebe	N/C	N/C	2 (APR)	N/C	N/C	2
Redshank	N/C	N/C	70 (APR)	N/C	N/C	70
Turnstone	N/C	N/C	(3) (APR)	N/C	N/C	(3)

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**Table5: National and International importance of the site for each species.**

Figures given indicate the percentage of the relevant qualifying level represented by the five year mean peak count for the species in question e.g. 50% indicates that the five year mean peak count is half that required for the site to qualify as nationally or internationally important as appropriate for the species in question. Where a count is enclosed by parentheses this indicates that it was considered incomplete i.e. those parts of the site not visited typically holds at least 25% of the species in question.

Asterisks indicate that the percentage presented has been derived using a value of 1% of the national population that is less than 50 (50 is normally used as a minimum threshold for designation of sites).

Species	Autumn cf National Threshold	Winter cf National Threshold	Spring cf National Threshold	Autumn cf International Threshold	Winter cf International Threshold	Spring cf International Threshold	Autumn 5yr mean of peaks	Winter 5yr mean of peaks	Spring 5yr mean of peaks
Canada Goose	N/A	N/A	N/A	N/A	N/A	N/A	0	10	0
Dark-bellied Brent Goose	0%	6%	N/A	0%	3%	N/A	0	62	(0)
Shelduck	0%	5%	N/A	0%	1%	N/A	0	42	(54)
Wigeon	2%	1%	0%	1%	0%	0%	88	44	0
Mallard	0%	0%	0%	0%	0%	0%	0	8	0
Pintail	0%	1%	0%	0%	1%	0%	0	4	0
Goldeneye	0%	2%	0%	0%	0%	0%	0	5	0
Great Crested Grebe	0%	2%	1%	0%	0%	0%	0	3	2
Cormorant	1%	0%	0%	0%	0%	0%	2	1	0
Little Egret	N/A	N/A	N/A	0%	0%	0%	1	1	0
Moorhen	0%	0%	0%	0%	0%	0%	0	1	0
Oystercatcher	0%	0%	0%	0%	0%	0%	2	1	0
Grey Plover	0%	24%	0%	0%	5%	0%	0	126	0
Lapwing	0%	0%	0%	0%	0%	0%	15	17	0
Knot	0%	5%	0%	0%	3%	0%	0	130	0
Dunlin	0%	1%	0%	0%	1%	0%	0	68	0
Ruff	*0%	*14%	*0%	0%	0%	0%	0	1	0
Curlew	0%	17%	0%	0%	3%	0%	0	258	0
Redshank	0%	4%	6%	0%	2%	3%	2	49	70
Turnstone	0%	7%	N/A	0%	2%	N/A	0	37	(3)
Black-headed Gull	1%	1%	0%	1%	1%	0%	150	106	0
Common Gull	0%	0%	0%	0%	0%	0%	0	3	0
Herring Gull	0%	0%	0%	0%	0%	0%	0	4	0
Kingfisher	N/A	N/A	N/A	N/A	N/A	N/A	1	0	0

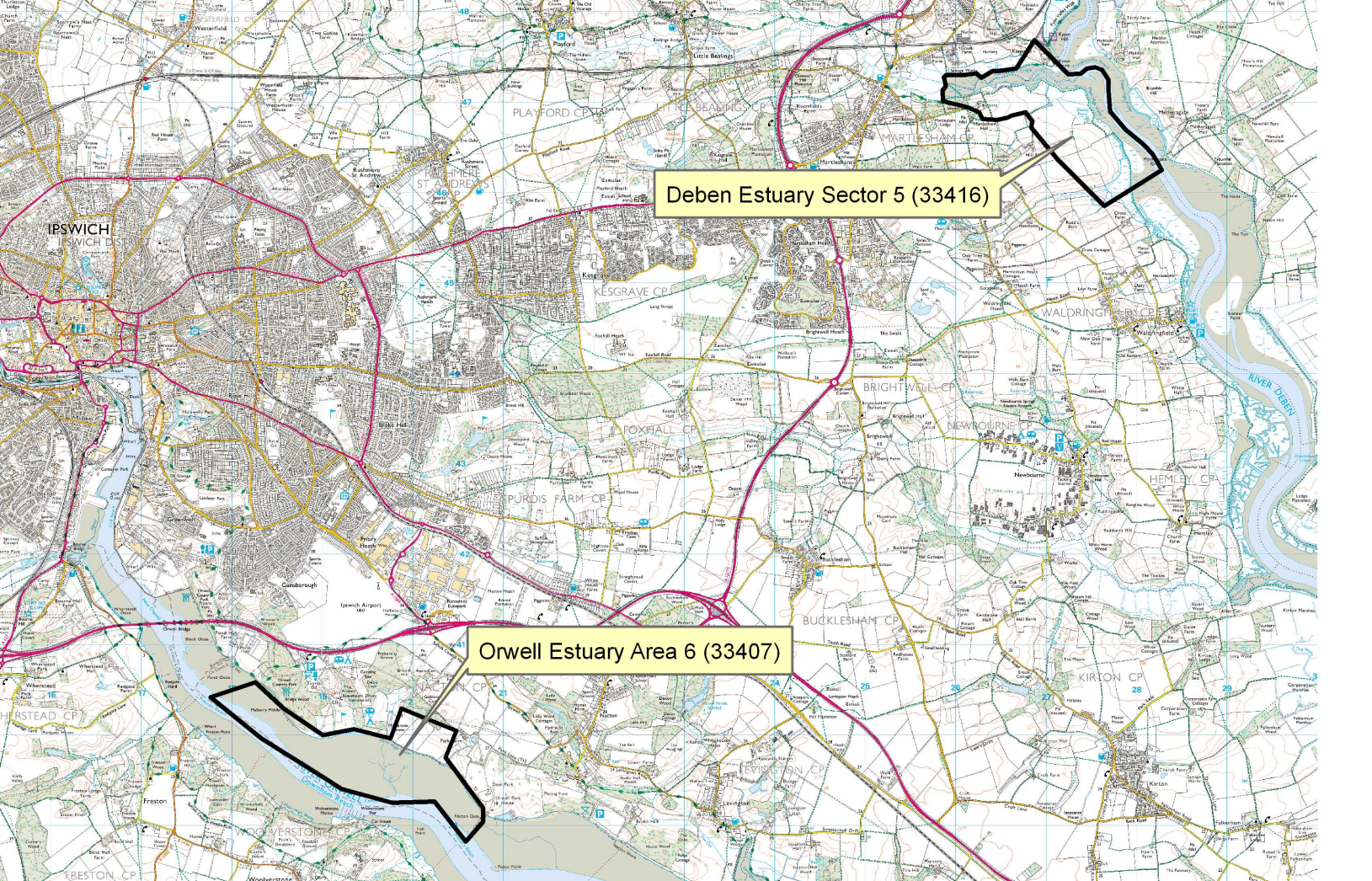
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Deben Estuary Sector 5 (33416)

Orwell Estuary Area 6 (33407)

# **Appropriate Assessment Addendum**

for

Ipswich Borough Council  
Core Strategy and Policies

**7<sup>th</sup> September 2009**





## Quality control

### Appropriate Assessment Addendum

for

Ipswich Borough Council  
Core Strategy and Policies

Checked by Project Manager:	Approved by:
Signature: 	Signature: 
Name: Nicholas Sibbett	Name: Simon Neesam
Title: Senior Ecologist	Title: Associate Director
Date: 7 <sup>th</sup> September 2009	Date: 7 <sup>th</sup> September 2009

The Landscape Partnership is registered with the Landscape Institute, the Royal Town Planning Institute, and is a member of the Institute of Environmental Management and Assessment

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***Part 1: text***



# 1 Revisions to the Core Strategy and Policies

## Introduction

- 1.1.1 In July 2009, Ipswich Borough Council published a draft Proposed Submission Core Strategy and Policies. The development plan document sets out a strategic vision and objectives to guide the development of Ipswich, it promotes a strategic approach to the development of the town, and provides a suite of policies to control, manage and guide development. During July and August 2009 an Appropriate Assessment of the Proposed Submission Core Strategy and Policies was made by The Landscape Partnership, following comments from Natural England. The Appropriate Assessment recommended several mitigation measures to allow a conclusion of no adverse effect upon the integrity of European sites.
- 1.1.2 The July 2009 version of the Core Strategy and Policies was subsequently superseded by the final Proposed Submission Core Strategy and Policies, which was published in September 2009 for consideration by Ipswich Borough Council's Council meeting on 9<sup>th</sup> September 2009. There were some modifications to the Proposed Submission Core Strategy and Policies, which consequently requires modifications to be made to the Appropriate Assessment.
- 1.1.3 This addendum identifies the relevant changes that have been made to the Proposed Submission Core Strategy and Policies between the July draft and the September final version, and revisions are accordingly made to the Appropriate Assessment. All changes from the July draft to the September 2009 Proposed Submission Core Strategy and Policies are listed in Appendix 1.
- 1.1.4 It is suggested that the Appropriate Assessment and both versions of the Proposed Submission Core Strategy and Policies are available for reference whilst reading this addendum.

## Use of terminology

- 1.1.5 The Appropriate Assessment follows the terminology of the Conservation (Natural Habitats &c.) Regulations 1994 as amended, to make it clear that those particular parts of the legislation are being addressed.. An extract of this is given in Section 1.2 of the Appropriate Assessment. The first part of the assessment process is to decide whether or not the plan has a 'likely significant effect' under regulation 85B (1)(a). The final part of the assessment is a conclusion as to the impacts of the plan on European sites. Section 85B(4) says that 'the Secretary of State shall give effect to the land use plan only after having ascertained that it will not adversely affect the integrity of the European site'.

## Modification to the Proposed Submission Core Strategy and Policies

- 1.1.6 The following paragraphs identify the changes to the September 2009 Proposed Submission Core Strategy and Policies that change the policies that were assessed, change other policies that then require consideration, and/or require revisions to the Appropriate Assessment dated 1 September 2009.
- 1.1.7 Checks of housing completions have resulted in a minor change to housing numbers in Policy CS7 and the accompanying Table 2. Twenty fewer units with planning permission exist (discounted numbers) than in the previous version, so as a result the allocation of new site allocations increases by 20 from 4983 to 5003.
- 1.1.8 Policy CS13 Planning for Jobs Growth is modified by widening the promotion of sustainable economic growth from 'Ipswich' to the 'Ipswich Policy Area'. It is also modified by revisions to the process of working with local partners.

- 1.1.9 Policy CS16 has been modified in accordance with mitigation recommendations in the Appropriate Assessment dated 1<sup>st</sup> September 2009. The revised Policy CS16, is

**Policy CS16 Green Infrastructure, Sport and Recreation**

**The Council will protect, enhance and extend the network of green corridors, open spaces, sport and recreation facilities for the benefit of biodiversity, people and the management of local flood risk. It will do this by:**

- a. requiring all developments to contribute to the provision of open space according to the Borough's standards, identified strategic needs and existing deficits or surpluses in an area;
- b. requiring major new developments to include on site public open spaces and wildlife habitat. On-site provision must create a network or corridor with existing green infrastructure where such a network exists beyond the site boundaries;
- c. supporting proposals or activities that protect, enhance or extend open spaces and sport and recreation facilities;
- d. working with partners to prepare and implement management plans for green spaces, including visitor management plans for key parts of European sites within the Suffolk Coast and Heaths AONB to be completed by 2015, and a plan for Orwell Country Park that will result in a reduced impact upon birds in the Orwell Estuary;
- e. supporting the Greenways Project in working with communities and volunteers to manage green corridors in Ipswich;
- f. working with partners to improve green infrastructure provision and link radial green corridors with a publicly accessible green rim around Ipswich;
- g. working with partners to ensure the provision of a new country park in the urban fringe of north eastern Ipswich (e.g. within any Northern Fringe development – see Policy CS10);
- h. promoting improved access to existing facilities where appropriate, e.g. through Building Schools for the Future; and
- i. reviewing the town's estate of sports facilities to consider how they can best meet the needs of a growing population.

**The IP-One Area Action Plan and Site Allocations and Policies development plan document will identify open spaces, sport and recreation facilities and green corridors.**

**This policy links closely to policy CS20, as part of the standard charge payable in association with new developments will relate to the provision of strategic green infrastructure for the town.**

- 1.1.10 Policy CS16 (b) now requires major developments to include wildlife habitats in open space, and to link new green infrastructure with existing networks beyond the site boundaries.
- 1.1.11 Policy CS16 (d) gives a stronger commitment to management plans for green spaces, and in particular the need for visitor management plans for key European sites within the Suffolk Coast and Heaths AONB and a plan for Orwell Country Park which results in a reduced impact on birds in the Orwell Estuary.
- 1.1.12 Policy CS16 (g) gives a firmer commitment to creation of a new Country Park in the north eastern fringe of Ipswich.
- 1.1.13 Paragraph 8.185 has been amended to recognise the potential impact to European sites outside Ipswich Borough and emphasises a firm commitment to the mitigation in Policy CS16 (d) and (g).
- 1.1.14 Changes to Policy CS20 give the wider context of a proposed Wet Dock crossing and an aspiration to reduce car dependency in Ipswich.

- 1.1.15 There are minor changes to Policy DC4 Development and Flood Risk for clarity.
- 1.1.16 There are minor changes to Policy DC15 Travel Demand Management for clarity.
- 1.1.17 No other changes to the Proposed Submission Core Strategy and Policies have been made which are likely to have a significant effect upon a European nature conservation site.

## 2 Revision to the Appropriate Assessment

### Revision to the assessment of individual policies

- 2.1.1 This section reviews the changes to the Core Strategy and Policies identified above. Changes to the Appropriate Assessment are shown as underlined text.
- 2.1.2 Changes of housing numbers in Policy CS7 and accompanying table 2 is a net change of no housing units; 20 fewer existing permissions and 20 further allocations result in no overall change. The assessment considers the combination of existing permissions and allocations so no change is required to the calculations in Section 5 or to the assessments in Section 6 of the Appropriate Assessment. The footnote to the Appropriate Assessment Table 3, regarding housing numbers, (footnote 7) is revised to 'Comprises 2552 dwellings with planning permission but not constructed at April 2009, 636 dwellings with a resolution to grant planning permission at April 2008, 5003 new allocations to 2021 and 3320 new allocations 2021 – 2025 (IBC Core Strategy and Policies)'.
- 2.1.3 The modifications to Policy CS13 make no difference to the location or amount of land allocated for employment within Ipswich Borough. No changes are needed to the Appropriate Assessment.
- 2.1.4 The modifications to Policy CS16 are as recommended in the Appropriate Assessment, so that there is confidence that the required mitigation is carried out. The conclusions of the assessment of Policy CS16 itself require no change, but paragraphs 6.4.8 and 6.4.9 require change to recognise the strengthening of the commitment to undertake mitigation.
- 2.1.5 Paragraphs 6.4.8 and 6.4.9 of the Appropriate Assessment dated 1<sup>st</sup> September 2009 are revised to
- 6.4.8 Policy CS16b requires major new developments to include on-site green spaces, to create a network 'where possible' connecting with existing green space. At a strategic level, it is considered that this is a moderately strong policy to create on-site walks through greenspace for new developments. Following an earlier draft of this appropriate assessment, the need for mitigation for impacts of increased housing (see Section 7) were recognised. Policy CS16 paragraphs b, d, f, & g all include elements of mitigation. In particular, the inclusion of the need for a new country park, and visitor management plans for European sites including Orwell Country Park is a direct iterative response to issues raised in this assessment. Improvements to the Gipping river side walk upstream of Ipswich town centre are encompassed in CS16 (e).
- 6.4.9 It is considered that the policy when implemented will provide the mitigation needs for housing growth; there is a full commitment to implementation within the policy and within supporting paragraph 1.185.
- 2.1.6 It is considered that changes to Policy CS20 make no substantive change to the impacts on any European site from that policy and so no changes are needed to the Appropriate Assessment.
- 2.1.7 Minor changes to Policy DC4 Development and Flood Risk, and to Policy DC15 Travel Demand Management make no substantive change to the impacts on any European site and so no changes are needed to the Appropriate Assessment.

### Revision to the mitigation measures and conclusions

- 2.1.8 The mitigation measures and conclusions are altered by the revised Policy CS16. In summary, the revised Policy CS16 is considered to include all the mitigation previously recommended by the Appropriate Assessment. Sections 7.1 and 7.2 of the Appropriate Assessment remain unchanged, but the content of section 7.3 is deleted and replaced with
- 7.3.1 Policy CS16 sets out the Council's firm commitment, at a strategic level, for appropriate greenspace management and provision, including visitor management on European sites, the visitor management plan for Bridge Wood and other parts of Orwell Country Park, and

a new Country Park north-east of Ipswich. Policy CS16 does not go into operational detail about how the mitigation will be implemented, but gives confidence that it will be implemented.

7.3.2 The timing of mitigation should be related to the speed of housing provision. Different parts of the mitigation can be implemented at different speeds; for example improvements to visitor facilities at Bridge Wood and any other parts of Orwell Country Park can be initiated reasonably quickly, whilst it will take a little longer to establish a new Country Park. However, the mitigation will be complete by the end of the plan period.

7.3.3 It is considered that the mitigation in Section 7.2 will be implemented through Policy CS16 to suitable standards. The impacts of additional housing provisions in Policies CS7 / CS9 / CS10, alone or in combination with provision in the Suffolk Coastal District Core Strategy and Development Management Strategy, will be reduced to an insignificant level. It is ascertained that, with the proposed mitigation, the Proposed Submission Core Strategy and Policies (Policy CS7 / CS9 /10) will have no adverse effect upon the integrity of any European site.

### Revision to the conclusions of the appropriate assessment

2.1.9 The conclusions of the Appropriate Assessment require amending to account for Policy CS16 providing the recommended mitigation. The content of Section 8.1 is deleted and replaced with

8.1.1 It is ascertained that the Proposed Submission Core Strategy and Policies (Policies CS7 / CS9 / CS10) has no adverse affect upon the integrity of a number of European sites.

8.1.2 There is predicted to be increased visitor pressure on those sites arising from the scale and broad location of housing growth. However, a firm commitment is made to the necessary mitigation in Policy CS16, to reduce increases in visitor pressure by providing alternative recreational opportunities and better management of existing European sites. The impacts of additional housing provisions in Policies CS7 / CS9 / CS10, alone or in combination with provision in the Suffolk Coastal District Core Policy and Development Management Strategy, will be reduced to an insignificant level. It is ascertained that, with the proposed mitigation, Policies CS7 / CS9 / CS10 will have no adverse affect upon the integrity of any European site.

2.1.10 Sections 8.2 – 8.5 of the Appropriate Assessment are unchanged.

2.1.11 Section 8.6, the final conclusions of the assessment requires amending to account for the necessary mitigation being provided. The content of Section 8.6 is deleted and replaced with:

### 8.6 Final conclusion

8.6.1 It is ascertained that the Proposed Submission Core Strategy and Policies (Policies CS7 / CS9 / CS10) will not have an adverse affect upon the integrity of any European site, alone and in combination with the Suffolk Coastal District Core Strategy and Development Management Strategy. There is a firm commitment to the mitigation proposed that will reduce the impact of housing growth to an insignificant level and enable this conclusion.







## ***Part 2: Appendices***



**Appendix 1** Changes from the July 2009 to the September 2009 version of the Proposed Submission Core Strategy and Policies. Supplied by Ipswich Borough Council.

Policy or paragraph reference	Change	Reason
Foreword	Consultation deadline added in accordance with dates set out in Council report	For clarity
Contents page	Page numbers updated and list of appendices amended	For clarity
Part A The Context		
Paragraph 3.1	Added reference to new appendix 2	For clarity
Paragraph 5.25	Added map of deprivation distribution	For illustrative purposes
Paragraph 5.27	Amended summary for Whitton	Correction
Part B The Strategy		
Paragraph 6.7 Vision	Added reference to historic character	To reflect Ipswich's unique combination of historic and modern development, as requested by English Heritage
Paragraph 6.8 Objective 3	Housing figure for 2025 amended and reference added to Ipswich Policy Area	To ensure objectives correspond with Policies CS7 and CS13.
Paragraph 6.13	Reference added to flood zone 2, and highly vulnerable development.	To better reflect PPS25, as requested by Environment Agency.
Paragraph 8.14	Date added for production of SPD <sup>1</sup> .	To provide detail to support the implementation of the policy as soon as it is adopted.
Policy CS2 Location of Development Clause g.	Added <i>very</i> high quality architecture	To reflect Council's aspiration for excellent design, and ensure policy corresponds with Policy DC5.
Paragraph 8.36	New paragraph added about urban characterisation.	To flag up urban characterisation exercise as a means to ensure that local character is enhanced through new development.
Paragraph 8.39	Reference added to the AONB, a small part of which is in Ipswich Borough.	For completeness.
Paragraph 8.43	Text added referring to the preparation of an SPD if one is needed.	To address current uncertainty around revisions to PPG15 and PPG16 about the historic environment.
Paragraph 8.52	Reference added to adopting the	To assist the retention of such

<sup>1</sup> SPD is a supplementary planning document.

## Changes from the July 2009 to the September 2009 version of the Proposed Submission Core Strategy and Policies

	revised local list as SPD.	buildings.
Policy CS5 Improving Accessibility	Reference added to prioritising introduction of a cycle network.	To make explicit reference to the Council's commitment to cycling.
Table 2 Housing Land Supply and table notes	Amendments to figures – housing requirement 2009 to 2021 now 5,003 dwellings.	Arising from further checks of completions data
Policy CS7 Amount of New Housing	Amendment to housing requirement	As for Table 2 above.
Policy CS8 Balance between flats and houses	Reference added to the Housing Needs Study and Strategic Housing Market Assessment	To provide the context for considering the appropriate housing mix in schemes.
Paragraph 8.99	Figure updated to 2009	To bring it up to date.
Policy CS10 Ipswich Northern Fringe, and explanation	Third paragraph of policy changed so that preparation of the SPD would begin when the Core Strategy is adopted.  New paragraph 8.107 added.  Paragraph 8.108 amended (was previously para 8.107).  Paragraph 8.114 (new numbering – was previously 8.113) amended  Previous paragraph 8.114 deleted.	To ensure that a coherent, detailed plan for the development of the area is put in place ahead of any potential development.  } } To clarify the Council's approach to RSS review }  To explain why the SPD work needs to start sooner.  Superseded by replacement text.
Policy CS12 Affordable Housing, and explanation	Addition of reference to floorspace in the policy.  Target for larger developments increased to 40%.  Requirement for rented tenure increased to 80%  Corresponding changes to the explanatory text in paragraphs 8.126, 8.129, and 8.131.	To clarify how the policy will be applied.  To meet need in Ipswich and ensure the overall regional figure of 35% is achieved, taking account of smaller developments also.  To reflect the level of need identified in the Housing Needs Study.  For clarity regarding changes to the policy.
Policy CS13 Planning for Jobs Growth	Reference included to the Ipswich Policy Area.  Clause f. revised to include reference to a delivery plan.	To reflect the recommendation of the Employment Land Review for a joint approach at the Ipswich fringe – already referred to in paragraph 8.141. To ensure implementation of sustainable economic growth measures.
Policy CS14 Retail	More information provided about	For clarity.

## Changes from the July 2009 to the September 2009 version of the Proposed Submission Core Strategy and Policies

Development	extension to Central Shopping Area.	
Paragraph 8.160	New paragraph added.	To address problem of vacant units.
Paragraphs 8.164 and 8.165	Combined	To maintain previous paragraph numbering as far as possible.
Policy CS16 Green Infrastructure, Sport and Recreation	Amendments to clauses b, d and g and correspondingly to paragraph 8.185.	To reflect the findings of the Appropriate Assessment and clarify the Council's commitment to working with others to mitigate potential impacts arising from growth.
Paragraph 8.211	Reference added to residual risks.	To better reflect PPS25, as requested by the Environment Agency.
Paragraph 8.215	Sentence added about the Level 2 SFRA.	To clarify the situation if the tidal barrier did not get built, as requested by the Environment Agency.
Paragraph 8.216	Reference added to plan objectives.	For consistency.
Paragraph 8.221 (was 8.220)	Reference added to Strategic Housing Land Availability Assessment findings.	To make the link to the evidence base document about the site's suitability, availability and deliverability.
Paragraph 8.226 (was 8.225)	Amended to refer to planned crossings on the Star Lane gyratory.	To explain measures already in the pipeline to improve physical integration.
Paragraph 8.227 (was 8.226)	Last sentence of previous paragraph deleted.	Pre-empts/repeats the policy.
Policy CS20 East-West transport Capacity, and explanation	<p>Substantial amendments throughout:</p> <p>Reference to reducing car dependency included in first paragraph;</p> <p>Reference to Wet Dock Crossing as one of a package of measures included in second paragraph;</p> <p>Reference to traffic management added to clause d.</p> <p>Reference to local movement in north Ipswich added to seventh paragraph; and</p> <p>New additional eighth paragraph added about rail freight.</p> <p>Also corresponding changes to the explanation paragraphs following the policy.</p>	<p>To tie in with the Ipswich Major Scheme.</p> <p>To provide wider context for possible Wet Dock Crossing.</p> <p>To provide wider context for any schemes to increase road capacity.</p> <p>To recognise all the functions a northern bypass could perform.</p> <p>To protect the line of the 'Bacon Chord' rail link.</p> <p>To reflect the changes made to the policy.</p>

## Changes from the July 2009 to the September 2009 version of the Proposed Submission Core Strategy and Policies

Paragraph 8.235 (was 8.233)	Reference added to route not passing between Ipswich and Westerfield.	To address concern raised at Executive 21/07/09
Part C Development Control Policies		
Policy DC2 Decentralised Renewable or Low Carbon Energy	Policy amended to explain the approach if 15% is not viable or feasible.	To clarify that some measures will still be expected even if 15% renewables or low carbon cannot be achieved.
Paragraph 9.20	Text added to explain that efficiency measures may also be acceptable if 15% renewables or low carbon cannot be achieved.	To explain policy and ensure flexibility of approach
Policy DC3 Private Outdoor Amenity Space	'Existing' added to policy title.	To clarify that the requirements would also apply to existing gardens where subdivided. Requested by Planning & Development Committee.
Paragraph 9.25	Sentence added about soakaways.	For clarity as soakaways may need larger garden spaces than the minimum.
Paragraph 9.26	Added 'will normally be required' in first sentence.  Added reference to the Development Control Policies and Guidelines and to existing gardens affected by severance.	For clarity.  To explain that the standards apply equally to gardens where subdivided and clarify that normal space standards apply.  Changes requested by Planning & Development Committee.
Policy DC4 Development and Flood Risk	'... all forms of...' added to clause a.	For clarity
Paragraph 9.32	Sentence added about flood zone 3b.	For clarity and as requested by the Environment Agency.
Paragraph 9.33	Sentence added about site specific FRAs.	For clarity and as requested by the Environment Agency.
Paragraph 9.35	Reference added to surface water.	For clarity.
Paragraph 9.37	Sentence added about the source of various standards.	For clarity and as requested by the Environment Agency.
Paragraph 9.40	Sentence added about site specific FRAs.	For clarity and as requested by the Environment Agency.
Paragraph 9.41	Reference added to Level 2 SFRA.	For clarity.
Policy DC5 Urban Design Quality	Added '... for all users ...' to clause a.	For clarity

## Changes from the July 2009 to the September 2009 version of the Proposed Submission Core Strategy and Policies

	<p>Clause f. 'very' added.</p> <p>New clause h. added about Air Quality Management Areas.</p>	<p>To reflect requirement for very good architecture. Changes requested by Planning &amp; Development Committee</p> <p>To ensure design and layout takes account of air quality.</p>
Paragraph 9.45 (was 9.44)	Added reference to public realm being friendly to all users.	To support change to policy and for clarity. Requested by Planning & Development Committee
Paragraph 9.48 (was 9.47)	Sentence added about street clutter.	To ensure this is considered in design and layout. Requested by Planning & Development Committee
Paragraph 9.52 (was 9.51)	Sentence added about the Council's Development Control Policies and Guidelines.	For clarity that these standards will also apply. Requested by Planning & Development Committee
Paragraph 9.57 (was 9.56)	Sentences added about maximising greening and incorporating biodiversity measures.	To clarify the Council's expectation of greener developments, and as requested by Planning & Development Committee
New Paragraph 9.58	New paragraph added explaining the air quality addition to the policy.	For clarity.
Policy DC6 Tall Buildings	New clause k. added about the setting of listed buildings.	For completeness and to address the relationship between the historic core of Ipswich and taller buildings at its fringes.
Paragraph 9.59 (was 9.57)	Sentence added to explain change to policy.	For clarity.
Paragraph 9.60 (was 9.58)	Requirement added to have regard to CABA guidance.	For completeness.
Policy DC7 Public Art, and explanation	Rewording of start of policy and explanation.	To add some flexibility around the application of the policy. Requested by Planning & Development Committee
Paragraph 9.65 (was 9.63)	Sentence added about contributions.	For clarity about operation of the policy.
Policy DC10 Protection of Trees	<p>Hedgerows added to title.</p> <p>Hedgerows also added to third paragraph.</p> <p>Clause e. changed to two for one</p>	<p>For completeness.</p> <p>To ensure hedgerows on development sites enjoy protection also.</p> <p>To compensate for loss of</p>



## Changes from the July 2009 to the September 2009 version of the Proposed Submission Core Strategy and Policies

	replacement planting.	mature trees and time taken for new trees to grow.  Requested by Planning & Development Committee
Paragraph 9.75	New paragraph added about off site planting and management plans.	To explain the changes to the policy and its implementation. Requested by Planning & Development Committee
Policy DC12 Extensions	First line amended to refer to extensions.  Clause d also amended to refer to extensions.	For clarity.
Policy DC13 Small Scale Infill	Policy re-cast to emphasise that development will only be permitted if all the criteria are satisfied.	To ensure that the quality of such developments can be controlled. Requested by Planning & Development Committee
Paragraph 9.83	New paragraph added about remnant garden remaining after severance and the Council's space standards.	See DC 13 above.
DC14 Subdivision of Family Homes	Policy amended to say ... will be permitted provided that ... and corresponding changes to wording of clauses.  Clause a amended to cross refer to the parking standards.	For consistency with other development control policies, and clarity.
Paragraph 9.86 (was 9.82)	Reference added to protecting amenity through the layout.	To explain how the policy will be implemented. Requested by Planning & Development Committee
Paragraph 9.87	New paragraph added about the broad proportion of HMOs in an area.	To explain how the policy will be implemented.
Policy DC15 Travel Demand Management	Reference added to 'dedicated' cycle routes, and 'safe and convenient' access to public transport.	For clarity. Requested by Planning & Development Committee
Policy DC16 Sustainable Transport Modes	In clause a, 'good' changed to 'safe and convenient'.	For clarity. Requested by Planning & Development Committee
Policy DC17 Transport and Access in New Developments	New clause added regarding bus priority measures and dedicated cycle routes.	For completeness and to ensure that developments support sustainable travel choices. Requested by Planning & Development Committee
Paragraph 9.106 (was 9.101)	Reference added to strategic measures for cycling.	For completeness.

## Changes from the July 2009 to the September 2009 version of the Proposed Submission Core Strategy and Policies

DC20 Central Shopping Area	References to 'non-A1 retail' changed to 'A2-A5'.	For clarity.
Paragraph 9.114 (was 9.110)	Three local centres deleted from the list: Clapgate Lane, Norfolk Road / Suffolk Road/Tuddenham Avenue and Grove Lane.	The centres no longer perform a local centre function (for example because they have lost their shops).
Paragraph 9.130 (was 9.126)	Paragraph simplified and amended.	For clarity and consistency with Policy CS12.
Paragraph 9.131 (was 9.127)	Explanation added about clusters of affordable homes.	For clarity and to support the implementation of the policy. Requested by Planning & Development Committee
Policy DC27 Protection of Amenity	References to 'serious' amended to 'significant.'	To ensure that amenity is adequately protected and for consistency with explanation. Requested by Planning & Development Committee
Policy DC30 Provision of New Open Space etc.	'Public' added to policy title and throughout policy and explanation.  15% added to second paragraph of policy.  Third paragraph of policy amended slightly – 'will be sought...'	To clarify that open spaces and sport and recreation facilities are expected to be available for public use.  Higher density developments need more on site green space provision. Requested by Planning & Development Committee.  For clarity. Requested by Planning & Development Committee
Paragraph 9.149	Additions made consequent to the changes to the policy.  Reference added to linking habitat to existing green networks.  Requirement added for management plans for planting proposals.	For clarity.  To maximise benefits and link to Policy CS16.  To ensure planting thrives.  Requested by Planning & Development Committee
Paragraph 9.150 (was 9.146)	Reference added to private garden space.	For clarity.
Paragraph 9.155	New paragraph added setting out minimum residential floorspaces that developers will be encouraged to achieve.	To ensure the high quality of new development in the town. Requested by Planning & Development Committee
Paragraph 9.161	Sentence added about	For completeness.

## Changes from the July 2009 to the September 2009 version of the Proposed Submission Core Strategy and Policies

(was 9.156)	management plans for facilities.	Requested by Planning & Development Committee
Part D Implementation, Targets, Monitoring, Review		
Table 8	Minor corrections	For accuracy.
Part E Appendices		
New Appendix 2 added	To explain which saved policies will eventually be replaced by the Core Strategy	Required by the Regulations
New Appendix 3 added	Map of Ipswich Policy Area added.	To illustrate the area referred to e.g. in Policy CS6
Remaining appendices	Renumbered as necessary	For clarity.