

Appropriate Assessment

for

Suffolk Coastal District Council
Core Strategy and Development Management
Policies

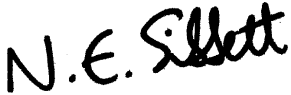
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Quality control

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Core Strategy and Development Management Policies

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Contents

1	Introduction.....	1
1.1	The plan being assessed.....	1
1.2	Appropriate Assessment requirement.....	1
1.3	Appropriate Assessment process	2
1.4	European sites.....	3
1.5	Impacts in combination with other Land-use Plans.....	3
1.6	Modifications to this Appropriate Assessment	3
2	European sites potentially affected.....	5
2.1	Sites within the Core Strategy and Development Management Policies area	5
2.2	Sites outside the Core Strategy and Development Management Policies area	5
2.3	Other relevant plans or projects affecting these sites	7
3	Likely significant effects.....	8
3.1	Process.....	8
3.2	Results.....	8
4	Policies to be assessed	9
4.1	Introduction	9
4.2	Policy SP2. Housing numbers.	9
4.3	Policy SP5. Employment land.	9
4.4	Policy SP8. Tourism.....	9
4.5	Policy SP13. Nuclear energy.....	9
4.6	Policy SP17. Green space.....	9
4.7	Policy SP20. Area East of Ipswich.	9
4.8	Policy SP21. Felixstowe.	9
4.9	Policy SP22. Aldeburgh.....	9
4.10	Policy SP24. Leiston.	10
4.11	Policy SP26. Woodbridge.	10
4.12	Policy SP27. Allocations in the key service centres.	10
4.13	Policy DC22. Airfields.....	10
5	Methods of assessing European site visitor increases from an increased human population ..	11
5.1	Introduction	11
5.2	Existing condition assessments of European sites	13
5.3	Calculations to predict additional visitors to European sites across the Suffolk Coast and Heaths AONB using Tourist Board data.	14
5.4	Impact on European sites in Colchester and Tendring Districts, Essex.....	20
5.5	Calculations to predict additional visitors to European sites in the south Sandlings using 2010 visitor survey data	20
5.6	Impact on specific sites	26
5.7	Survey of site managers opinion of impacts of additional visitors.....	27
6	Assessment of each policy	32
6.1	Introduction to the assessment of each policy	32
6.2	Policy SP2. Housing numbers.	32
6.3	Policy SP5. Employment land.	40
6.4	Policy SP8. Tourism.....	41
6.5	Policy SP13. Nuclear Energy.....	43
6.6	Policy SP17. Green space.....	43

7	Mitigation.....	45
7.1	Introduction to mitigation	45
7.2	Mitigation for Policy SP2. Housing numbers.....	45
7.3	Implementation of the proposed mitigation	49
7.4	Mitigation conclusions	50
8	Conclusions of the Appropriate Assessment	51
8.1	Policy SP2 and related policies	51
8.2	Individually assessed policies	51
8.3	All other policies	51
8.4	Interactions between policies in this plan	51
8.5	In combination with plans from others.....	51
8.6	Final conclusion	51
9	Limitations to the assessment.....	52
9.1	The evidence base	52
9.2	Further work needed.....	52
10	Iterations and Consultations	54
10.1	Previous versions of this appropriate assessment.....	54
10.2	Consultations with Natural England	54
10.3	Consultations with the Public	55

Figures

1. European sites in the study area
2. Ipswich Policy Area
3. Rights of Way by the Deben Estuary near Waldringfield

Appendices

- 1 European site citations
- 2 Conservation Objectives for SSSI components of European sites
- 3 Condition Assessments for SSSI components of European sites
- 4 Natural England correspondence regarding 'Likely significant effect'
- 5 Key diagram, from Preferred Options report
- 6 Sample of site managers' survey responses
- 7 Bird counts for Deben Estuary SPA 2002/3 – 2006/7
- 8 Bird counts for sector 5 of Deben Estuary SPA 2002/3 – 2006/7
- 9 Natural England advice on Appropriate Assessment addendum April 2011
- 10 Natural England Advice on Appropriate Assessment, 14th October 2011

1 Introduction

1.1 The plan being assessed

- 1.1.1 In December 2008, Suffolk Coastal District Council published its Preferred Options for its Local Development Framework Core Strategy and Development Management Policies. This document sets out the Council's vision for the area to 2025. It then set out the objectives that a planning strategy must work to if the vision is to materialise. Strategic planning policies then followed, with an emphasis on the 'spatial' aspect. Finally, a suite of Development Management policies provided guidance upon any detailed aspects.
- 1.1.2 A draft of the Submission stage Core Strategy was published on Suffolk Coastal District Council's website as part of the agenda for discussion by Cabinet in their meeting on 7th July 2009. The final Core Strategy was adopted by the Council as Interim Policy on 18th March 2010, prior to public consultation and formal submission to the Secretary of State for Examination into its soundness.
- 1.1.3 However, following adoption as Interim Policy, the Government stated its intention to withdraw Regional Spatial Strategies (RSS), so that each Local Authority would determine its housing numbers without the regional framework. In November 2010 Suffolk Coastal District Council published its reviewed Core Strategy and Development Management Policies for public consultation. A significant part of this review work involved revisiting the evidence base for the district housing requirement following the Government's decision to abolish the Regional Spatial strategies. Taking into account all the evidence, the Council decided that a total of 7,590 additional homes would be required in the District between 2010 and 2027 – a small reduction to 446 homes per annum from 510 proposed through the RSS. However, the Reviewed Core Strategy has been written with a commitment to commence a review of the housing requirement by 2015 when further evidence will be available, reflecting the fact that should all the economic growth projected be provided additional housing will be required to support it.
- 1.1.4 The Suffolk Coastal District Council Core Strategy and Development Management Policies are at a slightly earlier 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.
- 1.1.5 The plan being assessed in this report is Suffolk Coastal District Council's Reviewed Core Strategy & Development Management Policies Development Plan Document, Consultation draft – November 2010 as amended by the Council at their meeting of 27th July 2011.

1.2 Appropriate Assessment requirement

- 1.2.1 Appropriate Assessment of the Development Plan Document is required under the Conservation of Habitats and Species Regulations 2010. These regulations superseded in April 2010 the previous Conservation (Natural Habitats &c.) Regulations 1994 as amended by the Conservation (Natural Habitats &c.) (Amendment) Regulations 2007. The regulations are often abbreviated to, simply, the 'Habitats Regulations'. The 2010 Habitats Regulations consolidate the previous Regulations and amendments and in respect of land-use plans the Regulations are unchanged.
- 1.2.2 Regulation 102 states that
- (1) Where a land use plan—
 - (a) is likely to have a significant effect on a European site 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 must, 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 specify.

(3) They must also, if they consider it appropriate, take the opinion of the general public, and if they do so, they must take such steps for that purpose as they consider appropriate.

(4) In the light of the conclusions of the assessment, and subject to regulation 103 (considerations of overriding public interest), the plan-making authority or, in the case of a regional spatial strategy, the Secretary of State must 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 must provide such information as the appropriate authority may reasonably require for the purposes of the discharge of the obligations of the appropriate authority under this chapter.

(6) This regulation does not apply in relation to a site which is—

(a) a European site by reason of regulation 8(1)(c); or

(b) a European offshore marine site by reason of regulation 15(c) of the 2007 Regulations (site protected in accordance with Article 5(4) of the Habitats Directive)

1.2.3 The plan-making authority, as defined under the Regulations, is Suffolk Coastal District Council and the appropriate nature conservation body is Natural England.

1.2.4 The Appropriate Assessment in this report is carried out on behalf of Suffolk Coastal District Council to allow them to decide whether to give effect to the plan under Regulation 102. The Core Strategy and Development Management Policies will 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 and the public is described in Section 10.

Iterations and revision

1.3.8 The process is iterative; the conclusions of an initial 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 referred to within Section 10.

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 PPS9¹ 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.

1.5 Impacts in combination with other Land-use Plans

1.5.1 It is considered that the development proposed within Ipswich Borough may have a cumulative effect on nature conservation sites in the District. The Ipswich Borough Council Core Strategy and Policies Development Plan is at a more advanced stage, and has already been submitted to the Secretary of State and is still undergoing its examination in public. The Examination in Public re-convened in May 2011 with hearings in May 2011 and July 2011. As a consequence of this examination Ipswich Borough Council has published a Schedule of Proposed Focused Changes to its submitted Core Strategy and Policies Development Plan Document (01/08/2011). The Proposed Focused Changes add detail to the Core Strategy but do not make any fundamental changes to it; there is a re-phasing of the timing of housing development in the Ipswich Northern Fringe.

1.6 Modifications to this Appropriate Assessment

1.6.1 A previous version of this Appropriate Assessment dated August 2011 was published by Suffolk Coastal District Council in August 2011. This November 2011 version of the Appropriate Assessment is an update of the August 2011 version. The modifications are detailed below.

1.6.2 Chapter 10 'Iterations and Consultation' has been updated to include the updates to this version of the Appropriate Assessment, and consultations with Natural England and the public. A new Appendix 10 gives the advice received from Natural England regarding the August 2011 version.

1.6.3 New paragraphs discussing water availability and water quality, and boating, have been added to Section 5.1 following consideration of consultees' comments.

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

- 1.6.4 Data quality issues have been clarified. In paragraph 5.1.10, it was stated that the Suffolk Coast and Heaths 2004 visitor data was 'the best data currently available'. This was true when the first version (2009) of the Appropriate Assessment was written, but the text was not amended when other visitor data became available, such as the 2010 South Sandlings visitor survey or the NANT survey of the Deben. This paragraph has been amended from 'best data currently available' to 'useful data' with consequent grammatical changes within the sentence. Suffolk Coast and Heaths AONB visitor data is also clarified in paragraph 5.3.4 as being the 'best measure of potential impact to sites across the whole AONB' to clarify the geographic scale under assessment.

2 European sites potentially affected

2.1 Sites within the Core Strategy and Development Management Policies area

2.1.1 All European sites (including Ramsar sites) within the Core Strategy and Development Management Policies area, which is the whole Suffolk Coastal District, are potentially affected.

2.1.2 The European sites wholly or partly within Suffolk Coastal District 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
- Orfordness – Shingle Street SAC
- Staverton Park and the Thicks SAC
- Deben Estuary SPA
- Deben Estuary Ramsar site
- Stour and Orwell Estuaries Ramsar site
- Stour and Orwell Estuaries SPA

2.2 Sites outside the Core Strategy and Development Management Policies area

2.2.1 European sites in neighbouring Districts/Boroughs are also potentially affected. These neighbouring Districts/Boroughs are Ipswich Borough, Waveney District and Babergh District. European sites in Tendring District may also be potentially affected. European sites in Mid Suffolk District are considered to be at sufficient distance that there is not likely to be a significant effect on those sites.

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

- 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 Suffolk Coastal District or in adjacent Districts and potentially affected
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 Common 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 Suffolk Coastal District Council Core Strategy and Development Management Policies, the European sites are also affected 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, 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 Ipswich Borough Council Core Strategy and Policies
- Waveney District Council Development Plan Documents
- Babergh District Council Development Plan Documents
- Tendring District Council Development Plan Documents
- These plans are considered in the Appropriate Assessment of Suffolk Coastal District Council's Core Strategy and Development Management Policies.

3 Likely significant effects

3.1 Process

- 3.1.1 A Screening and Scoping exercise was carried out in 2009 on behalf of Suffolk Coastal District Council to identify if an Appropriate Assessment was required and suggesting a set of policies which were likely to have a significant effect. Natural England was consulted on 6th March 2009.

3.2 Results

- 3.2.1 Natural England confirmed on 16th March 2009 that an Appropriate Assessment would be required and advised on those policies suggested by Suffolk Coastal District Council considered likely to have a significant effect.
- 3.2.2 The policies considered by Suffolk Coastal District Council, having regard to Natural England's advice, to have a likely significant effect or no significant effect at that stage are listed in Appendix 4. Following that consultation, policies may have been re-numbered although the policies themselves have little changed.
- 3.2.3 The policies to be assessed in most detail are listed in Section 4 below.

4 Policies to be assessed

4.1 Introduction

- 4.1.1 The Policies in the Core Strategy and Development Management Policies document to be assessed are listed below. Comments received from Natural England, giving the previous policy numbers used at that time in the Preferred Options document, are also given. Those comments are incorporated into Appendix 4.

4.2 Policy SP2. Housing numbers.

- 4.2.1 Natural England commented on similar policies earlier numbered as SP16, SP17, and SP18 that 'Increased housing allocation in the more sensitive parts of the District, will result in negative impacts'.

4.3 Policy SP5. Employment land.

- 4.3.1 Natural England commented on the similar policy earlier numbered as SP21 that 'The areas identified are Felixstowe Port and Martlesham Heath Business Campus; further development at these sites could result in negative impacts upon the Stour & Orwell Estuaries SPA and Deben Estuary SPA respectively'.

4.4 Policy SP8. Tourism.

- 4.4.1 Natural England commented on the similar policy earlier numbered as SP24 that 'Although this policy does recognise the importance of the AONB designation, no specific mention is made of the suite of European designated sites within the District. Increased tourist pressure within these sites could result in serious negative impacts'.

4.5 Policy SP13. Nuclear energy.

- 4.5.1 Natural England commented on the similar policy earlier numbered as SP14 that 'Construction of a further power station could bring negative impacts to the nearby European sites through, inter alia, coastal protection issues, higher populations and increased construction disturbance. Site-specific Appropriate Assessment will be required by any proposer to a nuclear power station at this location. Anything in the policy not covered by the HRA for the planning application needs to be considered further'.

4.6 Policy SP17. Green space.

- 4.6.1 Natural England commented on the similar policy earlier numbered as SP30 that 'Increased public access activity may result in negative impacts upon the District's European designated sites particularly Heaths and Estuaries'.

4.7 Policy SP20. Area East of Ipswich.

- 4.7.1 Natural England commented on the similar policy earlier numbered as SP3 that 'Any development is likely to bring additional pressure to any of the sites of European interest, however the area near Martlesham identified as a "preferred option" could have particularly negative impacts upon the Deben Estuary SPA/SSSI'.

4.8 Policy SP21. Felixstowe.

- 4.8.1 Natural England commented on the similar policy earlier numbered as SP4 that 'Any development is likely to bring additional pressure to any of the sites of European interest, however the areas north of Candlet Road and Felixstowe town could have particularly negative impacts upon the Deben Estuary SPA/SSSI'.

4.9 Policy SP22. Aldeburgh.

- 4.9.1 Natural England commented on the similar policy earlier numbered as SP5 that 'Although further strategic housing is not envisaged, improving tourism could lead to increased pressures on the Sandlings SPA and Alde/Ore Estuary SAC'.

4.10 Policy SP24. Leiston.

- 4.10.1 Natural England commented on the similar policy earlier numbered as SP7 that 'Further development in and around Leiston could result in increased pressure upon nearby sites such as the Minsmere-Walberswick SPA/SAC/Ramsar and Sandlings SPA'.

4.11 Policy SP26. Woodbridge.

- 4.11.1 Natural England commented on the similar policy earlier numbered as SP10 that 'Increased tourist activity is likely to result in negative impacts upon nearby European designated sites particularly Heaths and Estuaries'.

4.12 Policy SP27. Allocations in the key service centres.

- 4.12.1 Natural England commented on the similar policy earlier numbered as SP20 that 'This policy does not expressly recognise the importance of European designated sites'.

4.13 Policy DC22. Airfields.

- 4.13.1 Natural England commented on the policy earlier numbered as DC22 that 'This policy does not expressly recognise the importance of European designated sites or the effect of powered aircraft flights upon the specific features of interest'.
- 4.13.2 Policy DC22 Airfields was subsequently deleted from the Core Strategy and Policies document and consequently is not assessed.

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 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.

The amount of housing proposed in Suffolk Coastal District

5.1.4 The November 2010 Reviewed Core Strategy, Policy SP2, contains proposals for 7,590 new dwellings, comprising 1,560 dwellings with planning permission and allocations deemed deliverable but not constructed at April 2010, 230 new dwellings on identified brownfield potential sites within existing physical limits boundaries, an estimated windfall of 540 dwellings, and 5,260 new allocations on greenfield land. This gives an annual requirement of 446 new dwellings per year between 2010 and 2027.

5.1.5 The total amount of the housing proposed within Suffolk Coastal District is given in the November 2010 Reviewed Core Strategy, in its table 3.3, as 2,320 dwellings in the Eastern Ipswich plan area, 1,760 new dwellings in Felixstowe Walton and the Trimleys, and 3,510 in the remainder of Suffolk Coastal District.

The amount of housing proposed in Ipswich Borough

5.1.6 The October 2010 Core Strategy contains proposals for 10,261 new dwellings, comprising 2,058 dwellings with planning permission but not constructed at April 2010, 752 dwellings with a resolution to grant planning permission at April 2010, 3951 new allocations to 2021 and 3500 new allocations 2021 – 2026. These dwellings would be concentrated within the existing built-up area of Ipswich, with farmland to the north of Ipswich being used when the supply of land within the town is exhausted.

The use of three visitor typologies – tourist, day trips or local greenspace users

5.1.7 There are three typologies of visitors to European sites which can be used, where data is consistent with these typologies.

5.1.8 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 Suffolk Coastal is not altered greatly by the 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.

5.1.9 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.

- 5.1.10 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 useful data which 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.
- 5.1.11 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 convenient local greenspace. 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 5.6 below, regarding specific sites close to areas of new development.
- 5.1.12 Further studies of visitors to the South Sandlings, and to the Deben Estuary at / near Waldringfield have been made available and include European sites within the influence of the Core Strategy. Natural England has published a national survey of People and the Natural Environment. These are discussed in Sections 5.5 and 5.8.
- 5.1.13 These typologies, using appropriate data, may be used to predict any change in visitors to European sites based on changes in numbers of people in each typology. The change in visitor numbers can be assessed to determine if that change would have an adverse affect upon the integrity of the European site.

Identifying the origin of visitors

- 5.1.14 Where data exists, the origin of visitors to European sites compared to the total number of people at that point of origin can be used to predict change in visitors; if the total number of people at a point of origin changes, the number of visitors from that point of origin may change proportionately.

Site Managers' knowledge of visitor impact and change

- 5.1.15 The managers of European sites, for example those sites managed as nature reserves, may 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 5.7.

Water resources and water quality

- 5.1.16 Public response to consultations has raised concerns regarding water availability for the housing allocations, and potential problems with surface water run-off and sewage treatment.
- 5.1.17 The Haven Gateway Water Cycle Study Stage 2 Report (2009) concluded that water supply companies were confident that they had sufficient resources to supply the demands of the region over the forthcoming period and had plans in place to be able to realise these resources.
- 5.1.18 A number of the treatment facilities within the Haven Gateway area were stated to be at, or will reach capacity with the projected growth, and therefore will require increases to their allowed discharge together with potential extensions to and upgrades of the facilities. Growth cannot take place until the treatment works have sufficient capacity.
- 5.1.19 Increases in discharge from sewage treatment works would need to be accommodated within the receiving watercourses without adverse impacts. There are areas within the region where treatment improvements will be required to avoid any increase in pollution loads within the receiving water bodies. This will occur before housing growth significantly increases.
- 5.1.20 Surface water run-off needs to be considered on a case by case basis, and there is no evidence at a strategic level that there would be any run-off into European sites. For example, a planning application would need to demonstrate that drainage is satisfactory, perhaps using a combination of traditional piped drainage and Sustainable Urban Drainage Schemes.

- 5.1.21 Water availability and water quality issues related to the Core Strategy and Development Management Policies are therefore considered to have no likely significant effect on European sites.

Boating

- 5.1.22 The possibility of increased boating activity causing disturbance to birds has been raised by respondents to consultations, mainly in respect of the Deben Estuary SPA.
- 5.1.23 The boatyard at Waldringfield is an existing facility and Natural England has not commented that there is a known impact upon the designated areas. Anecdotal evidence suggests that the boatyard is currently at or near to capacity and therefore any increase in public useage will be controlled by the finite nature of this resource. However, if the boatyard wishes to expand the facility, then detailed consideration will need to be made regarding the potential effect of additional disturbance to the estuary.
- 5.1.24 New bankside moorings, pontoons, swinging moorings and land-based facilities (e.g. boat park) would require planning permission. The Core Strategy does not promote or encourage new facilities so the existing boating infrastructure limits the amount of activity. There is a limited number of places where boats can be launched for day use, which in turn limits any increase in use. Evidence from other estuaries in Suffolk shows that the biggest source of disturbance to birds is people walking with dogs, followed by people walking without dogs². Boating disturbance is relatively minor and is less important than disturbance impacts from land-based recreation. Although no survey exists, the distance which people will drive to engage in boating activities is thought to be greater than that distance which people will drive for walking. The whole amount of housing growth has therefore been considered in making this assessment.
- 5.1.25 An increase in boating related to the Core Strategy and Development Management Policies is considered to have no likely significant effect upon European sites.
- 5.1.26 Natural England is involved in estuary management across England, and for other estuaries has worked in partnerships to produce codes of conduct for boaters. This approach could be introduced into the Deben Estuary if there is a need to. Further investigations into the Deben Estuary management could be helpful for planning the management. The mitigation for housing allocations east of Ipswich (chapter 7) includes visitor management and wardening. This mitigation does not exclude water-based visitors and could be used to include estuary management.

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 website³ on 11th April 2011, 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

² Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA*
Commissioned by Suffolk Coast and Heaths Unit.

³ www.naturalengland.org.uk

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 addressed⁴.

- 5.2.4 Of the 400 or so SSSI units, nine are assessed as unfavourable for reasons of public access / disturbance. Four of these SSSI units are within Minsmere – Walberswick Heaths and Marshes SSSI, (units 84, 85, 86, 110), two units are within Leiston – Aldeburgh SSSI, and three are within Alde-Ore Estuary SSSI. These units are all shingle beaches where human impact on vegetation is monitored. In 2009, nine units were also recorded as being unfavourable but this comprised eight units at Minsmere – Walberswick SSSI and one unit at Pakefield to Easton Bavents; four of the Minsmere – Walberswick SSSI units and the at Pakefield to Easton Bavents have recovered due to management action but new damage has been recorded at Alde-Ore Estuary SSSI and Leiston – Aldeburgh SSSI. However, the SPA qualifying feature of Leiston – Aldeburgh SSSI is not shingle beach, so the public access there is not harming the European site.
- 5.2.5 The unfavourable condition of the relevant SSSI units is 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. The condition assessment for unit 3 of the Orwell Estuary SSSI is favourable despite the large current public access from Orwell Country Park. However, Natural England has commented that it does not routinely monitor disturbance to birds on Sites of Special Scientific Interest, and recreational impacts may therefore not be included as a reason for unfavourability in condition assessments.
- 5.2.7 Most units on the Stour Estuary SSSI were recorded in 2009 as unfavourable because of 'coastal squeeze', although the comments at that time suggested that there was 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. In 2010, nine of the ten units were assessed as favourable and the possible recreational disturbance is no longer mentioned. Research shows that the amount of disturbance on the Stour Estuary SSSI from visitors is significantly less than that in the Orwell Estuary SSSI⁵.

5.3 Calculations to predict additional visitors to European sites across the Suffolk Coast and Heaths AONB using Tourist Board data.

- 5.3.1 This section looks at the group of people classified as 'day visitors' in the three typologies described in section 5.1 above (i.e. those travelling a significant distance to a destination for recreation on an occasional basis, rather than a local and/or regular use of a place close to home. The survey locations were situated in such places that the majority of people would be day visitors rather than routine users of convenient local greenspace.
- 5.3.2 There is little information available regarding the destinations of Suffolk Coastal and Ipswich residents for their recreation. However, in 2004 the Suffolk Coast and Heaths Unit commissioned East of England Tourist Board to carry out a visitor survey of the AONB (EETB 2004⁶). 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

⁴ Natural England (2009) SSSI condition assessment A guide for owners and occupiers

⁵ Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit.

⁶ 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>

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 '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 across the whole AONB.
- 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)

Origin of day visitors to AONB	Number of day visitors (total day visitors in survey = 430)	Percentage of total AONB day visitors (estimate)
Ipswich Borough, plus adjoining Pinewood ward (Babergh district)	50	11.6%
Eastern Ipswich plan area within Suffolk Coastal (Rushmere, Kesgrave and Martlesham wards)	29	6.7%
Felixstowe, Walton and the Trimleys	19	4%
Remainder of Suffolk Coastal District	114	26.5%
Shotley	1	0.2%
Total of these origins	213	49.5%

- 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 into the Borough per new dwelling (Ipswich Borough Council pers comm. and based on Suffolk County Council's population projection⁷). 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 in average household size.
- 5.3.7 In November 2010, an Outlook for Suffolk Coastal's economy and housing was published as part of the Local Development Framework evidence base⁸. This used Office of National Statistics data and projections, but tailored more closely to the local situation. Existing household size was predicted to decline from around 2.35 people per household in 2001 to around 2.25 people per household in 2027.

⁷ Suffolk County Council (2009) Projected changes in the population. A 2010 update is downloadable from web page <http://www.suffolk.gov.uk/CouncilAndDemocracy/AboutSCC/SpecialistSupportFunctions/BusinessDevelopment/DataSets/DemographyAndPopulation.htm> accessed 5th May 2011

⁸ Oxford Economics (November 2010) Suffolk Coastal Profile and Outlook Report Prepared for the Suffolk Coastal District Council

- 5.3.8 Overall, a population increase of 17,300 people was predicted by 2027, requiring an increase in 11,000 houses. This is equivalent to 1.57 'new' people in the District for every new dwelling built. The number of people per household is known as the 'occupancy ratio'.
- 5.3.9 This Appropriate Assessment therefore uses an average population increase of 1.38 new people per new dwelling in Ipswich Borough, and 1.57 new people per new dwelling in Suffolk Coastal District. These figures initially seem low but these figures are not occupancy rates for the new dwellings and should not be read as such. This is not an assumption about the occupancy rate of new dwellings, as some multiple person households already living in the area will fragment and disperse into the new dwellings, or some dwellings (existing or new) may be bought as holiday homes with zero occupancy. This reflects a trend towards a lower occupancy level per house caused by an increase in split households, an ageing population and the number of second homes across the Borough and District as a whole.
- 5.3.10 In other words some of the residents of those additional dwellings will come from existing dwellings within the area and so not be 'new' additional people. The patterns of births, death, and people moving out of, within, between and into, Ipswich Borough or Suffolk Coastal District are complex, but the population predictions are realistic and there are no better alternatives
- 5.3.11 The proportionate growth in population in new housing development in Suffolk Coastal and elsewhere can be calculated by looking at the existing population, the predicted net increase in people, and therefore the proportionate increase.
- 5.3.12 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 net increase in people ⁹
Ipswich Borough	10,261	14,160
Eastern Ipswich plan area	2,320	3,642
Felixstowe, Walton and the Trimleys	1,760	2,763
Remainder of Suffolk Coastal District	3,510	5,511
Shotley	404 ¹⁰	606
Totals	18,255	26,682

* based on population projections (see above paragraphs 5.3.6 to 5.3.9)

- 5.3.13 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.

⁹ Based on a net increase of 1.57 and 1.38 people per new dwelling for Suffolk Coastal and Ipswich respectively.

¹⁰ A 404 person retirement home is proposed; assume 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 2)	Estimated % increase in local population (estimated increase / existing)
Ipswich Borough, plus adjoining Pinewood ward (Babergh district)	132,013	14,160	10.7%
Eastern Ipswich plan area	20,014	3,642	18.2%
Felixstowe, Walton and the Trimleys	33,735	2,763	8.2%
Remainder of Suffolk Coastal District	68,251	5,511	8.1%
Shotley	2483	606	24.4%
Totals	256,496	26,682	10.4%

5.3.14 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 relative proportions of day visitors and overnight visitors does not change; and
- the summer snapshot survey is typical of visitors all year round.

5.3.15 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).

5.3.16 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.

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

Origin of day visitors to AONB	(A) proportion of total AONB day visitors (estimate) from table 1 expressed as a fraction of 1	(B) proportion of total AONB visitors (A x 0.55)	(C) increase in local population from table 3 expressed as a fraction of 1	(D) The overall increase of all visitors to the AONB (B) x (C)
Ipswich Borough, plus adjoining Pinewood ward (Babergh district	0.116	0.064	0.107	0.007
Eastern Ipswich plan area	0.067	0.037	0.182	0.007
Felixstowe, Walton and the Trimleys	0.04	0.022	0.082	0.002
Remainder of Suffolk Coastal District	0.265	0.146	0.081	0.012
Shotley	0.002	0.001	0.244	0.0002
Totals	0.495	0.272	0.104	0.0283

5.3.17 Table 6 below shows the Table 5 column D data alone, given as a percentage increase in total visitors to the AONB.

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 proportionate predicted increase in visitors to the AONB from each place of origin
Ipswich Borough, plus adjoining Pinewood ward (Babergh district)	0.7%
Eastern Ipswich plan area	0.7%
Felixstowe, Walton and the Trimleys	0.2%
Remainder of Suffolk Coastal District	1.2%
Shotley	0.02%
Totals	2.83%

- 5.3.18 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 2.83%. The numbers in Table 6 do not add exactly to 2.83% due to rounding earlier in the calculations but the 2.83% is based on the totals. The increase in visitors can be apportioned as 0.7% for Ipswich Borough and 2.13% for Suffolk Coastal District.
- 5.3.19 To allow for assumptions about people's behaviour patterns, the approximate 2.83% increase in total visitors to the AONB is given as a range of 2% - 5%.
- 5.3.20 The calculations of increased visitors to European sites are complex. Superficially, one would expect that an 10.4% increase in the combined population of Ipswich Borough and Suffolk Coastal District to cause a 10.4% increase in visitors to European sites in the Suffolk Coast and Heaths AONB. In reality, a 10.4% increase in population will result in a proportionate increase from only those visitors who come from Ipswich Borough and Suffolk Coastal District. Visitor numbers from elsewhere are unchanged, so the increase in the total number of visitors will be less than 10.4%.
- 5.3.21 Data presented in the Appropriate Assessment shows that about half (55%) of visitors to the Suffolk Coast and Heaths AONB were local people on a day trip, with the remainder being holiday makers staying in tourist accommodation. Of the locals on a day trip, about half (49.5%) were from Ipswich Borough and Suffolk Coastal District, with the remainder from elsewhere, for example, from Norwich or Bury St Edmunds. Combining these figures, half the visitors being on day trips, and half of these day trip visitors being from Ipswich Borough and Suffolk Coastal District, the calculation is that roughly one-quarter of all visits to the AONB originate from Ipswich Borough and Suffolk Coastal District. This assumption is also applied to the European sites within the AONB.
- 5.3.22 With roughly around one-quarter of the day trips coming from residents in Ipswich Borough and Suffolk Coastal, those day trips are predicted to rise in proportion with the predicted 10.4% population increase i.e. the number of day trips from Ipswich Borough and Suffolk Coastal are expected to rise by 10.4% in the period 2010 – 2026/7. However, other sources of visitors (holidaymakers or day trips from elsewhere) will not rise accordingly, so the total visits from all sources is calculated to rise by around 2.83%. Figure 1, which is drawn to relative scale, is a bar chart where the length of the bar represents the number of visitors in each group. It shows

the effect of the 10.4% increase in day trips from Ipswich Borough / Suffolk Coastal District in relation to the total visits from all sources.

- 5.3.23 There are a number of assumptions made regarding these calculations and people's behaviour, including
- 'New' people in the Borough / District will have the same visiting pattern as 'existing' people
 - Visits by holiday makers will not be affected by any increased use by local visitors
 - Sites, including their car parks, will not constrain the number of visits by becoming 'full' and turning away visitors
- 5.3.24 The separate breakdown of visits into 'day-trippers' and 'holidaymakers' was undertaken in the school summer holiday period when a greater proportion of 'holidaymakers' may have been present compared to other months
- 5.3.25 To allow for these assumptions, the approximate 2.83% increase in total visitors to the AONB is given as a range of 2% - 5%.
- 5.3.26 **It would therefore be reasonable to assume that the increase in visitors to European sites in the Suffolk Coast and Heaths AONB, using this survey data, could be in the range of 2% - 5% as a result of the Ipswich Borough Council and Suffolk Coastal District Council Core Strategy proposals.**
- 5.3.27 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.

5.4 Impact on European sites in Colchester and Tendring Districts, Essex

- 5.4.1 A report of visitor monitoring on Natura 2000 sites in Colchester and Tendring, Essex¹¹, was also considered. It showed that only a tiny proportion of visitors to European sites travelled from Ipswich or Suffolk Coastal. However, the sample sizes were so small that it is considered that the results may not have been meaningful.

5.5 Calculations to predict additional visitors to European sites in the south Sandlings using 2010 visitor survey data

- 5.5.1 A visitor survey was commissioned by a consortium led by Suffolk Wildlife Trust and Forestry Commission, and funded by the Haven Gateway Partnership. The survey was carried out in winter 2009/10 and summer 2010 by Footprint Ecology. Their final report was published on 10th February 2011¹² and the use of this report is gratefully acknowledged. It is considered that the visitor survey and data analysis were generally carried out to high standards. The report is referred to as the 2010 South Sandlings Visitor Survey in the remainder of this report.
- 5.5.2 The 2010 South Sandlings Visitor Survey took place in an area east and north-east of Woodbridge, encompassing Tunstall Forest, Rendlesham Forest and surrounding areas. The study included Sandlings SPA (comprising Sandlings Forest SSSI, Blaxhall Heath SSSI, Sutton and Hollesley Heaths SSSI and Tunstall Common SSSI), Staverton Park and the Thicks SAC, ,

¹¹ Habitat Regulations Assessment Survey and Monitoring. Year 1 Interim Report December 2010. Colchester Borough Council.

¹² Cruickshanks K, Liley D and Hoskin R (2011) Suffolk Sandlings Living Landscape Project Visitor Survey Report. Footprint Ecology / Suffolk Wildlife Trust.

and small parts of Alde-Ore Estuary (SPA, SAC, Ramsar) and Deben Estuary (SPA, Ramsar). Visitors at a number of points within the study area were counted and many were asked a number of questions about their visit, including where they had come from, where they went on their visit, what they did, how they arrived on site for their visit, and why they had chosen that place to visit.

5.5.3 Key messages from the 2010 South Sandlings Visitor Survey are

- 53% of total visitors entered the study area at just three points; the forest opposite Sutton Heath Estate (housing associated with MoD Woodbridge including some open market housing), Sutton Heath car park, and Iken.
- Visitors were not spread out evenly across the study area; there were 'hotspots' of visitors at Sutton Heath and in Rendlesham Forest at Tangham visitor centre; there were also spots of activity concentrated at the Rendlesham Forest runway car park and by the B1084, and in the north of Tunstall Forest at Tunstall Heath and Blaxhall Common. Heaths were used disproportionately more by visitors compared to equivalent areas of forestry plantation.
- In the study area there were 16 formal car parks providing a total of 261 spaces, and 106 locations used for informal parking providing 256 parking spaces. The density of visitors within the sites was closely related to the location of car parks; the visitor hotspots were close to the bigger and formal car parks; other spots of activity were close to small and/or informal car parks.
- 19% of visitors in summer and 6% of visitors in winter were tourists.
- 63% of visitors had dogs with them; the proportion being slightly higher in the winter than in summer
- Dog walking was undertaken by 52.8% of people interviewed; walking, exercise, family outings and cycling were undertaken by the majority of other visitors.
- 80% of all visitors arrived by car, and 17% of all visitors walked across the road from the Sutton Heath Estate into the adjacent forest.
- Half of all visitors who arrived on foot lived within 420m of the access point, and half of all visitors who arrive by car live less than 8km away. Over 75% of dog walkers lived within 10km of the access point.
- The number of houses within 5km of a site had a positive relationship with the number of visitors entering; the more houses there were, the more visitors there were.
- Most people stayed for 1 – 2 hours.
- 64% of visitors visited the sites at least weekly, and over half of these visited daily.
- Over half the visitors also said that they would visit coastal and estuary sites in the area
- There was a higher density of nightjar nests in the areas with the lowest category of visitor numbers, but no clear relationship between nest density across all categories of visitor numbers; for example the areas with the highest category of visitor numbers had more nightjar nests than those with an intermediate number of visitors.
- Public access had no apparent effect on the current distribution of woodlark nests in the Forest or on heaths.
- For non-SPA species, Dartford warbler nest density was negatively correlated to visitor numbers, but there was no apparent relationship between visitor numbers and silver-studded blue butterflies or ant-lion.

5.5.4 These key messages are extracted from the 2010 South Sandlings Visitor Survey, which gives much more detail.

- 5.5.5 The 2010 South Sandlings Visitor Survey contains good data on the location of the home of visitors to the study area within 0.5km distance bands from access points (normally car parks) to recreational sites. The survey also used postcode data to identify the number of existing dwellings within each distance bands. These are shown on Figures 6 and 7 of the 2010 South Sandlings Visitor Survey report. This data may be used to model changes in the number of visitors as the number of dwellings in each distance band changes.
- 5.5.6 It is a reasonable assumption that an increase in dwellings would generate a proportionate increase in visitors from any particular distance band. For example, if the number of houses doubled in a particular distance band the number of visitors from that area would also double. The proposed dwelling numbers can therefore be added to existing dwelling numbers in each distance band and used to calculate the increase in visitors for each distance band and the total overall increase in visitors.
- 5.5.7 The distribution of proposed housing is not precisely specified within the Core Strategies. For this assessment, the distribution of the proposed housing allocation as it relates to access points within the South Sandlings study area is considered to be as shown in table 7 below.

Table 7. Approximate distribution of proposed housing allocations from Sandlings access points

Location	no. of proposed new dwellings	Approximate distance of housing from South Sandlings study area access points / km
Ipswich Borough	10,261	13.5 - 14
Eastern plan area	2320	4.5 - 5
Felixstowe Walton and Trimleys	1760	12 – 12.5
rest of Suffolk Coastal*	700	4.5 - 5
rest of Suffolk Coastal*	700	9.5 - 10
rest of Suffolk Coastal*	700	14.5 - 15
rest of Suffolk Coastal*	700	19.5 - 20
rest of Suffolk Coastal*	710	24.5 – 25
* 3510 dwellings nominally allocated to five distance bands across the District.		

- 5.5.8 The South Sandlings Visitor Survey data for the number of visitors, and the existing number of houses, within 0.5km distance bands up to 50km from access points to sites within the study area were kindly supplied by Steve Aylward of Suffolk Wildlife Trust (the commissioning group's project manager) and Footprint Ecology. The use of this data is gratefully acknowledged.
- 5.5.9 For each distance band up to 50km from the study area access points, Table 8 shows the existing housing numbers and visitor numbers supplied from the South Sandlings Visitor Survey. The proposed housing numbers are also listed, using the distribution given above. For clarity, the distribution of proposed housing within distance bands has been highlighted; there is no change to numbers in other bands. The increase in visitors is calculated by multiplying the existing visitors in each distance band by the proportionate increase in housing. The

proportionate increase in housing is calculated by dividing the proposed housing numbers (existing number plus proposed new dwellings) by existing housing numbers.

- 5.5.10 To illustrate the calculations, if a distance band had 8 recorded visitors from 100 existing dwellings, and 50 new dwellings were proposed within a Core Strategy, then the proportionate increase in housing is $(100+50)/100 = 1.5$. The predicted number of new visitors is therefore 8 people $\times (100+50)/100$, giving a predicted number of 12 visitors.

Table 8. Predicted increase in visitor numbers to South Sandlings study area calculated as the number of existing visitors multiplied by the proportionate increase in dwellings (proposed / existing) within each distance band

Distance from access point (km)	Approximate Location of existing towns in relation to distance from access points	Number of existing dwellings	Number of visitors recorded in the survey	Number of existing and proposed dwellings	Number of predicted visitors on re-survey
0 - 0.5	Sutton Heath estate	495	71	495	71
0.5 - 1		305	12	305	12
1 - 1.5		802	26	802	26
1.5 - 2	Rendlesham Melton Woodbridge	1936	55	1936	55
2 - 2.5		2211	45	2211	45
2.5 - 3		2024	29	2024	29
3 - 3.5		1812	44	1812	44
3.5 - 4		1471	21	1471	21
4 - 4.5		716	8	716	8
4.5 - 5	SCDC eastern plan area	653	6	3673	33.7
5 - 5.5		2164	12	2164	12
5.5 - 6		2269	7	2269	7
6 - 6.5		1558	7	1558	7
6.5 - 7	Saxmundham Martlesham	2488	16	2488	16
7 - 7.5		2826	11	2826	11
7.5 - 8		3361	13	3361	13
8 - 8.5		2657	7	2657	7
8.5 - 9		1765	7	1765	7
9 - 9.5		1187	2	1187	2
9.5 - 10		1304	2	2004	3.1
10 - 10.5		1884	4	1884	4
10.5 - 11		2376	5	2376	5
11 - 11.5	Framlingham, Felixstowe, eastern Ipswich	5574	11	5574	11
11.5 - 12		7065	8	7065	8
12 - 12.5		9048	14	10808	16.7
12.5 - 13		9848	7	9848	7
13 - 13.5		8119	7	8119	7
13.5 - 14	central Ipswich	6020	7	16281	18.9
14 - 14.5		6001	1	6001	1
14.5 - 15		7289	5	7989	5.5
15 - 15.5		6961	2	6961	2

Distance from access point (km)	Approximate Location of existing towns in relation to distance from access points	Number of existing dwellings	Number of visitors recorded in the survey	Number of existing and proposed dwellings	Number of predicted visitors on re-survey
15.5 - 16		4716	2	4716	2
16 - 16.5	western Ipswich	6573	3	6573	3
16.5 - 17		5199	4	5199	4
17 - 17.5		5488	2	5488	2
17.5 - 18		4601	3	4601	3
18 - 18.5		2140	0	2140	0
18.5 - 19		2831	1	2831	1
19 - 19.5		1421	0	1421	0
19.5 - 20		1516	2	2216	2.9
20 - 20.5		1870	0	1870	0
20.5 - 21		1738	0	1738	0
21 - 21.5		2076	2	2076	2
21.5 - 22		1746	0	1746	0
22 - 22.5		1545	0	1545	0
22.5 - 23		2483	0	2483	0
23 - 23.5		2409	0	2409	0
23.5 - 24		2229	1	2229	1
24 - 24.5		2287	0	2287	0
24.5 - 25		1517	1	2217	1.5
25 - 25.5		3455	0	3455	0
25.5 - 26		4038	1	4038	1
26 - 26.5		4762	0	4762	0
26.5 - 27		4622	1	4622	1
27 - 27.5		5637	0	5637	0
27.5 - 28		5694	1	5694	1
28 - 28.5		4392	2	4392	2
28.5 - 29		2613	0	2613	0
29 - 29.5		2684	0	2684	0
29.5 - 30		3004	0	3004	0
30 - 30.5		2807	0	2807	0
30.5 - 31		1549	0	1549	0
31 - 31.5		1853	0	1853	0
31.5 - 32		1931	0	1931	0
32 - 32.5		4916	0	4916	0
32.5 - 33		7166	1	7166	1
33 - 33.5		9392	0	9392	0
33.5 - 34		7896	0	7896	0
34 - 34.5		6345	2	6345	2
34.5 - 35		7947	1	7947	1
35 - 35.5		12714	3	12714	3
35.5 - 36		11523	1	11523	1
36 - 36.5		10084	0	10084	0
36.5 - 37		10980	0	10980	0

Distance from access point (km)	Approximate Location of existing towns in relation to distance from access points	Number of existing dwellings	Number of visitors recorded in the survey	Number of existing and proposed dwellings	Number of predicted visitors on re-survey
37 - 37.5		10937	2	10937	2
37.5 - 38		12992	0	12992	0
38 - 38.5		11420	1	11420	1
38.5 - 39		6578	0	6578	0
39 - 39.5		7071	1	7071	1
39.5 - 40		7930	1	7930	1
40 - 40.5		8830	0	8830	0
40.5 - 41		10081	0	10081	0
41 - 41.5		8352	1	8352	1
41.5 - 42		8429	0	8429	0
42 - 42.5		6388	1	6388	1
42.5 - 43		5502	0	5502	0
43 - 43.5		5197	1	5197	1
43.5 - 44		2623	0	2623	0
44 - 44.5		3550	0	3550	0
44.5 - 45		5576	0	5576	0
45 - 45.5		4676	0	4676	0
45.5 - 46		4839	0	4839	0
46 - 46.5		3465	0	3465	0
46.5 - 47		6665	1	6665	1
47 - 47.5		8176	1	8176	1
47.5 - 48		6198	1	6198	1
48 - 48.5		8790	0	8790	0
48.5 - 49		6508	0	6508	0
49 - 49.5		5118	0	5118	0
49.5 - 50		4319	0	4319	0
Totals			517		562.3

5.5.11 For those distance bands with significant housing allocations, the change in visitor numbers is large. For example, the allocation of 10,261 dwellings for Ipswich Borough Council at a nominal distance of 13.5km - 14km from the study area increases the number of visitors from that distance band from 7 to 18.9. Similarly, the allocation of 2,320 dwellings for the Eastern Ipswich plan area, plus 700 further allocations for the 'rest of Suffolk Coastal', increases the number of visitors from the 4.5km - 5km distance band from 6 to 33.7. However, for some distance bands there is no change in visitor numbers.

5.5.12 The total existing visitor number identified in the survey is 517, according to the data received from the South Sandlings Visitor Survey. The predicted number of visitors, following implementation of housing as allocated within the Ipswich and Suffolk Coastal Core Strategies, is 562.3. These are nominal figures based on visitor samples, so the absolute number is of less relevance than the overall change. A change from 517 to 562.3 is **an increase of visitors of 8.8%** (562.3/517).

Assumptions and limitations

5.5.13 There are a number of assumptions and limitations to the model of predicted visitor change, including

- the pattern of day visits to sites by the new residents is similar to that of the existing population;
- an increase in visits to sites is not constrained by other factors e.g. lack of public transport, or car parks reaching capacity; so that the predictions may be an over-estimate;
- the number of holiday-makers does not change as a result of the Core Strategies housing allocations;
- the results of the summer and winter surveys are typical of visitors all year round
- the calculations do not take account of declining household size when calculating visitor numbers but assume that the number of people per dwelling remains constant;
- changes to the nominal distribution of housing allocations; a re-distribution of housing between distance bands would give higher or lower predicted numbers.

5.5.14 These assumptions are such that the predicted 8.8% increase in visitors is not considered to be precise. It would be reasonable to assume that the increase in visitors to European sites in the South Sandlings study area could be in the range of 6% - 12% as a result of the Ipswich Borough Council and Suffolk Coastal District Council Core Strategy proposals.

5.6 Impact on specific sites

5.6.1 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 convenient local greenspace, with routine activities such as recreational dog walking or play undertaken.

5.6.2 Studies in Dorset, carried out to investigate the impact of development on European sites there¹³, 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.

5.6.3 The 2010 South Sandlings Visitor Survey showed that half of all visitors who arrived on foot lived within 420m of the access point, and 75% of visitors walked 500m or less to reach the access point. The median distance travelled to reach the access point by car was less than 8km away. Over 75% of dog walkers lived within 10km of the access point. These data are reasonably consistent with the Dorset studies.

5.6.4 These studies indicate 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.

5.6.5 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 to a car parking location). This would be a greater increase than that increase on day trips to the AONB generally, as regular visits to places near home tend to be much more frequent (e.g. for daily dog walking) than visits to attractive sites at some distance. It is therefore necessary to identify European sites within the 1km and 8km distances of proposed housing allocations, and assess whether any increase in visitors is likely to occur there. To assess if an increase in visitors is likely to occur, the proportionate increase in population in those distance bands can be looked at, the provision of alternative sites for

¹³ Clarke, R., Liley, D., Underhill-Day, J. & Rose, R. 2005. Visitor Access patterns on the Dorset heathlands. *English Nature Research Reports*, No. 683

recreation needs to be taken into account, and the availability of the European sites for access needs to be identified.

- 5.6.6 The cumulative impacts of several developments are considered in Sections 5.3 and 5.5 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.
- 5.6.7 The Suffolk Coastal Core Strategy and Development Management Policies has two major allocations that could cause an increase of visitor pressure on European sites. The allocation east of Ipswich around Martlesham could be close to the Deben Estuary SPA. The allocation at Felixstowe and the Trimleys could be close to the Stour and Orwell Estuaries SPA. 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.
- 5.6.8 In addition to the major allocations, a number of smaller allocations across the District could also cause an increase of visitor pressure on the suite of European sites in the District. The combined effect of these smaller allocations is included in Sections 5.3 and 5.5 above.

5.7 Survey of site managers opinion of impacts of additional visitors

- 5.7.1 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 sites they managed. The organisations with land managers asked for views, via a survey form, are listed below in Table 9.

Table 9. Organisations where land managers were asked for views on visitor impacts

Organisation	Number of 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

- 5.7.2 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.
- 5.7.3 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.
- 5.7.4 Four replies were received using the survey form. Two respondents were happy for their replies to be made public (given in Appendix 6), 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.
- 5.7.5 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.
- 5.7.6 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.
- 5.7.7 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.
- 5.7.8 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.
- 5.7.9 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.
- 5.7.10 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 on some sites in the UK and that high numbers of people can disturb estuary birds so that bird populations decrease (see references in Section 6.2). The results therefore are helpful as indicative that robust evidence of human impacts on wildlife elsewhere could with caution be referable to European sites in the Suffolk Coast and Heaths.

5.8 Other visitor surveys, comparison of visitor surveys and calculations of impact

Comparison of AONB and South Sandlings impacts

- 5.8.1 The calculations in Section 5.3 for visitors to the Suffolk Coast and Heaths AONB, and in 5.5 for visitors to the South Sandlings result in different figures for increases in visits. For the Suffolk

Coast and Heaths AONB, the increase in visitors to European sites is estimated at 2 – 5 %, whereas for the South Sandlings the increase is 6 – 12%. The differences may be due to the baseline research being different, or simply because the AONB is a much larger area with much of it at a greater distance from population centres and strategic allocations compared to the South Sandlings. Fewer people living in or east of Ipswich might visit distant parts of the AONB compared to the South Sandlings, thus having a smaller impact over the AONB.

- 5.8.2 Both surveys contain various assumptions about the visitor behaviour, and both are based on sample surveys; neither should calculations be treated as precision forecasting tools. It would not be appropriate to choose either calculation of visitor increase as taking precedence over the other, nor to take an average of the two calculations to provide one overall prediction. In this assessment, both calculations are considered to be reasonable and useful indicators of increases in visitors for their respective areas.

Deben Estuary Visitor Survey report, July 2011

- 5.8.3 A Deben Estuary Visitor Survey report was made available in July 2011 by No Adastral New Town, a campaign group. The report gives details of a visitor survey carried out in April and May 2011 to provide detailed local information on recreational activities in the Waldringfield area (including Martlesham church car park and Hemley). The visitor survey methodology used a similar but reduced methodology to the South Sandlings Visitor Survey. Although the methodology and report have some fundamental problems (for example it is unclear if all survey points were surveyed simultaneously, people at Waldringfield may have been double-counted at the car park and beach, and some data looks anomalous), the results have some consistency with the South Sandlings Visitor survey and so are helpful.
- 5.8.4 The average size of groups of people was similar, and the proportion of people walking with or without dogs is similar between the Deben Estuary and South Sandlings surveys. The proportion of dog walkers compared to walkers without dogs was however much less in the Deben Estuary survey. The overall proportion of people who travelled by car was very similar in both surveys, although people tended to stay longer on the Deben Estuary perhaps because of the pub at Waldringfield.
- 5.8.5 The proportion of visitors who visit all year round was also significantly lower in the Deben Estuary visitor survey compared to the South Sandlings. This is a key point because wintering birds are vulnerable to disturbance in the estuary, yet visitor numbers are lowest in winter according to the Deben Estuary survey.
- 5.8.6 The distances people travelled to reach the survey points on the Deben Estuary survey are very different to the distances people travelled to the South Sandlings. For example, the arithmetic mean of the distance travelled on foot to the Deben Estuary survey points was 3.8km, with a number of people recorded as walking to the survey area from Ipswich, Woodbridge and from even further away such as Trimley St Mary near Felixstowe. The South Sandlings in comparison used medians to work out where most people came from, with a median distance of 400m travelled on foot to an access point to the South Sandlings.
- 5.8.7 The Deben Estuary survey did not question people about their walks, for example where they went or how far they went. Data on estuary-side walks is absent; whether people simply walked a short distance along the beach at Waldringfield, walked a circular route along the estuary returning inland, or other route, is not known. The number of people walking away from the busy beach area at Waldringfield is not known. Fifteen groups of people out of 510 groups were interviewed across the 16 days of interviews at Manor Farm, away from car parks and a point on one circular walk from Waldringfield car park, suggesting that few people walk that particular circular route.
- 5.8.8 The Deben Estuary visitor survey is helpful in pointing out the activities which visitors carry out, (primarily walking, sailing, outing with family, pub, dog walking) and giving a general picture of the survey area, but does not have the data or analysis to predict changes in visitor numbers.

Natural England national visitor survey

5.8.9 Natural England has published the results of a 2010 / 2011 national visitor survey¹⁴ which gives a national picture of visitor use of the countryside, urban greenspaces and the sea coast. The findings included

- Just over half of visits to the natural environment were taken to the countryside (53%), while 37% were to green spaces within towns and cities. In total, 11% of visits were taken in coastal locations of which seven per cent were taken to a green space in a seaside town and four per cent to another coastal location.
- While parks in towns and cities continued to be the most visited location, representing 22% of all visits (558 million visits), these visits decreased from the levels recorded in 2009/10 when 24% of all visits were taken to this type of location (679 million visits). Forests and woodlands received 13 per cent of all visits, an increased share from 11% in 2010.
- Two-thirds of visits (66%) were taken within two miles (3.2km) of the respondents home (or other start point e.g. their workplace or holiday accommodation) highlighting the importance of accessible green space that is close to home.
- Visits to coastal areas were more likely to be taken by car, while the majority of countryside visits were taken on foot by people living locally in rural or urban fringe areas.
- The average visit to the natural environment lasted for just under 2 hours (1 hour 58 minutes). This finding is not significantly different from that found in the 2009/10 survey.
- Around half of all visits (51%) involved walking with a dog.
- The average group size was 2.4 people.
- The largest proportion of visits involved walking (63%). A car or van was used in 30% of visits and public transport was used for only 2% of visits.
- The vast majority of visits involving a journey of less than one mile were taken on foot (92%) while 79% of visits where the journey was 5 miles or more featured a car or van as the main mode of transport used. Urban locations were most likely to have been visited on foot (67%). Seaside resorts or towns and other coastal areas were the type of place most likely to involve travelling by car (40% and 45% respectively).
- 82% of all journeys to a greenspace were under 8km.

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

Further Dorset studies

5.8.11 A study of visitors to heaths and the sea coast in Dorset in 2008¹⁵ unsurprisingly found that the closer their home location is to a greenspace, the more likely they are to visit it. All greenspace types, except coastal, showed a rapid decline in the proportion of respondents who visit them as the distance increases to around 5 km. There was a negative relationship between the mean number of visits per respondent to a particular greenspace and the distance from that greenspace to their home postcode, with a steeper decline in the number of visits within the first 3 km and then a plateau thereafter. This was observed across all of the greenspace types.

¹⁴ Natural England (2011) Monitor of Engagement with the Natural Environment: The national survey on people and the natural environment Annual Report from the 2010-11 survey NECR083

¹⁵ Liley, D., Sharp, J. & Clarke, R. T. (2008). Access Patterns in South-east Dorset. Dorset Household Survey and Predictions of Visitor Use of Potential Greenspace Sites. Dorset Heathlands Development Plan Document. Unpublished report, Footprint Ecology

This confirms that those respondents living close to a greenspace sites tend to visit them more frequently than those who live further away.

- 5.8.12 Comparing greenspace types, the “catchment” is smallest for parks and gardens with 50 % of visits to them made by respondents living within approximately 1 km, while for other non-coastal sites, including heathland, this value is 1.5 to 2 km. A greater visitation to urban rather than rural heaths may reflect the lower size and availability of greenspace alternatives in urban areas and small/no access to gardens in urban areas.
- 5.8.13 This report, part 1 of which is downloadable from the internet, contains no comparisons of people’s use of heaths and greenspaces. Part 2 of the report, which is hard to source but has been summarised in a Council report¹⁶, says that the area of greenspace within the vicinity did not affect the amount of visits to a heath, but the number of greenspaces within the vicinity did – the more choice of greenspaces there were, the fewer people visited heaths.

¹⁶ <http://www.eastdorsetdc.gov.uk/democracy/docstore/0904/090424155344-a66bf96d-279a-4f50-918f-002361845217.pdf>, accessed on 5th August 2011

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 SP2. Housing numbers.

Policy overview

6.2.1 Policy SP2 sets the amount of housing to be allocated in Suffolk Coastal District over the period to 2027. Policy is

Strategic Policy SP2 – Housing Numbers

The Core Strategy will make provision for the creation of up to 7,590, new homes across the district in the period 2010 to 2027 as set out in Table 3.1

Land for new housing will be distributed in accordance with the principle of a settlement hierarchy, itself drawn up on the principles of sustainable development.

New homes will be phased in order to ensure a continuous supply of housing land but at a rate commensurate with anticipated employment growth and the provision of any necessary associated new and improved infrastructure provision.

Further provision of new homes is expected to come forward across the plan period by means of small scale rural community led schemes for example via the new Community Right to Build. These types of schemes do not require specific allocation through the LDF, but have the potential to provide a mix of affordable and open market housing. It is anticipated that this could amount to around 50 homes per year but as a new initiative will be closely monitored.

6.2.2 The distribution of housing throughout Suffolk Coastal District is described in a range of other policies for geographic parts of the District, in particular **SP20 Eastern Ipswich Plan Area, SP21 Felixstowe, SP22 Aldeburgh, SP23 Framlingham, SP24 Leiston, SP25 Saxmundham, SP26 Woodbridge, SP27 Key and Local Service Centres, and SP28 other villages.** Supporting text to these policies give figures for housing allocations in the various parts of the District. All these policies are considered within this assessment of policy SP2 Housing Numbers.

6.2.3 In the Eastern Ipswich Plan Area, around Martlesham, 2320 housing allocations are proposed, and 1760 housing allocations are proposed in the Felixstowe and Trimley peninsula. There are smaller allocations in small towns such as Woodbridge and Leiston, smaller allocations in Key Service Centres, and a number of existing planning permissions not yet built, 'urban potential', and some existing Local Plan allocations. Including all these, 7,590 new dwellings are planned for the period up to 2027.

6.2.4 These allocations are shown on the Key Diagram as shown in Appendix 5.

Impact on the suite of European sites in the wider area

6.2.5 It is estimated (Section 5 above) that there will be a general increase in visitors to the European sites within Suffolk Coast and Heaths AONB of around 2% – 5%, and a general increase in visitors to European sites in the South Sandlings study area of 6% - 12%, as a result of

implementation of existing permissions since 2010 and new housing allocations, in the Suffolk Coastal District Core Strategy and Development Management Policies in combination with allocations in the Ipswich Borough Core Strategy.

- 6.2.6 This increase may have varying impacts on the European sites in the study area.
- 6.2.7 The European sites in Essex are considered to be further away and less often visited from Suffolk Coastal District than the European sites in the Suffolk Coast and Heaths, and so the increase is ascertained to have no adverse effect 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 upon it, so it is ascertained that there will be no adverse effect 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 upon it, so it is ascertained that there will be no adverse effect 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 Suffolk Coastal would have little impact on these sites. The proximity of the sites to Norwich and Great Yarmouth, the existing high numbers of visitors¹⁷ and the great proportion of visitors from across the UK and beyond, indicate that the contribution of Suffolk Coastal to visitor pressure is relatively small. It is considered that there will be no adverse effect 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 Suffolk Coastal District 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. The use of the beach by users of a nearby holiday camp and other tourists is such that the relative impact of any residential visitors from Suffolk Coastal is thought to be insignificant. It is also relevant that the larger concentrations of housing allocations are in Martlesham and Felixstowe, which are at some distance from these European sites. It is considered that it can be ascertained that there will be no adverse effect 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, several monitoring units of this site is unfavourable and declining condition (Section 5.2 and Appendix 3) due to shingle beach trampling with 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 the heaths¹⁸. 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, Natural England has commented that it does not routinely monitor disturbance to birds on Sites

¹⁷ <http://www.broads-authority.gov.uk/managing/recreation.html>

¹⁸ 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.

of Special Scientific Interest, and recreational impacts may therefore not be included as a reason for unfavourability in condition assessments. However, anecdotal evidence from land managers in the survey (Section 5.7) suggests that the current visitor levels are causing harm, with dogs off leads having the greatest impact. The predicted increases in visitors are not an insignificant amount in this context. The threshold value at which visitor numbers switch from being having minimal impact to harmful is not known. It is possible that a simple threshold does not exist, but that disturbance may be proportional to visitor activity over a wide range of activity levels. An increase in disturbance could result in the loss of one or more breeding woodlark or nightjar, depending upon the distribution of these extra visitors through the component parts of the SPA.

- 6.2.14 It is consequently not possible to ascertain that there will be no adverse effect upon the integrity of the Sandlings SPA in the absence of mitigation.
- 6.2.15 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, Orfordness – Shingle Street 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 saltmarsh¹⁹ through various mechanisms and at various times of year. However, none of these are currently recorded by Natural England as being unfavourable as a result of visitor activity.
- 6.2.16 The limited results of the Site Managers' survey indicated that several respondents believed that even a 1% increase in visitors would be harmful. This view is inconsistent with the organisations which employ the site managers, which continue to promote visits to their sites, for example through leaflets or web-based advertising²⁰. 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 style, but when the recreation at designated sites starts to cause damage to the European site in question, further management is required to reduce impacts.
- 6.2.17 An increase in visitors may exacerbate trampling damage to shingle vegetation on Minsmere – Walberswick (para 6.2.12 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 any of the 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 and SACs do not manage visitors in the sense that numbers are not restricted, dogs are not controlled, or visitors are not 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.
- 6.2.18 At the present state of knowledge it is not possible to be certain that the increase of visitors would not result in an increase of disturbance or trampling damage to qualifying features on estuarine / coastal sites. It is consequently not possible to ascertain that there will be no adverse effect upon the integrity of the Alde-Ore Estuary SPA, Alde-Ore and Butley SAC, Orfordness – Shingle Street SAC, Deben Estuary SPA, Minsmere - Walberswick Heaths and Marshes SAC, Minsmere – Walberswick SPA and Stour and Orwell Estuaries SPA in the absence of mitigation.

Impact on specific nearby European sites alone or in combination

- 6.2.19 It is considered that major areas of new housing may impact upon nearby European sites, if the European sites are used by residents from the new housing to such a level that disturbance or

¹⁹ Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit.

²⁰ see, for example, <http://www.suffolkcoastandheaths.org/downloads.asp?PageId=2>

trampling damage is initiated. The major housing allocations which need to be considered are at Martlesham, Ipswich, and Felixstowe.

6.2.20 In a study of recreational disturbance of birds on the Stour and Orwell Estuaries by Ravenscroft, Parker, Vonk and Wright (2007)²¹ the most visited parts of both estuaries were at Nacton, Pin Mill and Bridge Wood, part of Orwell Country Park, all of which had around ten or more visitors per hour. The level of visitors was correlated with a low number of birds, indicating that birds had been disturbed and therefore those parts of the estuary were effectively unavailable to the SPA qualifying birds. This result is readily applicable to other estuaries; where visitor numbers are high, bird numbers are low. However, following the report Natural England has assessed those units with high visitor numbers as in favourable condition. The study was not designed to quantify a threshold at which visitor numbers switch from being benign to damaging. However, Natural England has commented that it does not routinely monitor disturbance to birds on Sites of Special Scientific Interest, and recreational impacts may therefore not be included as a reason for unfavourability in condition assessments.

6.2.21 Sections 5.5 and 5.6 above explain 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.

Impact of the strategic allocation east of Ipswich on Deben Estuary alone or in combination

6.2.22 The Deben Estuary near Martlesham is believed to have a low to moderate level of terrestrial recreational activity at present. There is no data to confirm this belief, but the estuary-side path between Martlesham Creek and Waldringfield is in poor repair and few people use it for more than a short circular walk. There is no nearby visitor parking, with the nearest public car parks being in Woodbridge to the north and Waldringfield to the south. The car park for Martlesham church is also available for casual parking. A boatyard in the creek may cause localised disturbance to birds. The Natural England condition assessments for mudflats supporting SPA qualifying species in this part of the Deben Estuary SSSI (units 6,8 and 9) are unfavourable declining (Appendix 3) but due to saltmarsh erosion rather than due to visitor disturbance or trampling. However, Natural England has commented that it does not routinely monitor disturbance to birds on Sites of Special Scientific Interest, and recreational impacts may therefore not be included as a reason for unfavourability in condition assessments.

6.2.23 The Deben Estuary SPA has up to 22,000 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	15016 (JAN)	7846	19511	4348
03/04	15051 (JAN)	7687	20598	3142
04/05	21389 (JAN)	11998	22342	4300
05/06	15905 (JAN)	9857	21020	4282
06/07	13505 (JAN)	8917	17654	3484
MEAN		9081	20225	3911

²¹ Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit.

6.2.24 A more detailed breakdown of bird numbers by species for the whole SPA is given in Appendix 7. The bird counts are made by dividing the estuaries into 'count sectors', with counts made for each sector separately.

6.2.25 The count sector of the SPA adjacent to Martlesham Creek is called 'count sector 5'. Bird counts for this sector alone are given in the table below.

Year	Peak Monthly Total	Autumn Peak	Winter Peak	Spring Peak
02/03	1575 (DEC)	931	2237	515
03/04	845 (NOV)	685	1262	130
04/05	1145 (JAN)	186	1653	305
05/06	759 (FEB)	340	956	159
06/07	854 (MAR)	944	1417	66
MEAN		617	1505	235

6.2.26 A more detailed breakdown of bird numbers per month is given in Appendix 8.

6.2.27 An allocation of 2320 houses at Martlesham could potentially cause problems to the Deben Estuary, from increased visitor use causing significant disturbance to SPA birds; trampling of water-edge habitat in Martlesham Creek containing a rare snail might also occur, although this would be an impact upon the component SSSI rather than a SPA issue.

6.2.28 The key diagram shows the Ipswich Policy Area in an indicative location at Martlesham, but there no definitive area boundaries are proposed. The master-planning of new housing may also include a desire for new footpath links to the estuary. It is therefore possible that visitor recreation activity would substantially increase on the foreshore of Deben Estuary SPA, bringing in high levels of disturbance to what is currently little disturbed and a 'refuge' area for SPA-qualifying birds (see 6.2.29 below). It is not possible with the current state of knowledge to be able to quantify the new amounts of disturbance or the impact caused. These matters will relate to the location of housing, its distance from the SPA and ease of access to the SPA. It is noted that there is a small network of public footpaths to the SPA in the vicinity of Martlesham Church.

6.2.29 The location of high tide bird roosts has been kindly explained by Nick Mason, a local birdwatcher who co-ordinates bird counts on the Deben Estuary. When the tide rises, mudflats are covered and birds must leave the mudflats to roost on drier land until the tide falls. Some birds fly to the wet grassland of Kingston Marshes, between Martlesham Creek and Woodbridge. Other birds fly to roost in the wet grassland a short distance to the south of Martlesham Creek, east of Hill Farm. Some birds fly further south to the main Deben Estuary high tide roost on saltmarsh at Hemley. It is possible that on occasion that some birds might fly further inland, towards Martlesham village, but this is not thought to be common.

6.2.30 It therefore cannot be ascertained that an allocation of 2320 new dwellings at Martlesham will have no adverse affect upon the integrity of Deben Estuary SPA near Martlesham, given the current level of detail available within the Core Strategy and Development Management Policies and before the application of mitigation.

6.2.31 Provided that development is greater than 1km from a Natura 2000 site and that accessibility to the greenspace provision is adequate, it is unlikely that many visitors would walk from their home to the estuary, so this recreational activity would not substantially increase on the foreshore of Deben Estuary SPA at Martlesham, and there is expected to be no new high levels of disturbance from this typology of visitors to what is currently little disturbed and a 'refuge' area for SPA-qualifying birds.

6.2.32 The combination of the allocations at Martlesham with other allocations in Suffolk Coastal and Ipswich will not change this conclusion.

6.2.33 There are car parks at Woodbridge, Martlesham church and Waldringfield within 8km of the indicative housing area, and it is possible that these will receive an increase of visitors for

recreation alongside the estuary. Recreation beside the estuary at Woodbridge is already great, so it is considered that there will be no extra impact on the SPA at that point from increased visitor numbers from new dwellings at Martlesham.

- 6.2.34 The Martlesham church car park is believed to be used at present as the starting point for an approximate 2.3km circular walk which includes the estuary wall and grazing marsh north of Hill Farm. No data on visitor numbers is known. The data in table 8 shows the number of visitors in the survey arising from households at a particular distance from access points to the study area. It is considered that the nearest point of the strategic allocation at Martlesham would be, say, 2 – 2.5km from the Martlesham church car park (The Deben Estuary Visitor Survey by NANT of July 2011 gives 2.5km). Table 8 shows that for the 2221 dwellings at that distance from access points within the study area, 45 visitors were noted during survey. This is equivalent to 2.0 visitors surveyed per 100 dwellings. For 2320 new dwellings, 2.0 visitors surveyed per 100 dwellings would have generated, proportionately, 46.4 additional visitors in the survey. This number of new visitors using the Martlesham church car park is not trivial. Without the further mitigation of provision of local greenspace convenient for routine use by residents of the strategic allocation at Martlesham, a new Country Park or similar high quality facility, and a visitor management programme it would not be possible to ascertain that there would be no adverse affect upon the integrity of the Deben Estuary at that point.
- 6.2.35 The car park at the Deben Estuary at Waldringfield is privately operated for users of the pub and sailing club, with some public pay and display parking. It is noted that the Waldringfield Parish Plan of 2004 commented that there was at that time no public car park and advocated the provision of a car park. Waldringfield Parish Council, in its website <http://Waldringfield.onesuffolk.net> says that parking is limited. This limit to parking suggests that there is limited availability for an increase in visitors arriving by car to Waldringfield. The Parish's 2008 Tourism and Visitors Policy also mentions the lack of a public car park and a need to resolve the status of the 'old car park'; so subsequent provision of public car parking may have met this policy. It is considered that the nearest point of the strategic allocation at Martlesham would be, say, 2.5 – 3km from the Deben estuary at Waldringfield (The Deben Estuary Visitor Survey by NANT of July 2011 gives 3km). Table 8 shows that for the 2024 dwellings at that distance from access points within the study area, 29 visitors were noted during survey. This is equivalent to 1.4 visitors surveyed per 100 dwellings. For 2320 new dwellings, 1.4 visitors surveyed per 100 dwellings would have generated, proportionately, 33.4 additional visitors in the survey. This number of new visitors to Waldringfield is not trivial. Without the further mitigation of provision of local greenspace convenient for routine use by residents of the strategic allocation at Martlesham, a new Country Park or similar high quality facility, and a visitor management programme it would not be possible to ascertain that there would be no adverse affect upon the integrity of the Deben Estuary at that point. Given the limit to available parking the increase in visitors walking along the estuary might be less than that predicted. A comparison with the town of Woodbridge, further upstream on the Deben Estuary, shows that Woodbridge has a much larger resident and visitor population, greater parking facilities, well used estuary-side paths and yet the Deben Estuary is not assessed by Natural England as being unfavourable due to human disturbance although the assessment process is limited as explained previously.
- 6.2.36 Estuary-side footpaths north and south of Waldringfield are eroded and impassable, according to data received from Suffolk County Council in August 2011 (see Figure 03). This limits the walking routes available from Waldringfield.
- Impact of the strategic allocation at Felixstowe on Stour and Orwell Estuaries SPA and Deben SPA alone or in combination*
- 6.2.37 For the Felixstowe area, there is a proposed strategy of 1,760 additional dwellings to be allocated in a dispersed manner in the Core Strategy & Development Management Policies document. This growth is to be organic and evolutionary in the Felixstowe & Trimleys area over a mixture of sites immediately abutting existing built up areas, whilst preserving as far as possible prime agricultural land for essential food production.

- 6.2.38 The Orwell Estuary (part of the Stour and Orwell Estuaries SPA) has a relatively low level of visitor access as it approaches Felixstowe, compared to higher reaches nearer Ipswich (Ravenscroft et al 2007). Consequently, bird disturbance is low and the condition on the northern bank as assessed by Natural England in units 13 and 16 are unfavourable because of erosion. However, Natural England has commented that it does not routinely monitor disturbance to birds on Sites of Special Scientific Interest, and recreational impacts may therefore not be included as a reason for unfavourability in condition assessments. It is considered that current visitor levels are not harmful, not least because of the distance in reaching the north bank of the Orwell in the vicinity of the Trimleys from any public area or car park. It is also noted that Trimley Marshes nature reserve is well managed to successfully reduce any visitor impact to acceptable levels.
- 6.2.39 If housing allocations were to be within 1km of the estuary, for example around Thorpe Common, it would be within walking distance of the estuary. It is noted that there is a small network of public footpaths to the Orwell Estuary at that location. The master-planning of new housing may also include a desire for new footpath links to the estuary. It is therefore likely that without mitigation visitor recreation activity would substantially increase on the foreshore of Stour and Orwell Estuaries SPA, bringing in high levels of disturbance to what is currently little disturbed and a 'refuge' area for SPA-qualifying birds. It is not possible with the current state of knowledge to be able to quantify the new amounts of disturbance or the impact caused.
- 6.2.40 Provided that development is greater than 1km from a Natura 2000 site and that accessibility to the local greenspace provision convenient for routine use is adequate, it is unlikely that visitor recreation activity would substantially increase on the foreshore of the Stour & Orwell Estuaries SPA, so there is expected to be no new high levels of disturbance to what may be currently little disturbed and a 'refuge' area for SPA-qualifying birds.
- 6.2.41 There is one existing car park on the Orwell Estuary within 8km of the indicative housing allocation area which could have an increased use and bring extra visitors to cause more disturbance to SPA-qualifying birds. This is at Nacton and it already results in high levels of visitor disturbance, but many of the visitors are perceived to come from Ipswich (Ravenscroft et al 2007). It is considered that in combination with allocations in Ipswich there may be greater visitor pressure on the Stour-Orwell Estuaries SPA at Nacton causing greater disturbance to birds.
- 6.2.42 It can be ascertained that an allocation of 1760 new dwellings at Felixstowe / The Trimleys will have no adverse affect upon the Stour and Orwell Estuaries SPA, given a location well over 1km from the estuary and with adequate greenspace provision.
- 6.2.43 The Deben Estuary SPA is further than 1km away from the indicative housing area at Felixstowe so it is unlikely that there will be an additional visitor recreation resulting from people walking from the housing allocations to the Deben. There are car parks at Felixstowe Ferry and Waldringfield, within 8km of the indicative housing area, and it is possible that these will receive an increase of visitors for recreation alongside the estuary. Recreation at Felixstowe Ferry is primarily based around the harbour, and the North Sea beach, so it is considered that there will be little extra impact on the SPA from increased visitor numbers. The Deben Estuary visitor survey has identified that some of the visitors to that survey area do come from Felixstowe and nearby areas. It is considered that the nearest point of the strategic allocation at Felixstowe / The Trimleys would be, say, 7 – 7.5km from the Deben estuary at Waldringfield. Table 8 shows that for the 2826 dwellings at that distance from access points within the study area, 11 visitors were noted during survey. This is equivalent to 0.4 visitors surveyed per 100 dwellings. For 1440 new dwellings, 0.4 visitors surveyed per 100 dwellings would have generated, proportionately, 5.6 additional visitors in the survey. This number of new visitors to Waldringfield is low but not trivial. Without the further mitigation of provision of local greenspace convenient for routine use by residents of the strategic allocation at Felixstowe / The Trimleys, a new Country Park or similar high quality facility, and a visitor management programme it would not be possible to ascertain that there would be no adverse affect upon the integrity of the Deben Estuary at that point.

Summary of initial conclusions

- 6.2.44 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, Orfordness – Shingle Street SAC, Deben Estuary SPA, Minsmere - Walberswick Heath and Marshes SAC, Minsmere – Walberswick SPA, Sandlings SPA, and Stour and Orwell Estuaries SPA. The increase could be in the range 2 – 5% or 6 – 12% (Section 5.8) and it is not possible to ascertain that there will be no affect upon the integrity of those European sites, in the absence of mitigation. This conclusion is for the Suffolk Coastal Core Strategy and Development Management Policies alone, as well as in combination with the Ipswich Core Strategy and Policies. Each individual development site will require the process of the Conservation of Habitats and Species Regulations 2010 to be followed, including Appropriate Assessments in many cases, at the planning application stage. Section 7 describes strategic mitigation for the impacts.
- 6.2.45 Provided that strategic housing proposals for development at Martlesham and Felixstowe Peninsula are greater than 1km from the Deben Estuary and Orwell Estuary respectively, together with improvements in accessibility to greenspace provision, it is unlikely that visitor recreation activity would substantially increase on the foreshore of those estuaries. It is therefore concluded that there would be no adverse affect upon the integrity of the respective European sites.
- 6.2.46 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 either alone or in combination with the Ipswich Core Strategy and Policies.

Comparison with RSS conclusions

- 6.2.47 This conclusion differs from the initial 'Habitats Regulations Assessment' for the Regional Spatial Strategy²². That assessment concluded that there was likely to be no significant effect of the housing allocation for Ipswich Borough / Suffolk Coastal District 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 (ie 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 effects 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 effects on the integrity of sites of European or international importance'
 - Generic provisions have been made within the policies in the RSS (eg ENV3) supported by more specific provisions to ensure that the integrity of Natura 2000 and Ramsar sites are not adversely affected by development.
 - The initial RSS assessment did not specifically consider the increased amount of visitors to European sites from an increased population, regardless of the exact location of the housing allocations.

²² Fulton (2006) East of England Regional Spatial Strategy: Habitats Regulations Assessment. ERM, for Government Office for the East of England.

6.2.48 A second Appropriate Assessment of the Regional Spatial Strategy²³ assessed housing policies very briefly and, without analysis, 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.*

6.2.49 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 this stage, which is why the conclusions differ. Furthermore, the Government has announced its intention to abolish the Regional Spatial Strategies.

6.3 Policy SP5. Employment land.

Policy overview

6.3.1 The policy makes provision for 8.5ha of employment land, particularly at the strategic sites at Felixstowe Port, Martlesham Heath business campus, including Adastral Park and Ransomes Europark. Other employment land will be identified at other, smaller sites, at the Site Specific Local Development Document.

6.3.2 Policy SP5 states:

Strategic Policy SP5 – Employment Land

The Core Strategy will make provision for at least 8.5 hectares of new employment land within the district in support of business and to help facilitate the provision of new jobs. This represents its contribution towards the creation of in the region of 30,000 new jobs identified previously in the RSS within the Suffolk part of the Haven Gateway.

Three areas are identified as Strategic Employment Areas. The first two have a regional significance and are identified as key economic drivers for the Haven Gateway. The third is of strategic significance due to its overall size and mix of uses and the number of jobs it supports. The Council will support the retention, expansion and consolidation of these areas subject to conformity with the remainder of the strategy:

- **Felixstowe Port;**
- **Martlesham Heath Business Campus, including Adastral Park; and**
- **Ransomes Europark as part of a wider employment corridor extending into Ipswich Borough.**

With regard to Felixstowe Port, in addition to the Felixstowe South reconfiguration works that are currently underway, this includes provision of additional sites for necessary supporting port-related uses.

In respect of Martlesham Heath, the opportunity is available to create a high-tech business cluster, building on BT's research and development headquarters at Adastral Park. Specific encouragement will be given to the location of other

²³ 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)

high tech information, communication and technology sector businesses in this area that would benefit from co-existence over other more general uses.

Elsewhere across the district there are a number of employment areas that are significant at the district level. These are identified as General Employment Areas and will be identified in the Site Allocations and Area Specific Policies Development Plan Document and will be shown on the Proposals Map. The appropriate uses in General Employment Areas will normally be B1, B2 and B8 uses unless specified in specific policies. Other ancillary uses such as take away food, nurseries/crèche, and leisure may be appropriate if the primary purpose is to provide a service to local workers and not a wider area.

The strategy of creating new employment land will be complemented by one of protecting existing employment sites.

Impact upon European sites

- 6.3.3 The strategic provision at Felixstowe port does not allocate any particular land but says that the provision will occur on unidentified 'vacant' land. This land might include brownfield land within the port, or arable land in the vicinity of the port. It is unlikely that the Stour and Orwell Estuaries SPA would be treated as 'vacant land', although there is potential for development to take place on brownfield land close to the SPA.
- 6.3.4 The provisions of policy SP14 Biodiversity and Geodiversity specifically prevent the SPA from being harmed by developments, so the aggregate effect of the policies prevents employment land at Felixstowe Port from causing harm to the adjacent SPA, during construction or from land-take. Any development proposal which might arise will be subject to its own Appropriate Assessment.
- 6.3.5 Adastral Park, and the Martlesham Heath business campus, are over 2km from the Deben Estuary SPA. Direct effects from construction or operation of the employment facilities are very unlikely to have an impact upon the SPA. Indirect effects are expected to be absent; there is no known effect of the existing business park upon the estuary and, for example, no extra visits to the estuary are expected as a result of the employment facilities.
- 6.3.6 Ransomes Europark is sufficiently far from the Stour and Orwell Estuaries SPA that direct effects from construction or operation of the employment facilities are very unlikely to have an impact upon the SPA. Indirect effects are expected to be absent; there is no known effect of the existing business park upon the estuary and, for example, no extra visits to the estuary are expected as a result of the employment facilities

Conclusion

- 6.3.7 It is ascertained that policy SP5 will have no adverse affect upon the integrity of any European sites.

6.4 Policy SP8. Tourism

Policy overview

- 6.4.1 Policy SP8 describes all areas of the District and their capacity to absorb new tourism development and additional visitors. The policy gives a hierarchical approach to development, targeting it to larger towns and away from the Heritage Coast and AONB.
- 6.4.2 Policy SP8 is

Strategic Policy SP8 – Tourism

Tourism is an important element of the district economy. Suffolk Coastal possesses a high quality built and natural environment, rich in history and culture, within easy reach of large numbers of people from within and outside of the area. In order to manage tourism in a way which protects the features which

make the district attractive to visitors, proposals for tourism-related development will be determined by the areas capacity to absorb new development and additional activity.

The areas are:

- **The resort of Felixstowe, located on the coast and adjacent to the AONB, which is a priority for new tourist activity;**
- **The market towns of Framlingham, Leiston and Saxmundham. These are considered to have the capacity to absorb some modest development thereby taking pressure off the more sensitive areas;**
- **Aldeburgh and Woodbridge. Two small towns in sensitive locations within and adjacent to the AONB respectively. The protection of their settings will be of prime importance;**
- **The Heritage Coast. The environment is of national significance and the only development to be permitted will be individual conversions to tourist accommodation to a high standard of design;**
- **The Suffolk Coast and Heaths AONB. Development will be restricted to conversions and improvements/minor extensions to existing facilities within sustainable surroundings where a landscape assessment shows these could be accommodated with no adverse impact;**
- **The remaining area east of the A12. In addition to new facilities through conversions or extensions to existing facilities, modest new developments in sustainable locations; and**
- **The area west of the A12. This area has the potential to absorb additional tourist pressure and subject to the implications for the environment, including the generation of traffic, the Council will support and promote tourism west of the A12.**

Applicants will be expected to undertake biodiversity and habitat assessments and to ensure that any development of tourism related facilities does not result in noise and/or air pollution and that it conforms to other environmental protection policies. 'Green' tourism and the use of public transport will be encouraged. Where necessary the Council will support the introduction of local management solutions to the problems created by tourism /visitors.

Impact on European sites

- 6.4.3 All the European sites within Suffolk Coastal District are within the existing Suffolk Coast and Heaths AONB, where development is strictly limited, so there will be no direct impact of development and little change in visitor pressure.
- 6.4.4 However, there is potential for indirect effects of tourism, such as an increase of visitors to the European sites causing harm such as trampling of shingle vegetation or disturbance to birds.
- 6.4.5 In 2006, there were 420,700 staying trips to the Suffolk Coast and Heaths AONB (i.e. tourists who stayed overnight) with a total of 1,570,000 staying nights²⁴. There is no compulsory registration of tourism accommodation, but it is estimated that there are 511 establishments providing 11,289 bed spaces of tourism accommodation in Suffolk²⁵. The proportion of these in Suffolk Coastal is unknown but it might be expected to have more than the average for Suffolk; perhaps 150 establishments and 125,000 staying trips.
- 6.4.6 Much of any new tourism-related accommodation development is expected to cater for summer visitors. In winter, where wintering birds are SPA qualifying features, tourism is reduced and existing capacity would be sufficient. Many tourists who wish to 'experience nature' are

²⁴ East of England tourist board (undated) Economic Impact of Tourism. East of England Protected Landscapes and The Brecks.

²⁵ East of England Tourism (undated) Serviced accommodation stock in the East of England 2008.

expected to travel to 'visitor destinations' within European sites, such as the RSPB Minsmere nature reserve, where visitors are well managed to avoid any harm to designated features. Smaller sites, such as Blaxhall Heath (part of Sandlings SPA) for example, are less likely to be used by tourists.

- 6.4.7 The priority for tourism development is given in the Core Strategy as Felixstowe, where people enjoy traditional beach holidays, with entertainments provided within the town. The second location in the policy where more than modest development might take place is west of the A14. Tourism development here would require a car journey to a European site, reinforcing the view that tourists are likely to go to a site with a car park and facilities already in place. The 'protection of the settings' of Aldeburgh and Woodbridge indicates that large developments in those towns would not be permitted under this policy.

Conclusions

- 6.4.8 The lack of a minimum target for development, lack of allocations, and the locations suggested for development, indicate that tourism development can be ascertained to have no adverse affect upon the integrity of any European sites.

6.5 Policy SP13. Nuclear Energy.

Policy overview

- 6.5.1 Policy SP13 considers the local issues which would have to be addressed as part of proposals for a new nuclear power station at Sizewell, including nature conservation.
- 6.5.2 The policy does not propose, promote or allocate a new nuclear power station. Any new power station would require an application under the Electricity Act to the Secretary of State at the Department of Energy and Climate Change.
- 6.5.3 The policy therefore does not influence whether or not a nuclear power station is built.

Conclusion

- 6.5.4 It is ascertained that policy SP13 will have no adverse affect upon the integrity of any European sites.

6.6 Policy SP17. Green space.

Policy overview

- 6.6.1 The policy advocates provision of well-managed access to green space, including countryside and coast. The Haven Gateway Green Infrastructure Strategy²⁶ will form the basis of the implementation. However, the Haven Gateway Green Infrastructure Strategy itself was not subject to an Appropriate Assessment. A Green Infrastructure Strategy was published in May 2011²⁷, also not subject to an Appropriate Assessment.
- 6.6.2 Policy SP17 is

The Council will seek to ensure that communities have well-managed access to green space within settlements and in the countryside and coastal areas, in order to benefit health, community cohesion and greater understanding of the environment, without detriment to wildlife and landscape character. Where adequate green space is not provided as part of a development, developer contributions will be sought to fund the creation of appropriate green space and/or management and improvement of access to green space. In particular, the Council will work on green infrastructure opportunities with partners in strategic housing growth areas in order to suitably complement development proposals.

²⁶ The Landscape Partnership (2008) A Green Infrastructure Strategy for the Haven Gateway.

²⁷ The Landscape Partnership (2011) Green Infrastructure Strategy for Suffolk Coastal District Council

Impact on European sites

- 6.6.3 Provision of additional greenspace through developer contributions has a beneficial effect upon European sites, by providing alternative areas for recreation so that visitor pressure on European sites for 'local' use is reduced. The greenspace standards, in the Haven Gateway Green Infrastructure Strategy and repeated in the text for policy SP17, do not necessarily meet the needs for residents as set out in Section 5.4 regarding lengths of walks through greenspace rather than a simple site area, but they do recognise the need for local recreation and larger sites within driving distance for activities such as dog walking. Policy SP17 provides mitigation to a large degree for the impacts of additional housing.
- 6.6.4 The policy does not allocate land in or adjacent to European sites for an increase in access to greenspace. Any such project which might arise will be subject to its own Appropriate Assessment, either as part of a planning application or within the Site of Special Scientific Interest / European site consenting procedure operate by Natural England. The policy itself will therefore not cause harm to any European site.

Conclusion

- 6.6.5 It is ascertained that policy SP17 will have no adverse affect upon the integrity of any European sites.

7 Mitigation

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 effect, 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

- SP5 Employment land.
- SP8 Tourism.
- SP13 Nuclear energy.
- SP17 Green Space.

7.1.3 There was one policy which was identified in Section 6 above for which it could not be ascertained that there would be no adverse effect upon the integrity of Alde-Ore Estuary SPA, Alde-Ore and Butley SAC, Orfordness – Shingle Street SAC, Deben Estuary SPA, Minsmere - Walberswick Heath and Marshes SAC, Minsmere – Walberswick SPA, Sandlings SPA, and Stour and Orwell Estuaries SPA. This was Policy SP2 'Housing numbers', together with SP20 Area East of Ipswich, SP21 Felixstowe, SP22 Aldeburgh, SP24 Leiston, SP26 Woodbridge, and SP27 Allocations in the key service centres. The impact was due to a predicted increase of visitors to all those European sites. The impact included an affect in combination with development in Ipswich Borough. All these policies are included with policy SP2 discussions below.

7.1.4 Mitigation for policy SP2 is given in Section 7.2 below.

7.2 Mitigation for Policy SP2. Housing numbers.

7.2.1 The November 2010 Reviewed Core Strategy, Policy SP2, contains proposals for 7,590 new dwellings, comprising 1,560 dwellings with planning permission and allocations deemed deliverable but not constructed at April 2010, 230 new dwellings on identified brownfield potential sites within existing physical limits boundaries, an estimated windfall of 540 dwellings, and 5,260 new allocations on greenfield land. This gives an annual requirement of 446 new dwellings per year between 2010 and 2027.

7.2.2 The total amount of the housing proposed within Suffolk Coastal District is given in the November 2010 Reviewed Core Strategy, in its table 3.3, as 2,320 dwellings in the Eastern Ipswich plan area, 1,760 new dwellings in Felixstowe Walton and the Trimleys, and 3,510 in the remainder of Suffolk Coastal District.

7.2.3 The principle of mitigation remains as that described in the 2009 Appropriate Assessment, which 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.

7.2.4 Detailed aims of such mitigation are

- To prevent a damaging increase in visitor number to all European sites across the Suffolk Coast and Heaths AONB
- To prevent a damaging increase in visitor numbers to specific parts of European sites likely to be particularly affected, especially in relation to proposed housing allocations at Martlesham and Felixstowe.

7.2.5 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 strategic allocations east of Ipswich and at Felixstowe

7.2.6 Provided that strategic housing proposals for development to the east of Ipswich at Martlesham are greater than 1km from the Deben estuary (thus reducing the likelihood of many walkers), and improvements to locally accessible natural greenspace are made (thus providing alternative recreation), visitor recreation would be lesser than if those measures had not been taken. However, there may still be some increase in visitor activity on the foreshore of the Deben Estuary SPA. Further mitigation to reduce harm, as described in paragraphs 7.2.7 – 7.2.15 below remains to be required. A planning application Appropriate Assessment would be needed to look at site- and plan-specific issues. Natural England advised in its email of 15th February 2011 to Suffolk Coastal District that it believes *'that any adverse effects on N2K sites could be mitigated by the use of planning conditions/obligations/legal agreements (S106) to allow us to conclude no adverse effect on integrity. Suitable strategies are detailed in our letter to SCDC of 12 February 2010 which could be employed following AA at project level.'*

7.2.7 Provided that strategic housing proposals for development at Felixstowe Peninsula are greater than 1km from the Orwell estuary, and improvements to locally accessible natural greenspace are made, it is possible that visitor recreation activity would not substantially increase on the foreshore of the Stour & Orwell estuaries. Therefore it is expected that there are to be no new high levels of disturbance to what is currently little disturbed and a 'refuge' area for SPA-qualifying birds. However, a planning application Appropriate Assessment could be needed to look at site- and plan-specific issues.

7.2.8 The developments should deliver sufficient greenspace to accommodate the increased requirement for local recreation opportunities, so that there are no impacts upon the respective SPAs. The provision of adequate public open space within strategic developments, to provide alternative recreational opportunities for routine use, will include areas which are suitable and attractive for walking dogs off leads. The development of the public open space would be timed to either precede or coincide with the first phase of housing development, as people would be expected to establish walking habits (including dog walking) as soon as they moved to the development. The open green space would also be linked to PRoW in the area in such a way as to provide a network of paths and circular walks to attract people away from designated sites.

Natural England's national visitor study (see Section 5.8) showed that 37 per cent of all visits were to green spaces within towns and cities, with parks in towns and cities being the most visited location. This shows the value of urban greenspace to many people. Two-thirds of visits (66 per cent) were taken within two miles (3.2km) of the respondents' home highlighting the importance of accessible green space that is close to home. Greenspace provision close or within residential development, with characteristics of urban parks and of countryside, is therefore likely to be very well used and a good method of reducing pressure on European sites. Studies in Dorset (Section 5.8) have shown that the more choice of greenspace was available to people, the less demand there was for visits to heathland, suggesting that this mitigation would be effective.

Mitigation for all proposed housing in Ipswich Borough and Suffolk Coastal District

7.2.9 Mitigation for an increase in visitors to European sites is based on providing alternative recreational choices for residents (existing and proposed) of Ipswich Borough and Suffolk Coastal District, and managing visitors on existing European sites. 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 or similar high-quality provision is proposed for a location to the north or north-east of Ipswich as mitigation for future housing development. This would provide an alternative to European sites and therefore attract existing and proposed residents who might otherwise visit a European site. A new Country Park has been under discussion for some time,

and was suggested by the Haven Gateway Green Infrastructure Project²⁸ independently of this Appropriate Assessment, in order to provide strategic green space for the population of greater Ipswich, particularly the northern part of the Borough. A suitable location would be accessible from major routes out of Ipswich, Woodbridge, and Felixstowe and therefore providing a facility for people from those towns. The Ipswich Borough Core strategy contains provision for a Country Park, which would supply this need.

- 7.2.11 The new Country Park or similar high-quality provision 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 Information within the South Suffolk Visitor Survey suggest that a car park (preferably free) is essential, and that visitors would be likely to appreciate a café, toilets, a shop, a staffed information point, wildlife viewing areas, bins and benches, marked routes, children's facilities, and shelter for bad weather days. Substantial areas where dogs may be let off leads would be important to attract dog-walkers away from the heathland sites. This new Country Park must be attractive to dog walkers and include adequate provision for car parking, visitor facilities, dog bins, dogs off leads areas etc.
- 7.2.13 The three existing Suffolk County Council country parks currently attract a considerable number of people; in 2009/10 Brandon Country Park (13ha with access to over 1000ha of forest) attracted 175,000 visitors, Clare Country Park (13ha) attracted 180,000 people, and Knettishall Heath (158ha) attracted 75,000 people²⁹. This demonstrates that Country Parks successfully attract recreational users, many of whom would otherwise have used other sites for recreation. It is therefore reasonable to assert that a new Country Park would also attract a large number of visitors.
- 7.2.14 As the new Country Park or similar alternative provision 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.
- 7.2.15 It is expected that the new Country Park or similar high quality provision 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 report³⁰ 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.
- 7.2.16 Visitor management on European sites within the Suffolk Coast and Heaths AONB requires the provision of wardening and visitor management measures, guided by a visitor management plan, to manage and monitor recreational access and birds on designated sites. The designated sites include the Deben Estuary SPA/Ramsar and Sandlings SPA. These measures would be co-ordinated across the Coast & Heaths Area, and are likely to require a capital works programme, and on-site wardening. The programme, as identified in the 2009 Appropriate Assessment, will include
- identifying key sites where visitor pressure is currently, or close to, causing harm
 - identifying the origin of visitors to those identified key sites

²⁸ available at <http://www.suffolkcoastal.gov.uk/yourdistrict/planning/review/evidence/studies/default.htm>

²⁹ Suffolk County Council (January 2011) The future of country parks and recreation sites in Suffolk. Brandon Country Park. Clare Country Park. Knettishall Heath Country Park.

³⁰ Ravenscroft, Parker, Vonk and Wright 2007 *Disturbance to waterbirds wintering in the Stour-Orwell Estuaries SPA* Commissioned by Suffolk Coast and Heaths Unit

- 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. The impact of visitor numbers may be difficult to determine and would rely on specialist studies as well as Natural England's programme of SSSI Condition assessment.

7.2.17 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 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.

Mitigation for housing allocation by Ipswich Borough Council

7.2.18 It is considered that the increased population of Ipswich, from housing allocations, would increase the visitor pressure on the Stour and Orwell Estuaries SPA, in particular with the number of visitors to Orwell Country Park adjacent to the SPA. The Appropriate Assessment for Ipswich Borough Council's Core Strategy includes mitigation proposals, including better visitor management, to reduce this impact; this mitigation requirement remains unchanged.

7.2.19 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 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.

7.2.20 The mitigation proposals are consistent with the Haven Gateway Green Infrastructure Strategy³¹.

7.2.21 A summary of mitigation is provided in Table 10 below.

³¹ The Landscape Partnership (2008) Haven Gateway Green Infrastructure Strategy.

Table 10. Summary of mitigation

Impact	Mitigation	Strategic allocation east of Ipswich	Strategic allocation at Felixstowe	all proposed housing in Suffolk Coastal and Ipswich
New large-scale usage of European sites as convenient local greenspace for routine use, causing harm to features of European interest.	1km separation of strategic allocations from European sites thus preventing regular walks from home to the sites Improvements to convenient local greenspace for routine use thus reducing the demand for visits to European sites.	✓	✓	
New large-scale increase in car-borne trips for recreation on European sites causing harm to features of European interest; primarily for sites with car parking within 8km.	Improvements to convenient local greenspace for routine use thus reducing the demand for visits to European sites.	✓	✓	
	The provision of a new Country Park (or similar high quality provision) to provide an alternative attraction for recreational activity for residents of existing and proposed new dwellings. This new Country Park will be attractive to dog walkers and others and include adequate provision for car parking, visitor facilities, dog bins, dogs off leads areas etc	✓	✓	✓
Harm to features on European sites (such as trampling, disturbance to birds etc) from a residual increase of visitors to the proportion of European sites sensitive to a small increase in visitor numbers.	The provision of wardening and visitor management measures, guided by a visitor management plan, to manage and monitor recreational access and birds on designated sites. The designated sites include the Deben Estuary SPA/Ramsar and Sandlings SPA. These measures would be co-ordinated across the Coast & Heaths Area, and are likely to require a capital works programme, and on-site wardening	✓	✓	✓

7.3 Implementation of the proposed mitigation

Suffolk Coastal District

7.3.1

Strategic Policy SP17 – Green Space says that ‘The Council will seek to ensure that communities have well-managed access to green space within settlements and in the countryside and coastal areas, in order to benefit health, community cohesion and greater understanding of the environment, without detriment to wildlife and landscape character. Where adequate green

space is not provided as part of a development, developer contributions will be sought to fund the creation of appropriate green space and/or management and improvement of access to green space. In particular, the Council will work on green infrastructure opportunities with partners in strategic housing growth areas in order to suitably complement development proposals.' Policy SP20 of the Core Strategy, referring to the Martlesham Area Action Plan, states that the strategy 'maximises opportunities to achieve access to green space, including the countryside', thus demonstrating that the provision of convenient local greenspace for routine use will be achieved at Martlesham.

- 7.3.2 Green infrastructure provision at Martlesham and Felixstowe, and working with Ipswich Borough, is clearly set out in the Implementation and Monitoring chapter of the Core Strategy. Visitor management and monitoring on European sites is also described. The District Council is currently investigating the use of Community Infrastructure Levy to pay for the necessary measures.
- 7.3.3 Natural England previously had concerns regarding this policy's effectiveness on mitigation³². Following a change to this policy for the November 2010 Reviewed Core Strategy and Development Management Policies document, Natural England was able to withdraw that concern.
- 7.3.4 It is clear that Suffolk Coastal District is committed to providing the necessary mitigation for the impacts caused by its housing allocations.

Ipswich Borough

- 7.3.5 Policy CS 16 of the Ipswich Borough Core Strategy and Policies contains a strong commitment for the Council to adjust its management of Orwell Country Park, giving good confidence that it would be carried out. The policy also includes support to the Greenways Project in its management of green infrastructure, which includes the Gipping path. The mitigation proposed in the September 2009 Appropriate Assessment is therefore contained within this policy.
- 7.3.6 Policy CS16 of the Core Strategy and Policies commits Ipswich Borough Council to the implementation of a Country Park as required for mitigation as described in the September 2009 Appropriate Assessment. Policy CS16 also contains a commitment for the Council to work with partners on the implementation of visitor management plans for European sites, giving good confidence that it would be carried out. The mitigation proposed in the September 2009 Appropriate Assessment is therefore contained within this policy.
- 7.3.7 A focussed change to Policy CS10 (October 2010) has strengthened the reference to providing a Country Park at the Ipswich northern fringe, thus further strengthening the confidence that this feature will be created as a measure to divert a proportion of recreational activity away from European sites. It is clear that Ipswich Borough is committed to providing the necessary mitigation. Suffolk Coastal District is working with Ipswich Borough regarding this provision.

7.4 Mitigation conclusions

- 7.4.1 It is considered that, if the mitigation in section 7.2 is implemented to suitable standards, the impacts of additional housing provisions in Policy SP2 and related policies, alone or in combination with provision in the Ipswich Borough Core Strategy and Policies, will be reduced to an insignificant level. It is ascertained that, with the proposed mitigation, Policy SP2 and related housing policies will have no adverse effect upon the integrity of any European site.

³² Letter of 10th February 2010 to Suffolk Coastal District Council

8 Conclusions of the Appropriate Assessment

8.1 Policy SP2 and related policies

8.1.1 It is not possible to ascertain that Policy SP2 has no adverse affect upon the integrity of a number of European sites (without mitigation), because of increased visitor pressure on those sites.

8.1.2 However, it is considered that, if the mitigation in Section 7.2 is implemented, the impacts of additional housing provisions in Policy SP2 and related housing policies, alone or in combination with provision in the Ipswich Borough Core Strategy and Policies, will be reduced to an insignificant level. It is ascertained that, with the proposed mitigation, Policy SP2 and related housing policies will have no adverse effect 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

- SP5 Employment land.
- SP8 Tourism.
- SP13 Nuclear energy.
- SP17 Green Space.

8.3 All other policies

8.3.1 All other policies in the Reviewed Suffolk Coastal Core Strategy and Development Management Policies document 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 initially 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 Ipswich Borough Core Strategy and 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 policy SP2 would have an adverse effect upon the integrity of a number of European sites, alone and in combination with the Ipswich Borough Core Strategy and Policies. Mitigation is proposed which, if implemented, would reduce the adverse effect to an insignificant level and would enable a conclusion that it can be ascertained that there will be no adverse effect 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 for a number of Europe sites, as data is very sparse. Available data from the Tourist Board in 2004 was used but it was a snapshot survey during one summer and did not cover all European sites or take account of seasonal differences. In a meeting with Natural England on 7th December 2009, it was agreed that the Appropriate Assessment was written using the best evidence available at that time. Although it would have been desirable to have had better evidence of visitor numbers on European sites, it would not be reasonable to delay the Appropriate Assessment, and therefore the Core Strategies and Policies, for a number of years until further evidence was collected.
- 9.1.2 The level of evidence within the 2009 Appropriate Assessment met or was above the minimum needed to support the assessments at that time, so the conclusions were still adjudged to be sound.
- 9.1.3 However, subsequent visitor data for the South Sandlings study area was of excellent quality and was well analysed by Footprint Ecology (Section 5.5). The findings of the study are strong and provide good evidence regarding the predicted increase in visitors to European sites in the study area. The visitor data in the South Sandlings study area is not necessarily exactly transferable to other European sites, but it does act as good pointers to shared impacts. A national visitor survey by Natural England, a local survey by No Adastral New Town, and further studies in Dorset have also been considered.
- 9.1.4 The evidence base for the impact of visitors on bird disturbance, and on population impacts of birds, is moderately good. There was one good disturbance report for the Stour and Orwell Estuaries SPA, but not for other estuaries. Natural England's interpretation of the parts of the Stour and Orwell Estuaries with highest visitor pressure is that they are in favourable condition notwithstanding the conclusions of that disturbance report. The evidence base for disturbance to SPA bird species on the Sandlings heaths is good, at least for the South Sandlings heaths.
- 9.1.5 There is an apparent 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 assessments show that visitor trampling to shingle beach vegetation is the only damage caused to designated site features caused by excess public disturbance.
- 9.1.6 Natural England's condition assessments have been updated since the 2009 version of this Appropriate Assessment was published. Despite the raising of public access as an issue, no parts of any relevant Site of Scientific Interest forming a component of European sites are assessed as unfavourable due to public access with the exception of beach trampling. This suggests that public access is not causing excess disturbance to birds or other fauna or flora of European interest at the present time although Natural England does say that it does not measure human disturbance as a component of the factors affecting habitat or species.
- 9.1.7 This assessment is founded on the best evidence base which is available. The evidence base is sufficiently good for a sound conclusion to be made, 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. Section 9.2 describes improvements to the evidence base that would be of most help.

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 any parts of 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. This would also help Natural England in their assessment of site condition.
- 9.2.3 This further work is not immediately required for this Appropriate Assessment or the Core Strategies and Policies to progress. It is mentioned to raise the issue that was uncovered by the process of writing this assessment, that the impact of existing visitors is patchily known. The mitigation mentioned in Section 7 would encompass a significant proportion of this further work.
- 9.2.4 It is suggested that Natural England might consider contributing to further studies, because it is the statutory regulator and adviser for these sites. There are a number of other nature conservation and/or recreation providers active in the area who could be expected to 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. Estuary Management groups and user groups such as other local walking groups; Deben estuary partnership; sailing club etc may also desire to become involved.
- 9.2.5 Representatives of users should be involved in any 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.
- 9.2.6 The time and cost to carry out these studies, and plan implementation, is not to be underestimated.
- 9.2.7 Natural England has the power under Section 30 of the Conservation of Habitats and Species Regulations 2010 to make bylaws for prohibiting or restricting the entry into, or movement within, European sites of persons, vehicles, boats or animals. If Natural England believes that disturbance is a serious issue at any European site, it has the option to make such bylaws to demonstrate that point, should it so wish. 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.

10 Iterations and Consultations

10.1 Previous versions of this appropriate assessment

- 10.1.1 There has been a number of previous Appropriate Assessments.
- 10.1.2 The first Appropriate Assessment was published in September 2009³³, assessing Suffolk Coastal District Council's Core Strategy & Development Management Policies Development Plan Document, Consultation draft – July 2009.
- 10.1.3 Following comments from consultees, notably Natural England, a Clarification Summary was published in January 2010³⁴. The Clarification Summary did not alter the content of the Appropriate Assessment but explained some of the technical detail in a different way so that it was clearer. In March 2010 the Consultation Draft was adopted as Interim policy by the Council.
- 10.1.4 Subsequently, the Core Strategy was reviewed, and in November 2010 a Reviewed Core Strategy and Development Management Policies document was published. An Appropriate Assessment of the Reviewed Core Strategy was published in June 2011.
- 10.1.5 Following comments from consultees, primarily Natural England and No Adastral New Town, the Appropriate Assessment was revised in August 2011 and published for consultation.

10.2 Consultations with Natural England

- 10.2.1 Natural England was consulted on 6th March 2009 with a list of policies to be considered for 'likely significant effect'. Natural England confirmed on 16th March 2009 that an Appropriate Assessment would be required and advised on those policies suggested by Suffolk Coastal District Council considered likely to have a significant effect.
- 10.2.2 Natural England was consulted on a draft assessment of a draft Core Strategy in July 2009 and an email response was received dated 7th July 2009. A meeting was subsequently held in August 2009. Useful comments were received from Natural England, which were used to revise the Appropriate Assessment. Natural England's comments in May 2009 on a planning application also were briefly considered as to the wider strategic implications for the Core Strategy.
- 10.2.3 Following publication of the September 2009 Appropriate Assessment, a meeting was held with Natural England to discuss issues, although Natural England were broadly in agreement with the Appropriate assessment. This meeting was on 7th December. The outcome of the meeting was that a Clarification Summary was produced, and published in January 2010.
- 10.2.4 Following publication of the Reviewed Core Strategy and Development Management Policies document in November 2010, focussed changes to Ipswich Borough Council's Core Strategy, and availability of the South Sandlings Visitor Study as a draft in November 2010, a revised Appropriate Assessment was needed. A draft of the Appropriate Assessment, presented as an Addendum to highlight changes, was used to consult Natural England on these changes and a reply was received on 6th April 2011 (Appendix 9). Natural England was broadly in agreement with the changes. Subsequently, this document was produced to consolidate all previous versions of the Appropriate Assessments into one single document dated June 2011. Natural England then had further comments on the June 2011 document which were used for this current document.
- 10.2.5 Natural England was consulted on the August 2011 Appropriate Assessment and responded on 14th October 2011. Natural England agreed with the conclusion of the appropriate assessment, that with the mitigation as outlined, the Core Strategy is not likely to have an adverse effect on the integrity of any Natura 2000 site, alone and in-combination with other plans and projects.

³³ The Landscape Partnership (September 2009) Appropriate Assessment for Suffolk Coastal District Council Core Strategy and Development Management Policies

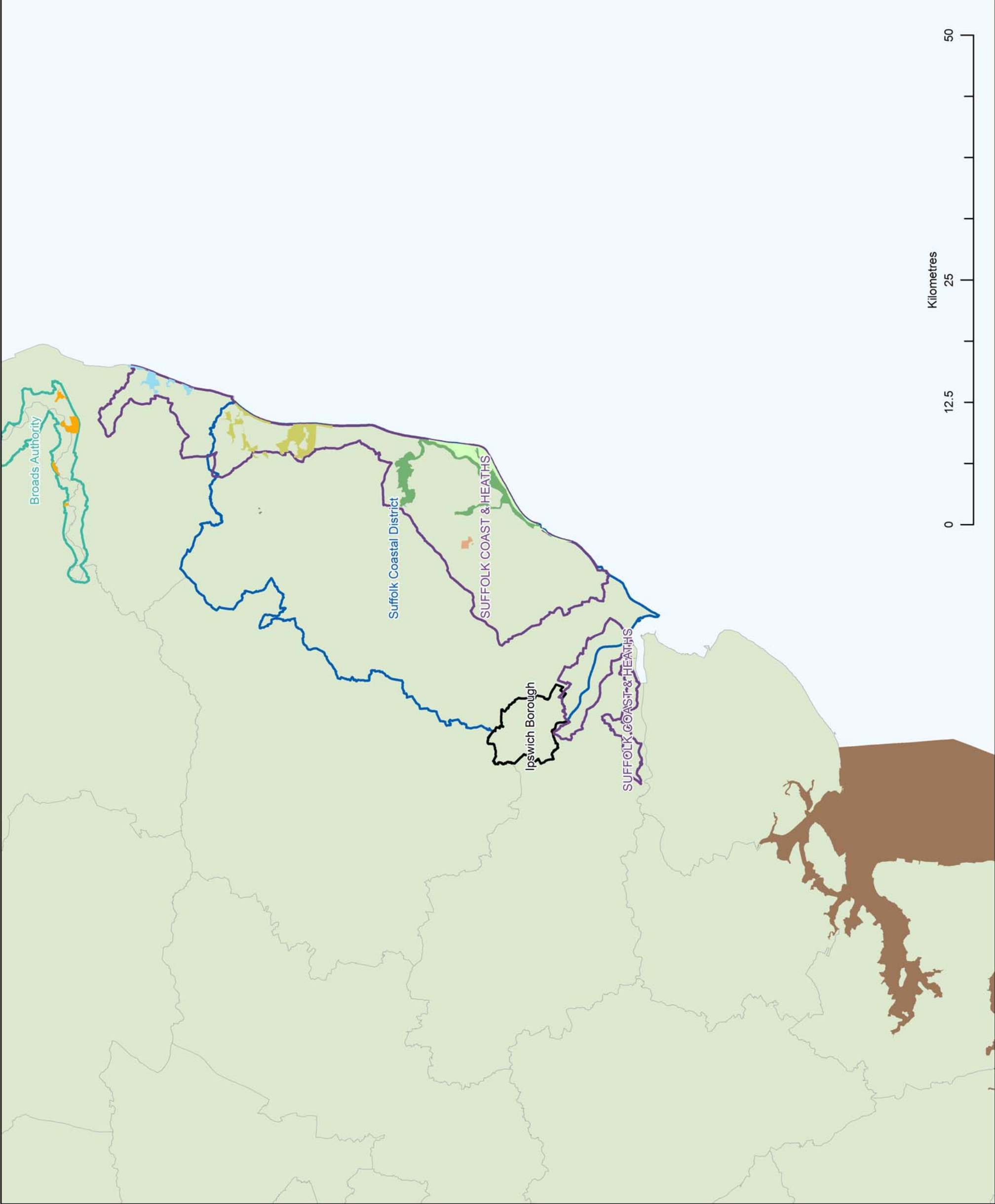
³⁴ The Landscape Partnership (January 2010) Clarification Summary for Suffolk Coastal District Council Proposed Submission Core Strategies and Policies

- 10.2.6 Natural England also emphasised the strategic nature of the Core Strategy. Developments presented at the area action plan or planning stage would need to be subject to additional appropriate assessment. This would need to demonstrate that the range of mitigation measures identified at the strategic level had been implemented in a suitable way, and that there were no residual adverse effects on integrity of Natura 2000 sites. Natural England's letter of 14th October 2011 is given at Appendix 10.

10.3 Consultations with the Public

- 10.3.1 The public has previously been consulted by providing the September 2009 Appropriate Assessment and January 2010 Clarification Summary on the Council's website.
- 10.3.2 A meeting was also held with Deben Estuary Partnership on 13th April 2010 to discuss issues.
- 10.3.3 Site Managers of European sites were consulted as to their view on visitor increases (Section 5.7). Nick Mason kindly provided information about the distribution of birds within Deben Estuary SPA in 2009.
- 10.3.4 The June 2011 Appropriate Assessment received comments from No Adastral New Town, acting through Richard Buxton in a letter of 6th July 2011, and with comments added within the Deben Estuary Visitor Survey July 2011. These comments were used in the August 2011 update of the Appropriate Assessment.
- 10.3.5 Responses on the consultation of the August 2011 Appropriate Assessment were received from members of the public as well as Natural England and Environment Agency. After the consultation period ended, comments were received from a solicitor on behalf of 'No Adastral Park New Town'. These responses were used to inform this update of the Appropriate Assessment.

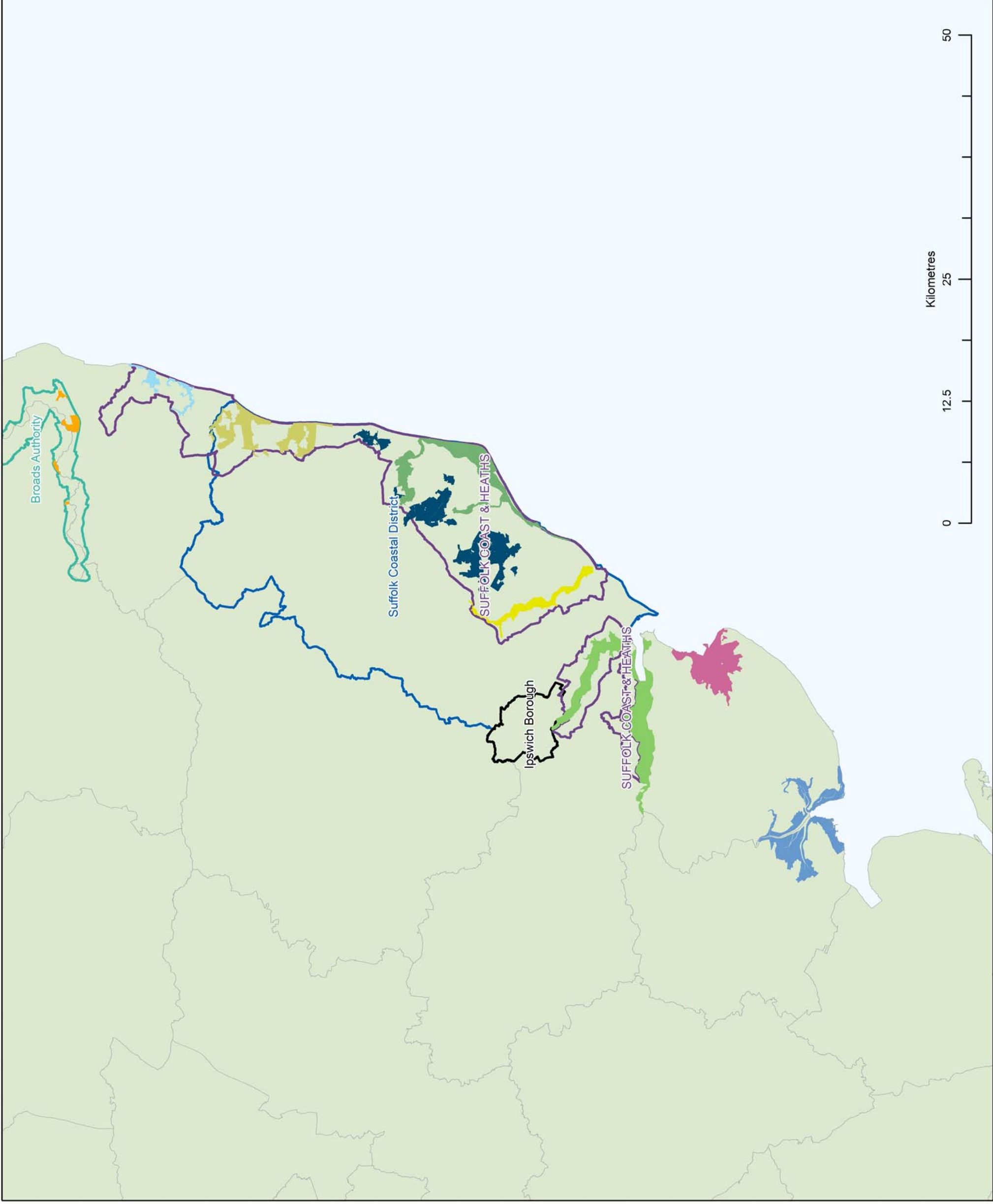
Part 2: Figures



W09219 Suffolk Coastal District Council
Core Strategy and DC Policies
Appropriate Assessment

Figure 1a
SAC in the study area
June 2009





Key

SPA name:

- Alde-Ore Estuary
- Benacre to Easton Barents
- 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

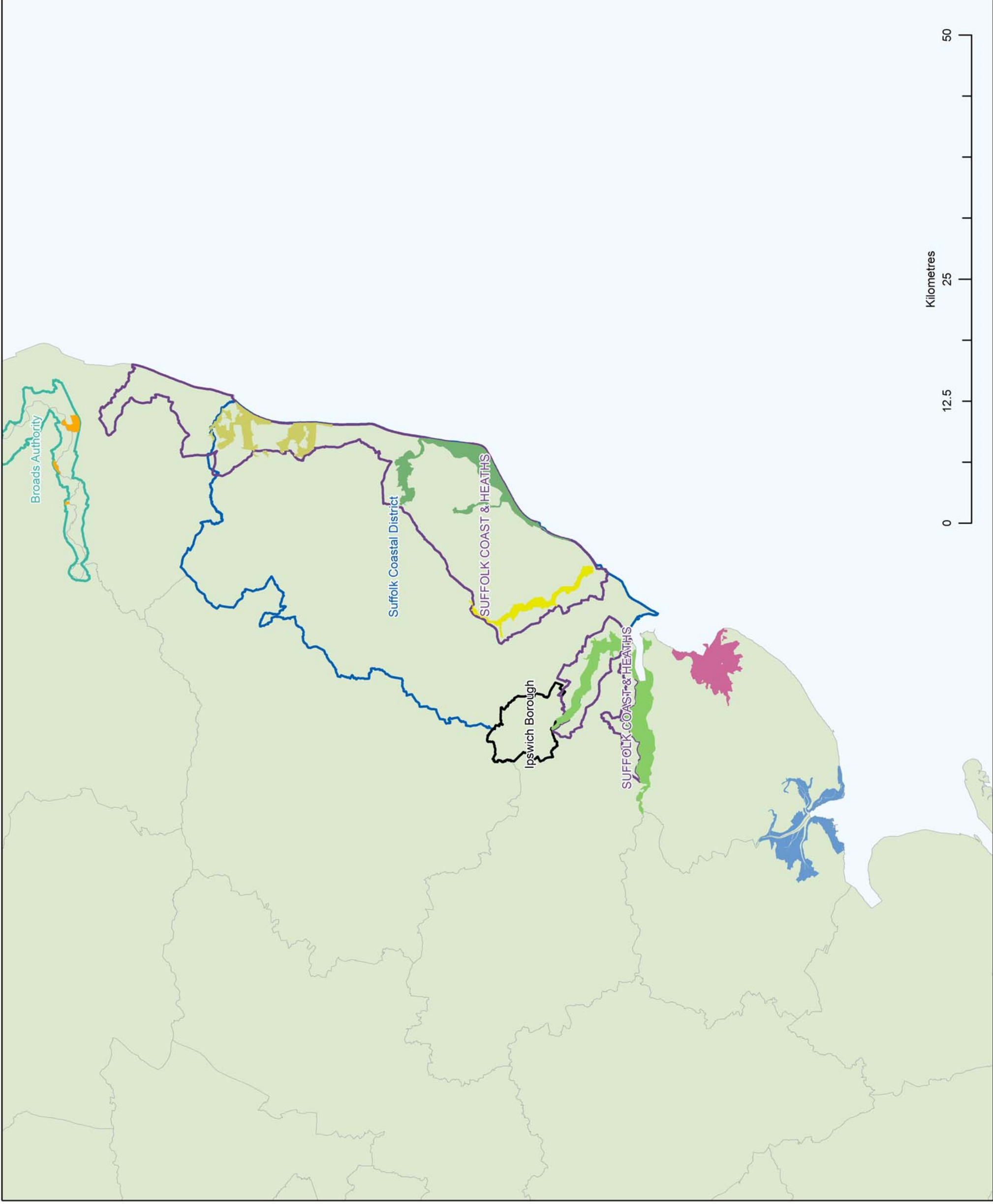
W09219 Suffolk Coastal District Council
Core Strategy and DC Policies
Appropriate Assessment

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

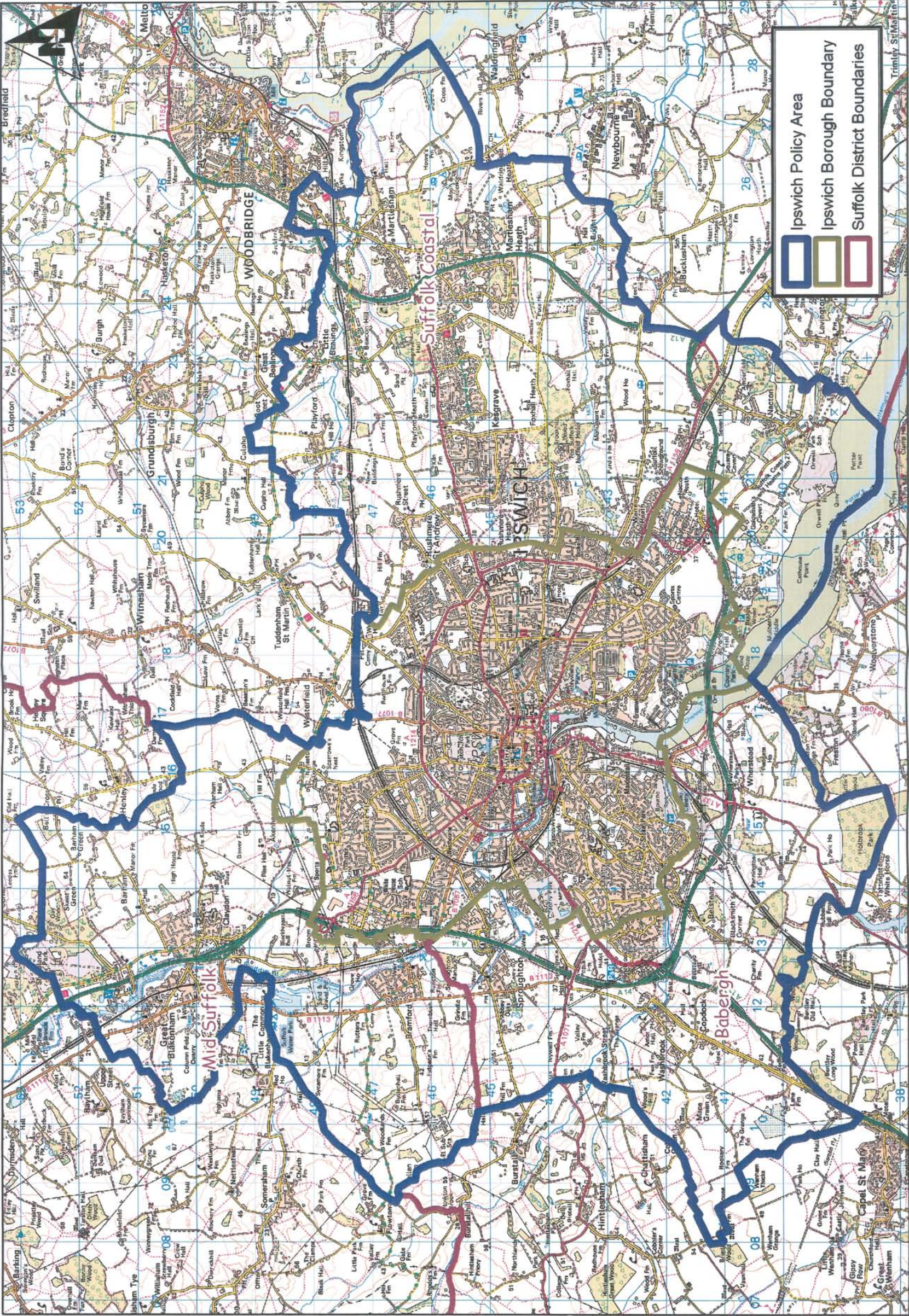
W09219 Suffolk Coastal District Council
Core Strategy and DC Policies
Appropriate Assessment

Figure 1c

RAMSAR in the study area

June 2009





Project Name: 11204 Suffolk Coastal District Council, Core Strategy and Development Control Policies appropriate assessment.

Figure: 02 Ipswich Area
Scale: NTS



Date: 24/06/2009

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Reproduced from the Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office. Licence number: AL 10002205. © CROWN COPYRIGHT.

Note: Rights of Way data supplied by Suffolk County Council.

- KEY**
-  Rights of Way
 -  Section lost due to erosion

W11204 SCDC Appropriate Assessment Core Strategy

Figure 03 - Rights of Way by the Deben Estuary near Waldringfield

1:25,000@A3

August 2011



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

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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

longitude	latitude
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
Mudflats and sandflats not covered by seawater at low tide	40	B	C	B	C
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)	25	C	C	C	C

3.2 Annex II species

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

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)	
Total habitat cover	100%

4.1 Other site characteristics

Soil & geology:

Mud, Sand, Shingle

Geomorphology & landscape:

Coastal, Enclosed coast (including embayment), Estuary, Intertidal sediments (including sandflat/mudflat), Islands, Lagoon, Open coast (including bay), Subtidal sediments (including sandbank/mudbank)

4.2 Quality and importance

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 the area is considered to support a significant presence.

Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)

- 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

U	K	9	0	0	9	1	1	2
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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	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
-------------------------------------	------	---	---	---	---

3.2 Annex II species

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

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. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	2.0
Total habitat cover	100%

4.1 Other site characteristics

Soil & geology:

Mud, Nutrient-poor, Sand, Shingle

Geomorphology & landscape:

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

4.2 Quality and importance

Coastal lagoons

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

Annual vegetation of drift lines

- 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 100 hectares.

Perennial vegetation of stony banks

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

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
A081	<i>Circus aeruginosus</i>		Breed	Winter	Stage	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. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
Total habitat cover	100%

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
Over winter the area regularly supports:	
<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

ARTICLE 4.2 QUALIFICATION (79/409/EEC)**During the breeding season the area regularly supports:**

<i>Larus fuscus</i> (Western Europe/Mediterranean/Western Africa)	11.3% of the breeding population 5 year mean 1994-1998
--	---

Over winter the area regularly supports:

<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 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th 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

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

--	--	--	--	--	--

Site Reference Number

2. Date this sheet was completed/updated:

Designated: 04 October 1996

3. Country:

UK (England)

4. Name of the Ramsar site:

Alde–Ore Estuary

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

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

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 (Seabird 2000 Census)
W Europe/Mediterranean/W Africa

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.

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) (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
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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)
Species with peak counts in spring/autumn:	
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)
Species with peak counts in winter:	
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 browningi*, *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.

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.

Monitoring estuarine processes.

Saline lagoon survey.

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

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.

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.

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

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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

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	Stage				

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)	
Total habitat cover	100%

4.1 Other site characteristics

Soil & geology:

Acidic, Alluvium, Neutral, Sand, Shingle

Geomorphology & landscape:

Coastal, Lagoon, Lowland, Open coast (including bay)

4.2 Quality and importance

Coastal lagoons

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

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

U	K	0	0	1	3	1	0	4
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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	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
A021	<i>Botaurus stellaris</i>		Breed	Winter	Stage	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. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
Total habitat cover	100%

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**

Code	% cover
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

U	K	9	0	0	9	2	5	3
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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	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)	
Total habitat cover	100%

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

		Population			Site assessment				
		Resident	Migratory						
Code	Species name		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)	
Total habitat cover	100%

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
Over winter the area regularly supports:	
<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

ARTICLE 4.2 QUALIFICATION (79/409/EEC)**Over winter the area regularly supports:**

<i>Anas strepera</i> (North-western Europe)	0.8% of the population 5 year peak mean, 1991/2-1995/6
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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 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th 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

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 21 September 1994

3. Country:

UK (England)

4. Name of the Ramsar site:

Broadland

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

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

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.

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) (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

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 , <i>Circus aeruginosus</i> , Europe	16 pairs, representing an average of 10.5% of the GB population (5 year mean 1987/8-1991/2)
--	--

Species with peak counts in spring/autumn:

Common coot , <i>Fulica atra atra</i> , NW Europe	3112 individuals, representing an average of 1.7% of the GB population (5 year peak mean 1998/9- 2002/3)
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Species with peak counts in winter:

Great cormorant , <i>Phalacrocorax carbo carbo</i> , NW Europe	273 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9- 2002/3)
Great bittern , <i>Botaurus stellaris stellaris</i> , W Europe, NW Africa	2 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9- 2002/3)
Bean goose , <i>Anser fabalis fabalis</i> , NW Europe - wintering	238 individuals, representing an average of 59.5% of the GB population (5 year peak mean for 1996/7-2000/01)
Greater white-fronted goose , <i>Anser albifrons albifrons</i> , NW Europe	351 individuals, representing an average of 6% of the GB population (Source period not collated)
Eurasian teal , <i>Anas crecca</i> , NW Europe	2934 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9- 2002/3)
Common pochard , <i>Aythya ferina</i> , NE & NW Europe	800 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9- 2002/3)
Smew , <i>Mergellus albellus</i> , 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, <i>Circus cyaneus</i> , Europe	22 individuals, representing an average of 2.9% of the GB population (5 year peak mean 1987/8- 1991/2)
Water rail , <i>Rallus aquaticus</i> , Europe	23 individuals, representing an average of 5.1% of the GB population (5 year peak mean 1998/9- 2002/3)
Ruff , <i>Philomachus pugnax</i> , 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	<i>Vertigo moulinsiana</i>	Desmoulin's whorl snail
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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*, *Luronium 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.

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.

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

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

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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

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

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	0	0	1	3	6	9	0
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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
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

		Population				Site assessment			
		Resident	Migratory						
Code	Species name		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)	
Total habitat cover	100%

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:

*Circus cyaneus*up to 2.5% of the GB population
No count period specified.**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
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<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 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th 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

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 28 July 1994

3. Country:

UK (England)

4. Name of the Ramsar site:

Colne Estuary (Mid-Essex Coast Phase 2)

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

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

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.

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) (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

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 km² 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

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

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).

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 , *Larus melanocephalus*, Europe

2 apparently occupied nests, representing an average of 1.8% of the GB population (Seabird 2000 Census)

Black-headed gull , *Larus ridibundus*, N & C Europe

2300 apparently occupied nests, representing an average of 1.7% of the GB population (Seabird 2000 Census)

Little tern , *Sterna albifrons albifrons*, 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:

Ringed plover , *Charadrius hiaticula*, 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 , *Tringa erythropus*, Europe/W Africa

3 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Little egret , *Egretta garzetta*, West Mediterranean

20 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3)

Common shelduck , *Tadorna tadorna*, NW Europe

840 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)

Hen harrier, *Circus cyaneus*, Europe

<19 individuals, representing an average of 2.5% of the GB population (5 year mean 1987-1991)

Water rail , *Rallus aquaticus*, Europe

5 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)

Pied avocet , *Recurvirostra avosetta*, 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 , *Pluvialis apricaria*, 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 , *Pluvialis squatarola*, 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 , *Calidris alpina alpina*, 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	+	+

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	+	+

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
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- Cottle, R, Pethick, J & Dalton, H (2002) *Essex Estuaries Coastal Habitat Management Plan: final report*. English Nature, Peterborough (Living with the Sea LIFE Project)
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- 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
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- 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
- 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)
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- 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.)
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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**

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	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

		Population				Site assessment			
Code	Species name	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. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
Total habitat cover	100%

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 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th 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

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DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 11 March 1996

3. Country:

UK (England)

4. Name of the Ramsar site:

Deben Estuary

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

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

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* 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.

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) (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

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 , *Limosa limosa islandica*, 307 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)
Iceland/W Europe

Common greenshank , *Tringa nebularia*, 22 individuals, representing an average of 3.6% of the GB population (5 year peak mean 1998/9-2002/3)
Europe/W Africa

Species with peak counts in winter:

Bean goose , *Anser fabalis fabalis*, NW Europe - 5 individuals, representing an average of 1.2% of the GB population (Source period not collated)
wintering

Common shelduck , *Tadorna tadorna*, NW 832 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Europe

Pied avocet , *Recurvirostra avosetta*, 167 individuals, representing an average of 4.9% of the GB population (5 year peak mean 1998/9-2002/3)
Europe/Northwest Africa

Spotted redshank , *Tringa erythropus*, Europe/W 3 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9-2002/3)
Africa

Common redshank , *Tringa totanus totanus*, 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

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.

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.

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.

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

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- 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)
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www.jncc.gov.uk/SACselection
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- 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.
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- 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
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- Suffolk Wildlife Trust (1993) *National Vegetation Classification of the saltmarsh of the Deben, Alde–Ore and Blyth estuaries, Suffolk*. Suffolk Wildlife Trust, Saxmundham

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

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	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. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	1.0
Total habitat cover	100%

4.1 Other site characteristics

Soil & geology:

Clay, Neutral

Geomorphology & landscape:

Lowland

4.2 Quality and importance

Triturus cristatus

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

4.3 Vulnerability

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.

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)	
Total habitat cover	100%

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 maritima*)

- 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 maritima*)

- 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

☐	☐	☐	☐	☐	☐	☐	☐
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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

		Population			Site assessment				
		Resident	Migratory						
Code	Species name		Breed	Winter	Stage	Population	Conservation	Isolation	Global
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)	
Total habitat cover	100%

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
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Over winter the area regularly supports:

<i>Recurvirostra avosetta</i> (Western Europe/Western Mediterranean - breeding)	25% of the GB population 5 year peak mean 1991/92-1995/96
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ARTICLE 4.2 QUALIFICATION (79/409/EEC)**Over winter the area regularly supports:**

<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 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th 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

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DD MM YY

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Designation date

--	--	--	--	--	--

Site Reference Number

2. Date this sheet was completed/updated:

Designated: 08 June 1993

3. Country:

UK (England)

4. Name of the Ramsar site:

Hamford Water

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

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

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.

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	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
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General description of the Physical Features:

Hamford Water is 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 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)

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. altifrons 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
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- Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 5. Eastern England*. Joint Nature Conservation Committee, Peterborough
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- 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
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- 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)
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- 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

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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

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. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
Total habitat cover	100%

4.1 Other site characteristics

Soil & geology:

Acidic, Sand, Shingle

Geomorphology & landscape:

Coastal, Lagoon, Lowland

4.2 Quality and importance

Annual vegetation of drift lines

- 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 100 hectares.

Perennial vegetation of stony banks

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

European dry heaths

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

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

U	K	0	0	1	2	8	0	9
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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	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

Population						Site assessment			
		Resident	Migratory						
Code	Species name		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)	
Total habitat cover	100%

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
Over winter the area regularly supports:	
<i>Circus cyaneus</i>	2% of the GB population 5 year peak mean, 1985/6-1989/90

ARTICLE 4.2 QUALIFICATION (79/409/EEC)**During the breeding season the area regularly supports:**

<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

Over winter the area regularly supports:

<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

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 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th 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

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DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 05 January 1976

3. Country:

UK (England)

4. Name of the Ramsar site:

Minsmere–Walberswick

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

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

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) (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

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*, *Limoniea 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.)
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- 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 & Hirons, 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
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Wiggington, M (1999) *British Red Data Books. 1. Vascular plants*. 3rd edn. Joint Nature Conservation Committee, Peterborough

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

☐	☐	☐	☐	☐	☐	☐	☐
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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

		Population			Site assessment				
		Resident	Migratory						
Code	Species name		Breed	Winter	Stage	Population	Conservation	Isolation	Global
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. Scree. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	1.8
Total habitat cover	100%

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

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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	Stage				

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)	
Total habitat cover	100%

4.1 Other site characteristics

Soil & geology:

Acidic, Nutrient-poor, Sand

Geomorphology & landscape:

Lowland

4.2 Quality and importance

Old acidophilous oak woods with *Quercus robur* on sandy plains

- for which this is one of only four known outstanding localities in the United Kingdom.

4.3 Vulnerability

This site, mainly consisting of veteran oak pollards, is vulnerable to fire as there is a dense ground cover dominated by bracken. *Rhododendron*, 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.

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

A

1.2 Site code

UK9009121

1.3 Compilation date

199407

1.4 Update

200505

1.5 Relationship with other Natura 2000 sites

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1.6 Respondent(s)

International Designations, JNCC, Peterborough

1.7 Site name

Stour and Orwell Estuaries

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)

3676.92

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

Population						Site assessment			
		Resident	Migratory						
Code	Species name		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)	
Total habitat cover	100%

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
<i>Branta bernicla bernicla</i> (Western Siberia/Western Europe)	1.2% of the population 5-year peak mean 1995/96-1999/2000
<i>Calidris alpina alpina</i> (Northern Siberia/Europe/Western Africa)	1.4% of the population 5-year peak mean 1995/96-1999/2000
<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
<i>Limosa limosa islandica</i> (Iceland - breeding)	7.3% of the population 5-year peak mean 1995/96-1999/2000
<i>Pluvialis squatarola</i> (Eastern Atlantic - wintering)	1.3% of the population 5-year peak mean 1995/96-1999/2000
<i>Tringa totanus</i> (Eastern Atlantic - wintering)	2.8% of the population 5-year peak mean 1995/96-1999/2000

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 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th 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

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 13 July 1994

3. Country:

UK (England)

4. Name of the Ramsar site:

Stour and Orwell Estuaries

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

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

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 , <i>Tringa totanus totanus</i> ,	2588 individuals, representing an average of 2% of the population (5-year peak mean 1995/96-1999/2000)
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Species with peak counts in winter:

Dark-bellied brent goose, <i>Branta bernicla bernicla</i> ,	2627 individuals, representing an average of 1.2% of the population (5-year peak mean 1995/96-1999/2000)
Northern pintail , <i>Anas acuta</i> , NW Europe	741 individuals, representing an average of 1.2% of the population (5-year peak mean 1995/96-1999/2000)
Grey plover , <i>Pluvialis squatarola</i> , 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 , <i>Calidris canutus islandica</i> , W & Southern Africa (wintering)	5970 individuals, representing an average of 1.3% of the population (5-year peak mean 1995/96-1999/2000)
Dunlin , <i>Calidris alpina alpina</i> , 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 , <i>Limosa limosa islandica</i> , Iceland/W Europe	2559 individuals, representing an average of 7.3% of the population (5-year peak mean 1995/96-1999/2000)
Common redshank , <i>Tringa totanus totanus</i> ,	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.

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) (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

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 , *Tadorna tadorna*, NW Europe

2955 individuals, representing an average of 3.8% of the GB population (5-year peak mean 1995/96-1999/2000)

Eurasian curlew , *Numenius arquata arquata*, N. a. *arquata* Europe (breeding)

1824 individuals, representing an average of 1.2% of the GB population (5-year peak mean 1995/96-1999/2000)

Ruddy turnstone , *Arenaria interpres interpres*, 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.

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Appendix 2

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	To maintain, in favourable condition, the: • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>. • Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davallianae</i>. • Alkaline Fens • Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>- type vegetation. • Transition mires and quaking bogs. To maintain, in favourable condition, the habitats for the population of: • Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>). • Otter (<i>Lutra lutra</i>). To maintain, in favourable condition, the habitats for the populations of Annex 1 bird species¹ of European importance with particular reference to: • Open water • Reed swamp • Fen • Reedbed • Lowland wet grassland with ditches and water bodies. ¹ Bittern, Marsh Harrier, Hen Harrier To maintain, in favourable condition, the habitats for the populations of migratory bird species² of European importance with particular reference to: • Open water • Reed swamp • Fen • Reedbed

		• Lowland wet grassland with ditches and water bodies. ² Gadwall and Shoveler 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: • Open water • Swamp and fen • Lowland wet grassland with ditches and water bodies.
The Broads SAC	Barnby Broad and Marshes	To maintain, in favourable condition, the: • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>. • Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davallianae</i>. • Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>- type vegetation. • Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.. • <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>). To maintain, in favourable condition, the habitats for the population of: • Otter (<i>Lutra lutra</i>). • Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>). To maintain, in favourable condition, the habitats for the populations of Annex 1 bird species¹ of European importance with particular reference to: • Open water • Swamp • Fen • Lowland wet grassland with ditches and water bodies. ¹ Marsh Harrier, Hen Harrier, Whooper Swan and Ruff To maintain, in favourable condition, the habitats for the populations of migratory bird species² of European importance with particular reference to: • Open water • Reed swamp • Fen • Lowland wet grassland with ditches and water bodies.

		² Pink-Footed Goose, Gadwall and Shoveler 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: • Open water • Swamp and fen and lowland wet grassland with ditches and water bodies.
The Broads SAC	Stanley & Alder Carrs, Aldeby SSSI	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 23rd October 2007. Habitat types represented (BAP Categories): • Broadleaved, Mixed and Yew Woodland • Fen Marsh and Swamp
Minsmere to Walberswick Heath and Marshes SAC	Minsmere to Walberswick Heath and Marshes SSSI	Subject to natural change, to maintain, in favourable condition, the: • Annual vegetation of drift lines • Perennial vegetation of stony banks To maintain, to maintain, in favourable condition, the: • European dry heaths To maintain, in favourable condition, the habitats for the populations of Annex 1 species of European importance¹ with particular reference to: • Shingle • Swamp, marginal and inundation communities • Saltmarsh • Standing water • Grassland • Heathland ¹Avocet, Bittern, Little Tern, Marsh Harrier, Nightjar, Woodlark, Hen Harrier. To maintain, in favourable condition, the habitats for the populations of migratory bird species of European importance² with particular reference to: • Grassland, marsh and standing water ²Gadwall, Teal, Shoveler, European White-Fronted

		Goose.
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 ¹ , of European importance, with particular reference to grazing marsh, saltmarsh, intertidal mudflat and shallow coastal waters. ¹ 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: • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>. • Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davallianae</i>. • Alkaline Fens • Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>- type vegetation. • Transition mires and quaking bogs. To maintain, in favourable condition, the habitats for the population of: • Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>). • Otter (<i>Lutra lutra</i>).

		To maintain, in favourable condition, the habitats for the populations of Annex 1 bird species¹ of European importance with particular reference to: • Open water • Reed swamp • Fen • Reedbed • Lowland wet grassland with ditches and water bodies. ¹ Bittern, Marsh Harrier, Hen Harrier To maintain, in favourable condition, the habitats for the populations of migratory bird species² of European importance with particular reference to: • Open water • Reed swamp • Fen • Reedbed • Lowland wet grassland with ditches and water bodies. ² Gadwall and Shoveler 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: • Open water • Swamp and fen • Lowland wet grassland with ditches and water bodies.
Broadland SPA	Barnby Broad and Marshes SSSI	To maintain, in favourable condition, the: • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>. • Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davallianae</i>. • Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>- type vegetation. • Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.. • <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>). To maintain, in favourable condition, the habitats for the population of: • Otter (<i>Lutra lutra</i>). • Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>).

		To maintain, in favourable condition, the habitats for the populations of Annex 1 bird species¹ of European importance with particular reference to: • Open water • Swamp • Fen • Lowland wet grassland with ditches and water bodies. ¹ Marsh Harrier, Hen Harrier, Whooper Swan and Ruff To maintain, in favourable condition, the habitats for the populations of migratory bird species² of European importance with particular reference to: • Open water • Reed swamp • Fen • Lowland wet grassland with ditches and water bodies. ² Pink-Footed Goose, Gadwall and Shoveler 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: • Open water Swamp and fen and lowland wet grassland with ditches and water bodies.
Broadland SPA	Stanley & Alder Carrs, Aldeby SSSI	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 23rd October 2007. Habitat types represented (BAP Categories): • Broadleaved, Mixed and Yew Woodland • Fen Marsh and Swamp
Deben Estuary SPA	Deben Estuary SSSI	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 species¹, of European importance, with particular reference to intertidal saltmarsh and mudflats. ¹Avocet, Brent Goose.

Hamford Water SPA	Hamford Water SSSI	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 2nd October 2008. Habitat types represented (BAP Categories): • Broadleaved, Mixed and Yew Woodland (Lowland) • Arable & Horticulture • Neutral Grassland (Lowland) • Supralittoral Sediment • Littoral Sediment • Coastal Lagoon.
Minsmere – Walberswick SPA	Minsmere to Walberswick Heath and Marshes SSSI	Subject to natural change, to maintain, in favourable condition, the: • Annual vegetation of drift lines • Perennial vegetation of stony banks To maintain, to maintain, in favourable condition, the: • European dry heaths To maintain, in favourable condition, the habitats for the populations of Annex 1 species of European importance¹ with particular reference to: • Shingle • Swamp, marginal and inundation communities • Saltmarsh • Standing water • Grassland • Heathland ¹Avocet, Bittern, Little Tern, Marsh Harrier, Nightjar, Woodlark, Hen Harrier. To maintain, in favourable condition, the habitats for the populations of migratory bird species of European importance² with particular reference to: • Grassland, marsh and standing water ²Gadwall, Teal, Shoveler, European White-Fronted Goose.
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 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	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 ¹ , of European importance, with particular reference to intertidal mudflats and saltmarsh. ¹ 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 ¹ , of European importance, with particular reference to intertidal mudflats, saltmarsh and grazing marsh. ¹ Black-Tailed Godwit, Dark-Bellied Brent Goose, Dunlin, Grey Plover, Redshank, Ringed Plover, Shelduck, Turnstone.

Appendix 3

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - SSSI name - Dew's Ponds - Staff member responsible for site - Monica O'Donnell

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Standing open water and canals	Monica O-donnell	1	1025845	0.09	15 Sep 2005	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.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Monica O-donnell	2	1025847	4.58	15 Sep 2005	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.	
East Of England	Suffolk	Suffolk Coastal	Standing open water and canals	Monica O-Donnell	3	1025846	0.10	01 Apr 2009	Favourable	Unit favourable based on the high numbers of newts observed and the good quality of the ponds. Numbers of GCN likely to increase over the next few years	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Monica O-Donnell	4	1025848	2.06	01 Apr 2009	Favourable	Unit favourable based on the very good quality terrestrial habitat that supports large populations of GCN	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - **SSSI name** - Alde-ore Estuary - **Staff member responsible for site** - Emma Hay

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	1	1009299	59.87	29 Sep 2009	Favourable	The old sea wall had been breached in the 1950s and parts of this were visible at low tide. There was no built sea wall along the western boundary of the unit and reed and saltmarsh sp. had naturally colonised over time. Much of the southern area of the unit followed the Suffolk Coastal Path. There were a number of well established creeks and pools within the reed and saltmarsh. Extensive area of reed and low –mid marsh species, common saltmarsh grass, sea purslane and sea aster being dominant species in the low-mid salt marsh. There appeared to be no distinct pioneer zone as natural transition to reed (with beds of sea purslane) was occurring. Small areas of both sea rush and saltmarsh rush could be seen at the saltmarsh edge where the reed was not so dominant. Most species established above MHW level. There were small beds of Spartina anglica in the mud below the MHW level with very few numbers of glasswort and sea blite. Coastal scouring was occurring at the edge of the saltmarsh where soft mud cliffs (0.5-1 metre) could be seen. Higher saltmarsh species included red fescue, sea milkwort and saltmarsh goosefoot.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	2	1009300	29.38	30 Sep 2009	Favourable	There were a number of well established creeks and pools within the reed and saltmarsh. Extensive area of reed and salt marsh species - common saltmarsh grass, sea purslane and sea aster being the dominant species in the low-mid salt marsh. The Suffolk Coastal path/sea wall follows the northern edge of the unit. Reed is present in this area up to the sea wall (concrete blocks). Along the eastern edge of the unit there appeared to be no distinct pioneer zone as natural transition to reed (with beds of sea purslane). Small areas of sea rush and saltmarsh rush at the saltmarsh edge where the reed was not so dominant. Most species established above MHW level. There were small beds of Spartina anglica in the mud below the MHW level with scarce glasswort species and sea blite. Coastal scouring was occurring at the edge of the saltmarsh where soft mud cliffs (0.5-1 metre) could be seen. A study by IECS (2010 in prep.) was commissioned to investigate the change of extent in saltmarsh and this showed a 0.02ha loss in extent of saltmarsh between 1999/00 to 2006/07 in	

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	3	1009301	51.84	28 Sep 2009	Favourable	this unit. There was an area of marsh mallow on the eastern boundary of the site adjacent to southern edge of scrub/wood. Salt marsh is mainly concentrated in two areas; an area of mid-high marsh at the bend in the river bank, where a small river enters the main channel and deposition has occurred, and an area of high marsh to the north of The Anchorage dominated by sea purslane and salt marsh rush. Aside from these two areas, some beds of chord grass are present where the sand beach meets tidal mud, but little salt marsh vegetation has developed. Large reed beds are present close to Iken cliff. Marsh is mostly backed by a sea wall of concrete which varies in height from around 2-6m. Sea couch is frequent along the sea wall and at its base. Some disturbance occurs from public access via footpath along approx 50% of the length of the unit. Beyond this, land use is mainly pasture land with a small area of woodland close to Iken cliff.
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	4	1009302	101.94	11 Jan 2010	Favourable	Salt marsh fronting grazing land and arable fields, grading from higher grassland through high and mid marsh, with small area of lower/pioneer marsh at the very edge. Edge of marsh has steep shelf to gravel and mud of river bed, where patches of Spartina are present. There is no sea wall so the saltmarsh is not subject to coastal squeeze. Extensive creek system with banks dominated by common reed and sea purslane. Large creek outlet divides marsh, with freshwater influence seen in large areas of reed bed. Other side of the main creek was not accessed, from remote observation this area contained similar vegetation but with a taller sward (approx 60cm) due to lack of grazing, and more frequent sea aster.
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	5	1009303	97.60	10 Nov 2010	Unfavourable recovering	This unit is restricted by a sea wall backed by pasture and therefore coastal squeeze may be an issue. Saltmarsh, plus tidal muds fronting sea wall with patches of spartina. Saltmarsh present is grassy, higher level (no significant transition zones) stable saltmarsh in front of sea wall. Small pans and creeks are present. Erosion occurring on the leading edges plus some accretion. No management activities, etc, effecting condition. Relevant species composition. The saltmarsh appeared to be degraded and eroding for lengths of the unit. Eastern corner of saltmarsh shown on OS map completely eroded. Much spartina close to sea wall where erosion had taken place (two fifths of length of unit) (see map). In order to investigate coastal squeeze a study by IECs (2010) was commissioned - showed a 0.35ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit, Alde-Ore Estuary as a whole has gained 11.13ha in extent of saltmarsh in the same period. Some of this area was a result of managed re-alignment. As the driver for managed re-alignment here has not been to offset the effects of a plan or project but to offset deterioration caused by coastal squeeze these gains

											should contribute to the condition of the littoral sediment units within the site and help to push them into favourable condition. No, management activities affecting condition. No evidence of human alteration to creek patterns/drainage. Saltmarsh present is grassy, higher level (no significant transition zones) stable saltmarsh in front of sea wall. Areas of pioneer type vegetation (Spartina) against seawall where erosion has taken place (two fifths of length of unit) . No other negative indicators eg pollution, bait digging etc. Quality indicators include marsh harrier, shell ducks, gulls, oyster catchers.
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	6	1009304	93.13	08 Nov 2010	Unfavourable recovering	This unit is partly restricted by a sea wall backed by pasture/woodland, partly by a natural beach below soft/sandy cliff and gentle slope to grassland. The unit has Saltmarsh, plus tidal muds fronting sea wall/ beach with patches of spartina. Saltmarsh present includes grassy, higher level (no significant transition zones) stable saltmarsh in front of sea wall at the west of the unit, including small pans and creeks are present, with erosion occurring on the leading edges. There is also higher level (no significant transition zones) stable saltmarsh to the east of the unit. In between there are areas of accretion with much development of pioneer saltmarsh. No management activities, etc, effecting condition. Relevant species composition. In order to investigate coastal squeeze a study by IECs (2010) was commissioned, showed a 0.18ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This is not a significant gain in itself but the study also showed that the Alde-Ore Estuary as a whole has gained 11.13ha in extent of saltmarsh in the same period. Some of this area was a result of managed re-alignment. As the driver for managed re-alignment here has not been to offset the effects of a plan or project but to offset deterioration caused by coastal squeeze these gains should contribute to the condition of the littoral sediment units within the site and help to push them into favourable condition. No management activities, etc, effecting condition. No evidence of human alteration to creek patterns/drainage. Saltmarsh present is grassy, higher level (no significant transition zones) stable saltmarsh in front of sea wall to the west and east of unit. Areas of pioneer type vegetation (including Spartina) in between. No negative indicators eg pollution, bait digging etc. Quality indicators Avocets with chicks, lapwing with young, shell ducks, black headed gulls, swans, oyster catchers.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Emma Hay	7	1009310	71.93	04 May 2010	Favourable	Hazelwood Marshes is managed well for the breeding and wintering birds the site is important for. A large part of the site comprises grazing marsh with a mosaic of short fine grasses, rush tussocks and extensive areas dominated by reed. Some areas of rush were topped to reduce their dominance and the site is grazed. Birds seen that appear on the notification include 22 avocet, 3 marsh harrier,160	

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	8	1009305	71.36	16 Nov 2010	Unfavourable recovering	black-tailed godwit and teal. The saltmarsh appeared to be degraded and eroding and the whole length backed by a sea wall. There were two main sections. The southern section dominated by common saltmarsh-grass and sea purslane with large patches of cord-grass and backed by a sea wall dominated by sea couch and sea beat. The northern section has large areas dominated by cord-grass on sandy banks. Higher areas are dominated by sea purslane, sea plantain, sea aster and sea couch. There was a small transition zone of sandy beach then couch grass dominated sea wall approximately 10m wide then seaward down to cord grass bed then mud. There were no specific signs of e.g. trampling, grazing (poaching), agriculture and vehicle damage, dredging, engineering works, pollution or bait digging that might affect unit condition. In order to investigate coastal squeeze a study by IECs (2010) was commissioned and this showed a 0.09ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. The study also showed that the Alde-Ore Estuary as a whole has gained 11.13ha in extent of saltmarsh in the same period. Some of this area was a result of managed re-alignment . As the driver for managed re-alignment here has not been to offset the effects of a plan or project but to offset deterioration caused by coastal squeeze these gains should contribute to the condition of the littoral sediment units within the site and help to push them into favourable condition.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	9	1009306	63.32	21 May 2010	Unfavourable recovering	The saltmarsh appeared to be degraded and eroding and the whole length backed by a sea wall. There were two main sections. The southern section dominated by common saltmarsh-grass and sea purslane with large patches of cord-grass and backed by a sea wall dominated by sea couch and sea beat. The northern section has large areas dominated by cord-grass on sandy banks. Higher areas are dominated by sea purslane, sea plantain, sea aster and sea couch. There was a small transition zone of sandy beach then couch grass dominated sea wall approximately 10m wide then seaward down to cord grass bed then mud. There were no specific signs of e.g. trampling, grazing (poaching), agriculture and vehicle damage, dredging, engineering works, pollution or bait digging that might affect unit condition. In order to investigate coastal squeeze a study by IECs (2010 in prep.) was commissioned and this showed a 0.05ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This is not a significant gain in itself but the study also showed that the Alde-Ore Estuary as a whole has gained 11.13ha in extent of saltmarsh in the same period. Some of this area was a result of managed re-alignment . As the driver for managed re-alignment here has not been to offset the effects of a plan or project but to offset deterioration caused by coastal squeeze these gains should contribute to the condition of the littoral sediment units within the site	

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	10	1009307	108.71	21 May 2010	Unfavourable recovering	The salt marsh is dominated by common saltmarsh-grass with patches of sea purslane and large patches of cord-grass. Saltmarsh is levelled out into a plateau with 'cliff' like edge to seaward. About 10% of the area is salt pans and creeks. The saltmarsh is backed by a sea wall along the entire length. There were no specific signs of e.g. trampling, grazing (poaching), agriculture and vehicle damage, dredging, engineering works, pollution or bait digging that might affect unit condition. The area around the Martello Tower had a transition zones from mid/low saltmarsh to high saltmarsh/rough grassland (aprox. 10m wide) and a transition to shingle sea wall and bare ground. In order to investigate coastal squeeze a study by IECs (2010 in prep.) was commissioned and this showed a 0.28ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit. The study also showed that the Alde-Ore Estuary as a whole has gained 11.13ha in extent of saltmarsh in the same period.	and help to push them into favourable condition.
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	11	1009339	146.51	01 Oct 2009	Favourable	The salt marsh has developed in small pockets along the western bank of the river, where conditions are sheltered enough to allow deposition. The marsh is backed by a sea defence wall which runs the length of the unit, and supports the coastal footpath. Behind this the land is mainly grazing marsh with some arable farming. There is evidence of erosion along seaward edge, and it therefore consists of mainly mid-level marsh communities which shelve directly into the muds of the river bed. Lower level communities are largely absent, except for some isolated patches where the marsh is more frequently inundated by tides. However, a study by IECs (2010) was commissioned to investigate the change of extent in saltmarsh and this showed a 0.72ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit. Public access via footpath, however this results in little impact on the marsh as the footpath follows the sea wall and access onto the marsh is unlikely.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	12	1009331	33.17	30 Nov 2009	Unfavourable recovering	Eastern boundary consist a shingle bank with shingle vegetation. At base of wall saltmarsh communities dominated by Atriplex portulacoides and beyond that extensive patches of Spartina anglica and mud. At the southern end of the unit there are good transitions from pioneer to high saltmarsh/mature shingle vegetation. These transitions also present along the eastern boundary. Good numbers of waders and wildfowl. A study by IECs (2010) was commissioned to investigate the change of extent in saltmarsh and this showed a 3.19ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit.	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	13	1009312	14.86	26 Aug 2010	Unfavourable no change	The Unit has a history of coastal management/defence and includes a length of hard coastal defence (rock) which is recharged by EA with shingle (removed from adjacent unit 15). It is narrow, with the vegetated shingle habitat	Inappropriate coastal management

										constrained between a track and eroding coast, meaning that the transition zones are quite limited. There was much evidence of trampling by foot and along track by vehicles. The track is unmade (apart from at the northern end where it is part of the beach revetment above groynes) and widens significantly where the substrate is loose shingle with many lines of tracks. Restraining traffic to a single track would ease any encroachment on to the shingle, along with reducing traffic significantly. There is loss of vegetated substrate within the unit as a result of anthropogenic activities, including walkers, fisherman and vehicles. Transition between habitats is narrow and constrained in places between eroding beach and access track (notably stops 15-20). Species composition was not met for the strandline habitat but was for the more stable shingle. The condition is deemed unfavourable no change.
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	15	1009313	58.27	06 Nov 2009	Favourable	Very limited strandline vegetation present, with only two species recorded. However this seems to be the case all along the Suffolk coast and the targets set in CSM may need adjusting to take account of local variation. Perennial vegetation is more abundant, with 5 indicator species present. Perennial vegetation is becoming dominated by grass species. North section shows signs of trampling as a result of unauthorized public access. Sea kale and sea pea seem to be recovering. Middle section is the location for Environment Agency shingle re-cycling activities and EA take shingle from here to feed defenses at Slaughden. This activity is now highly regulated in agreement with Natural England, and previously disturbed areas are now recovering, but there remains a significant footprint of these operations. Southern section again significantly trampled as a result of unauthorized public access and forming cliff edged shingle.
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Emma Hay	16	1009332	156.92	06 Nov 2009	Favourable	This unit is part of the site fabric that supports some of the breeding and over wintering birds the site was notified for. Bird numbers are increasing under the present management. Southern Section - The transmitting station comprises site buildings and a large area of vegetated stone and shingle. The shingle was free of vegetation in the past but this was probably maintained by using herbicides. The shingle is now mostly dominated with coarse grasses such as couch, Arrhenatherum and yorkshire fog with creeping thistle and docks and patches of elder and bramble. There are still some patches of bare shingle. Northern Section - Coarse grasses (Arrhenatherum & Elymus pyc/rep) dominate with Fes. rub and Agro. sto. persisting under. There are also areas of open water and reedbed.
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	17	1009314	29.91	06 Aug 2009	Favourable	A band of 25m of shingle with little/no signs of annuals but some perennials. Behind this section, the shingle is a mass of sea pea and grasses. Annual species – field notes indicate little to no sign of annuals. However transect data

										has spear-leaved orache in ten out of ten quadrats (abundant). No other species were recorded – Fail. Good band of perennial vegetation with large amounts of sea pea. Perennial vegetation includes three species which are Abundant, one Frequent and two rare species. – Pass There is a brief mention of trampling on this unit but the perennial vegetation passes the CSM minimum target. Annual vegetation fails the CSM but this appears to be the case all along the Suffolk Coast and I think there may be a case for the targets to be adjusted. This Unit and adjacent shingle units need to be re-assessed in view of what may be considered an acceptable degree of disturbance within different units.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Emma Hay	18	1009333	99.70	27 Oct 2009	Favourable	This unit is part of the site fabric that supports some of the breeding and over wintering birds the site was notified for. Bird numbers are increasing under the present management. Southern section Areas of open water with patches of saltmarsh, mud and taller grasses (Elymus pyc/rep, Dactylus glom and Arrhenatherum with Agrostis sto. under). Northern section This is predominantly coarse grasses with little or no areas of open water or short grassland areas.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	19	1009340	31.58	21 May 2010	Favourable	Northern shore - follows Stony Ditch along sea wall with well established creeks and salt pans present within the saltmarsh. Low- mid saltmarsh species include common saltmarsh grass, sea purslane, sea blite and common sea lavender with some greater sea spurrey and sea milkwort on higher areas. Sea couch and Sea wormwood present on sea wall. Shingle ridge behind sea wall in NW of unit. Southern Shore – there is an extensive area of low-mid saltmarsh with approximately 10% of the area consisting creeks and salt pans. The saltmarsh is backed by vegetated shingle/lichen heath. No evidence of grazing, trampling or vehicle damage. No distinct transition between saltmarsh zones on northern shore. On southern shore there is a transition from low-mid saltmarsh to vegetated shingle/lichen heath. The transition zone is about 5 metres wide. A number of waders and wildfowl including 6 redshank, 16 brent geese, 1 curlew and 2 little egret. Spartina maritima occasional to locally frequent over marsh. In order to investigate coastal squeeze a study by IECS (2010) was commissioned and this showed a 0.21ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. However, the study also showed that the Alde-Ore Estuary as a whole has gained 11.13ha in extent of saltmarsh in the same period. Some of this area was a result of managed re-alignment . As the driver for managed re-alignment here has not been to offset the effects of a plan or project but to offset deterioration caused by coastal squeeze these gains should contribute to the condition of the littoral sediment units within the site and help to push them into favourable condition.	

East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Em ma Hay	20	1 009315	81.61	10 Nov 2010	Unfavourable recovering	The species composition for the stable shingle did not meet the targets set, despite good species diversity over much of the unit. The strandline only had one target species with other target species not being known/expected at this location (along with much of Suffolk Coast). In addition the coast is actively eroding (natural coastal process) with implications for strandline flora. Accordingly, the strandline target should be adjusted and the strandline found to be in favourable condition. Trampling was noted as significant during the field assessment, however access is limited to specific areas due to presence of unexploded ordnance and access areas have not changed since NT took over the site. There is some unauthorised access to areas of the Unit (and beyond) and the site now has an access warden and research/action being undertaken (part of their EU LIFE+ Nature project) (as a remedy to trampling of shingle). Given that the trampling issue is being dealt with and the generally outstanding shingle flora present the site should be assessed as unfavourable recovering, however the Unit needs to be carefully monitored with regard to reduction in unauthorised trampling.
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Em ma Hay	21	1 009317	112.43	06 Aug 2009	Favourable	Large shingle unit containing relicts of war defences. Area dissected by roadways which are predominantly used by the public removing serious disturbance issues, allowing kale, sea pea, poppy and sea dock to establish across the unit.
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Em ma Hay	22	1 009334	86.50	27 Oct 2009	Favourable	This unit is part of the site fabric that supports some of the breeding and over wintering birds the site was notified for. Bird numbers are increasing under the present management. The unit consists of ditches with high water levels, areas of tall coarse grass, areas of short grass and brackish pools.
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Em ma Hay	23	1 009341	35.03	21 May 2010	Favourable	Southern Shore – there is an extensive area of low-mid saltmarsh with approximately 10% of the area consisting of creeks and salt pans. The saltmarsh is backed by vegetated shingle/lichen heath. Transition of low to mid saltmarsh to vegetated shingle/lichen heath. The transition zone is about 5 metres wide. In SW of unit low to mid saltmarsh with frequent creeks and salt pans with large deep creeks extending to base of sea wall in many places. Common saltmarsh grass, sea purslane and glasswort dominant. Sea couch and sea wormwood present on sea wall. Northern Shore – Mid marsh with areas of higher ground dominated by sea couch and backed by sea wall. Creeks and salt pans represent 10-15% of marsh area. Shingle beach forming in place at the front edge of the marsh and some patches of shingle dumped on the marsh (not significant). No evidence of recent engineering work but one old straightened creek at western end of unit adjacent to northern shore. Spartina maritima occasional to locally frequent over marsh. In order to investigate coastal squeeze a study by IECs (2010) was commissioned and this showed a 0.42ha loss in extent of

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	24	1009342	117.32	21 May 2010	Favourable	saltmarsh between 1999/00 to 2006/07 in this unit. However, the study also showed that the Alde-Ore Estuary as a whole has gained 11.13ha in extent of saltmarsh in the same period. Some of this area was a result of managed re-alignment. As the driver for managed re-alignment here has not been to offset the effects of a plan or project but to offset deterioration caused by coastal squeeze these gains should contribute to the condition of the littoral sediment units within the site and help to push them into favourable condition. The salt marsh is present in small sections along the western bank of the river, and is backed by a sea defence wall supporting the coastal footpath. Along the majority of the unit, the marsh is backed by grazing marsh with some arable farming. The unit includes the town of Orford which sits on the river, and here there is a small marina, with the sea wall continuing. Very little marsh vegetation is present to the west of Orford, here the tidal muds extend up to the sea wall and offer little chance for marsh development. The sea wall has resulted in significant coastal squeeze, with evidence of erosion along seaward edge, and is therefore dominated by mid-level communities which shelve directly into the muds of the river bed. Lower level communities are largely absent. Creeks and salt pans are frequent in places, with large, deep creeks extending up to the base of the sea wall. Disturbance by cattle is frequent, with grazing of vegetation and heavy poaching observed along most of the unit. This has resulted in more open habitats close to the sea wall, where standing water and bare ground are more frequent. Public access is limited to the footpath, which results in little impact on the marsh as the footpath follows the sea wall and access onto the marsh is infrequent. No obvious transition between different saltmarsh zones.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	25	1009343	252.11	15 Oct 2009	Favourable	Only northern bank of this unit accessed, no access to Havergate Island. Sea wall present along entire northern bank, with thin belt of salt marsh developed in front of the wall in places. In some sheltered inlets larger areas of marsh have developed. Some evidence of deer/sheep trampling- poaching and slot marks seen on marsh. Sea purslane and other vegetation shorter on accessible parts of the marsh indicating grazing is occurring. A study by IECS (2010) was commissioned to investigate the change of extent in saltmarsh and this showed a 1.14ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit. Majority of marsh present is comprised of mid-level communities. Slender hare's-ear was found growing along the sea wall.	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	26	1009318	79.03	06 Aug 2009	Favourable	There are major issues with public access from boats, fisherman, water skiing, dogs and camping. There are large areas of shingle heath, a red data book habitat, which unfortunately provides easier walking for the public. Within	

East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	27	1009319	57.72	06 Aug 2009	Unfavourable declining	the shingle grasses, dock, sea beet, sea pea, sea kale, sea campion and sea wormwood were found. The field notes from this visit (and to some extent all the shingle units on Orford Ness) indicate a high level of disturbance resulting from unauthorised access by the public. It suggests in the field notes that this is having a negative impact on the vegetation which itself indicates a movement towards negative condition. Base line data and subsequent monitoring is needed to determine the extent the shingle flora is being affected. The National Trust, as part of their EU LIFE+ Nature project, starting on 1 April 2010 and running to 2014, will look at the issue of unauthorised access. This work will involve local communities and user groups being engaged in an effort to seek a compromise solution to favour some access while protecting the most vulnerable areas of coastal vegetated shingle. This shows the commitment of the National Trust to look for solutions and maintain favourable condition. There are major issues with public access from boats, fisherman, water skiing, dogs and camping. At present unit 27 has been divided into three parts by erosion, which Little Terns used for nesting this year. The unit contains large areas of shingle heath, a red data book habitat, which unfortunately provided easier walking for the public. Also within the unit are areas of saltmarsh. Within the shingle we found grasses, dock, sea beet, sea pea, sea kale, sea campion and sea wormwood. The National Trust, as part of their EU LIFE+ Nature project, starting on 1 April 2010 and running to 2014, will look at the issue of unauthorised access. This work will involve local communities and user groups being engaged in an effort to seek a compromise solution to favour some access while protecting the most vulnerable areas of coastal vegetated shingle. This shows the commitment of the National Trust to look for solutions and return this unit to favourable condition.	Public access/disturbance
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	28	1009329	57.24	15 Oct 2009	Unfavourable recovering	Narrow belt of mid-level salt marsh formed at the base of sea wall which runs along the length of the unit. Behind sea wall land use is mainly grazed pasture. Salt marsh being squeezed against sea wall with evidence of erosion along outward edge. However, recent survey results show a 1.12ha gain in saltmarsh area. This gain is compounded by a 13.9ha gain in saltmarsh area in the estuary as a whole. Oyster beds present at the northern end of the unit, apparently not recently used. Lax-flowered sea lavender present within the unit.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	29	1009308	48.63	21 May 2010	Unfavourable recovering	The saltmarsh is dominated by common saltmarsh-grass and sea purslane with associated species. Saltmarsh is levelled out into a plateau of mid-low marsh with 'cliff' like edge to seaward and backed by a sea wall dominated by sea couch. There are a number of small and large saltpans and creeks occupying about 15% of the marsh with a further 5% (ish) that seems to be forming or filling with the	

										remains of last years annual sea blite and germinating glasswort emerging. There were no specific signs of e.g. trampling, grazing (poaching), agriculture and vehicle damage, dredging, engineering works, pollution or bait digging that might affect unit condition. In order to investigate coastal squeeze a study by IECs (2010) was commissioned and this showed a 0.27ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit. The study also showed that the Alde-Ore Estuary as a whole has gained 11.13ha in extent of saltmarsh in the same period. Some of this area was a result of managed re-alignment . As the driver for managed re-alignment here has not been to offset the effects of a plan or project but to offset deterioration caused by coastal squeeze these gains should contribute to the condition of the littoral sediment units within the site and help to push them into favourable condition.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	31	1009344	131.02	25 Sep 2009	Favourable	Starting from the North East end of the unit. There is a sand/shingle beach fronting an area of saltmarsh which is backed by a sea wall dominated by sea couch on the seaward side. The central area of the saltmarsh is raised and forms what appears to be a lichen heath community dominated by Cladonia sp. and red fescue. There was some evidence that the front edge of the saltmarsh is eroding in places. However, a study by IECs (2010) was commissioned to investigate the change of extent in saltmarsh and this showed a 0.83ha gain in extent of saltmarsh between 1999/00 to 2006/07 in this unit. Towards the South western end of the unit (from about 600metres north east of the sluice) the sea wall is fronted by an area of high level marsh grading into a plateau of mid-low marsh with saltmarsh creeks. This section of wall leading up to the sluice is without fencing and the grassland and marsh are grazed but there was no evidence of excessive poaching or damage of the saltmarsh. South west of the sluice the saltmarsh is fenced off from the grazing marsh and sea wall. The grassland and marsh are grazed but there was no evidence of excessive poaching or damage of the saltmarsh. The extreame South western end of the unit has a shingle beach with a sand/shingle dune behind. The beach to seaward has patches of sea purslane and shrubby sea blite and is dominated by sea couch with sea purslane and sea beat at higher levels.	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	32	1009320	19.96	06 Sep 2010	Unfavourable declining	There has been quite alot of movement of shingle in this unit further south into unit 33 possibly leading to constriction of habitat (a natural process). There is a range of habitats with open shingle with sparse vegetation to vegetated shingle grading into short grassland with lichens in some areas and much sea campion, plus saltmarsh communities and small saline lagoons. The unit is bordered by a sea wall to the east. There is no increase in constraints to shingle mobility in active foreshore zone. The whole Unit is heavily used by people walking dogs, fishing,	Public access/disturbance

										etc, and there seem to be established grassy tracks behind the shingle ridge, plus the beach area is extensively used with much trampling of the ridge line (see photos). There is a concrete track running through the site which is extensively used by vehicles despite prohibitive signage. There is much trampling at the end of this track where it approaches the beach, plus evidence of fires (popular with fisherman). The open vehicular access to the unit presents a real risk to the SSSI. There is an ongoing issue of people driving over the vegetation and shingle and old tracks could be seen (see photos). There is also a bungalow, The Beacons, within the unit with access off the concrete track. There is much trampling at the southern end of Unit (and into Unit 33) where pedestrian access to the beach is taken from the car park. Species composition was not met for the strandline habitat or the more stable shingle, however there were many characteristic species present outside the quadrats and a good mosaic of habitats. No negative species indicators. Due to the trampling, the site was deemed to be in unfavourable condition.	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	33	1009321	40.42	25 Jun 2009	Unfavourable declining	Although there are good examples of vegetated shingle across the unit it is heavily used by the public and this is having a negative impact on the shingle vegetation. JNCC guidelines recommend that there should be "no loss of vegetated substrate within the habitat as a result of anthropogenic activities" and therefore this unit should be considered as unfavourable	Public access/disturbance
East Of England	Suffolk	Suffolk Coastal	Earth heritage	Emma Hay	38	1022111	1.29	11 Nov 2009	Unfavourable no change	The cliff at Gedgrave is a small exposure of Coralline Crag about 3m in height. Sandwave facies (characterised by cross stratification) overlie fossiliferous silty crag. The site is one of the only Coralline Crag localities to show lower erosional contact of the sandwave facies.	Earth science feature obstructed
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	42	1028010	36.24	25 Sep 2009	Favourable	The northern 1/3 of the unit is dominated by reed with extensive patches of sea rush. The southern section has patches of reed and sea rush but otherwise dominated by a plateau of low – mid saltmarsh fronted by tidal mud to seaward and grading into grassland on the landward side. Pioneer communities of any extent were not seen during the visit but large areas were difficult to access so it is likely that they were missed. Extensive areas of mid-low marsh could only be seen at a distance as they were very difficult to access. The grassland and marsh seem to be grazed but there was no evidence of any significant poaching or damage of the saltmarsh. There was some evidence that the front edge of the saltmarsh is eroding in places but the saltmarsh was only backed by a sea wall on a small section at the southern end of the unit. Otherwise the saltmarsh is not subject to coastal squeeze against the sea wall. In addition a study by IECs (2010) shows no change in saltmarsh extent between 1999/00 to 2006/07 in this unit. The tidal mud was being used by large numbers of waders including: Curlew, Avocet and Black Tailed	

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	43	1028020	25.27	14 Oct 2009	Favourable	Godwit.	Extensive area of salt marsh along the western side of the estuary, with frequent well-developed creeks producing a number of islands of marsh. The majority of the marsh is mid-level, with some higher marsh communities of couch and purslane along the base of the sea wall. No low/pioneer communities were observed. The marsh is eroding at the outer edge, and has a steep shelf down to the river bed, and squeezed against the sea wall behind. However, a study by IECS (2010) was commissioned to investigate the change of extent in saltmarsh and this showed no change in saltmarsh extent between 1999/00 to 2006/07 in this unit. Beyond the sea wall is mainly arable land with some areas of woodland. Common reed is dominant along much of the sea wall, and in some areas of the marsh reed and rush are largely dominant. Some evidence of rabbit grazing. Boats moored nearby, and a number of jetties present. Possible light dredging of the channel.
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Emma Hay	44	1028011	32.13	18 Nov 2010	Favourable		Emma Hay and Emma Quick visited Unit 45 on 28 June 2010. It was not clear what feature the Unit was notified for prior to visit. The Unit has a mosaic of largely woodland habitats, with wet alder carr woodland around the decoy pond (plus wet marginal vegetation inc iris, sedge and reed) with drier acid woodland around the north eastern, eastern and southern (W10) edges (all much replanted possibly after the 1987 storm, with oak, beech, sweet chestnut, etc, plus much sycamore and birch), plus open areas of bracken and soft grass. The site was initially assessed as wet woodland and the overall condition of the unit was found to be favourable. However, the unit is not of SSSI woodland quality and would fail on a number of targets including species composition (non natives - sycamore) and structural processes (single age structure of replanted areas and very mature alder). Plus, wet woodland is not a feature of the SSSI but the unit contributes to the overall site and its interests, notably the estuary feature (unit is located at the head of the Butley Estuary and has a number of drains into it) and bird feature (marsh harrier). It is proposed that this Unit be kept as part of the Fabric of the SSSI but be reunited into Unit 44. Carl Borges surveyed Unit 44 on 30 November 2009 and found the Unit to be in favourable condition.

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - **SSSI name** - Barnby Broad & Marshes - **Staff member responsible for site** - Patrick Robinson

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	1	1009604	45.72	16 Sep 2009	Favourable	Unit 1 passes all the criteria/targets for CSM ditch assessment. There is a high number of Appendix 2 sp. within the ditches and <i>Stratiotes aloides</i> and <i>Hydrocharis morsus-ranae</i> being abundant and <i>Utricularia</i> spp. and <i>Chara</i> spp. being present in the southern area of the unit. The unit is owned by the Suffolk Wildlife Trust and is managed by cattle grazing and regular topping under an ESA agreement. The site is in Favourable condition.	
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	2	1009612	7.80	29 Jul 2009	Unfavourable recovering	Unit 2 passes all the criteria/targets for CSM ditch assessment apart from the succession stage. The % successional vegetation does not fit the % target criteria although the ditches are mid succession which is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. There are a number of Appendix 2 sp. within the ditches. <i>Stratiotes aloides</i> and <i>Hydrocharis morsus-ranae</i> are abundant in the ditches. The unit is owned by the Suffolk Wildlife Trust and is managed by cattle grazing, regular topping and ditch/dyke maintenance under an ESA agreement. The site is in Unfavourable recovering condition.	
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	3	1016608	3.18	29 Jul 2009	Unfavourable recovering	Unit 3 passes all the criteria/targets for CSM ditch assessment apart from the succession stage which does not fit the % target criteria. The ditches are mid-late succession which is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. The levels of algal cover, bankside cover and channel form all meet the criteria set and the mean number of Appendix 2 aquatic species exceeds the target. <i>Stratiotes aloides</i> and <i>Hydrocharis morsus-ranae</i> were recorded in the ditches. The unit is owned by the Suffolk Wildlife Trust and is managed by cattle grazing, regular topping and ditch/dyke maintenance under an ESA agreement. The site is in Unfavourable recovering condition.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	4	1016619	5.70	23 Nov 2010	Favourable	Unit passes all of its targets and is meeting its objectives. Bird populations are being maintained at stable levels.	

East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	5	1016610	8.81	10 Sep 2010	Favourable	This unit has several features including Sallow and Alder Carr, ditches, tall herb fen and breeding bird assemblage all are in favourable condition and are well managed. W2/W5/W6 Sallow/Alder woodland - Sycamore and Rhododendron are present and should be monitored and not allowed to increase. Ditches – 8 Appendix II species were recorded including <i>Carex acutiformis</i> , <i>Carex riparea</i> , <i>Hydrocharis morsus-ranae</i> , <i>Lemna minor</i> , <i>Lemna triscula</i> , <i>Phragmites australis</i> , <i>Rumex hydrolapathum</i> and <i>Stratiotes aloides</i> . S25 <i>Phragmites australis</i> - <i>Eupatorium cannabinum</i> tall-herb fen. The average number of positive indicator species across 10 samples was 5.2 exceeding the threshold of 5. <i>Urtica dioica</i> and <i>Rubus fruticosus</i> were not recorded. The fen is cut on rotation. Marsh Fern <i>Thelypteris palustris</i> was also recorded in this area. The unit was assessed for its variety of breeding bird species (broadleaved, mixed and yew woodland) and exceeded the threshold set at site notification. Norfolk Hawkers <i>Aeshna isosceles</i> and the Scarce Chaser <i>Libellula fulva</i> were observed on the track between Units 5 and 13. The unit is well managed.
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	6	1009610	1.18	16 Jul 2009	Favourable	NVC survey data was available to assess the site and unit 6 meets the CSM criteria for M22 vegetation. There has been no loss of extent of the feature. Positive indicator species, sward composition, indicators of waterlogging and negative indicator species all meet the criteria. The site is managed by the Suffolk Wildlife Trust.
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	7	1016614	6.09	11 Sep 2009	Unfavourable recovering	Unit 7 passes all the criteria/targets for CSM ditch assessment apart from the succession stage which does not fit the % target criteria although the ditches are early-mid succession which is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. The unit also fails the target for bankside shading with 40% shading. This is due to one of the ditches running along a wood edge. The unit had a total number of 12 App.2 sp. and a mean number of 8.3 App.2 sp. <i>Hydrocharis morsus-ranae</i> was present. The unit is under an ESA agri-agreement and is managed by cattle grazing. The amount of bankside cover/shading should be monitored to ensure that the ditches do not become unfavourable over time. The site is in Unfavourable recovering condition.
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	8	1016615	4.11	02 Dec 2010	Unfavourable recovering	Unit passes on extent, water availability, habitat structure, and species composition. One section of ditch was identified as being turbid and therefore failed.
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	9	1016617	11.25	25 Nov 2010	Favourable	Unit 9 passes the criteria/targets for CSM ditch assessment on which it was assessed The ditches averaged over 11 Appendix 2 sp (JNCC Monitoring guidance). The unit is cattle grazed and has regular topping.
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	10	1016616	2.35	16 Sep 2009	Unfavourable recovering	Unit 10 passes all the criteria/targets for CSM ditch assessment apart from the succession stage which does

			lowland							not fit the % target criteria although the ditches are early-mid succession which is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. The unit also failed the target for bankside cover as the ditch was adjacent to a woodland edge and was shaded by the trees growing there. A mean number of 7.5 App.2 sp. were found in the ditches. The unit is under an ESA agri-environment scheme and managed by cattle grazing. The amount of bankside cover/shading should be monitored to ensure that the ditches do not become unfavourable over time. The site is in Unfavourable recovering condition.
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	11	1016609	11.89	16 Sep 2009	Unfavourable recovering	Unit 11 passes all the criteria/targets for CSM ditch assessment apart from the succession stage which does not fit the % target criteria. The ditches are all mid succession which is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. The unit also failed the target for bankside cover with 18.3% shading. This will need to be monitored to ensure that the ditch vegetation does not decline and the scrub/trees are appropriately managed. A mean number of 8.3 App.2 sp. were found in the ditches. The unit is under an ESA agri-environment scheme and managed by cattle grazing. The site is in Unfavourable recovering condition.
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	12	1009608	0.46	24 Nov 2010	Unfavourable recovering	Unit 12 passes all the criteria/targets for CSM ditch assessment apart from the succession stage which does not fit the % target criteria although the ditches are early-mid succession which is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. The unit also fails the target for bankside shading with 40% shading. This is due to one of the ditches running along a wood edge. The unit had a total number of 12 App.2 sp. and a mean number of 8.3 App.2 sp. Hydrocharis morsus-ranae was present. The unit is under an ESA agri-agreement and is managed by cattle grazing. The amount of bankside cover/shading should be monitored to ensure that the ditches do not become unfavourable over time. The site is in Unfavourable recovering condition.
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	13	1010517	4.61	10 Sep 2010	Favourable	The W2/W5/W6 Sallow/Alder woodland is in favourable condition. Sycamore and laurel are present and should be monitored and not allowed to increase. The unit was assessed for its variety of breeding bird species (broadleaved, mixed and yew woodland) and exceeded the threshold set at site notification. Norfolk Hawkers Aeshna isosceles and the Scarce Chaser Libellula fulva were observed on the track between Units 5 and 13.
East Of	Suffolk	Waveney	Broadleaved,	Patrick	14	1016611	6.06	10 Sep 2010	Favourable	The unit was assessed for its variety of breeding bird

England			mixed and yew woodland - lowland	Robinson						species (broadleaved, mixed and yew woodland) and exceeded the threshold set at site notification. Ditches – The ditches surrounding this unit have recently been slubbed out, banks cut and the alders and other tree species aligning the banks coppiced. No vegetation was therefore recorded however they have the potential to be floristically diverse and should be monitored in the future. They will also be excellent habitat for Dragonflies and Damselflies.	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	15	1016612	4.89	10 Sep 2010	Favourable	The unit was assessed for its variety of breeding bird species (broadleaved, mixed and yew woodland) and exceeded the threshold set at site notification. The ditches surrounding this unit have recently been slubbed out, banks cut and the alders and other tree species aligning the banks coppiced. No vegetation was therefore recorded however they have the potential to be floristically diverse and should be monitored in the future. They will also be good habitat for dragonflies and damselflies.	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	16	1016613	18.13	10 Sep 2010	Favourable	W2/W5/W6 Sallow/Alder woodland Favourable. Sycamore and Rhododendron are present but the % cover is less than 10%. They should be monitored and not allowed to increase. The unit was assessed for the variety of breeding bird species (broadleaved, mixed and yew woodland) and exceeded the threshold set at notification. The ditches surrounding this unit have recently been slubbed out, banks cut and the alders and other tree species aligning the banks coppiced. No vegetation was therefore recorded however they have the potential to be floristically diverse and should be monitored in the future. Norfolk Hawkers and Aeshna isosceles were recorded on the central trackway.	
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	17	1016618	2.51	16 Jul 2009	Unfavourable recovering	Unit 17 passes all the criteria/targets for CSM ditch assessment apart from the succession stage which does not fit the % target criteria. The ditches are mid succession which is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. A total of 13 Appendix 2 CSM species were recorded. The field notes report the unit has scrub/woodland on the east and west and the ditches close to these are shaded in parts, resulting in little vegetation. A kingfisher and water vole droppings were seen. The unit is under an ESA agri-environment scheme and managed by cattle grazing. The site is in Unfavourable recovering condition.	
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	18	1016603	2.11	29 Jul 2009	Unfavourable recovering	Unit 18 does not pass the CSM ditch criteria/targets for algal cover, succession stage and mean number of Appendix 2 species. The ditches are in mid-late succession which is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. The level of algal cover was higher than the target in half the ditches surveyed, this could be due to	

									heavy shading from the woodland to the east and south of the unit. One ditch surveyed had a high level of silt (possible silt trap?) and little vegetation. A total of 13 Appendix 2 CSM species were recorded in the ditches but the mean number was lower than the target required. The unit is under an ESA agri-environment scheme and managed by cattle grazing. The site is in Unfavourable recovering condition.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	20	1016621	8.56	17 Sep 2009	Unfavourable recovering	Unit 20 passes most of the CSM ditch criteria/targets. It fails on channel form and succession stage. The ditches had been recently cleared (year to 18 months) and this explains the ditches being in early succession. This is acceptable if there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation. Two ditches were monitored and one was trapezoidal form – this can be acceptable for wetland sites with large amounts of fen and areas of standing water. The mean number of Appendix 2 aquatic native plants was above the target required. The unit is under an ESA agri-environment scheme and managed by cattle grazing. At the time of surveying there was much work that had/was taking place in this unit and a follow-up visit would ensure that correct management was in place for the site to become favourable in time. The site is in Unfavourable recovering condition.
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	21	1016622	7.09	02 Oct 2009	Unfavourable recovering	The unit did not pass the ditches CSM criteria for algal cover, channel form and bankside cover. The scrub/wood needs management along the bank/ditch edge as heavy shading is detrimental to characteristic ditch flora and fauna. This will also ensure that the growth of aquatic macrophytes is not effected and there is not a build up of leaf litter in the ditches. The algal cover was above the level required and this may be due to the heavy shading of the site. This again should be monitored to ensure that the Appendix 2 aquatic species do not decline. The channel form failed the target with a high % of the ditches being trapezoidal shaped – this may be acceptable in areas of large fen and standing water. From the field notes it would seem that there is also an issue with possible water pollution. The EA have been involved with water issues on the site in the past. The unit is in Unfavourable recovering condition.
East Of England	Suffolk	Waveney	Standing open water and canals	Patrick Robinson	22	1009614	1.97	02 Dec 2010	Unfavourable recovering	The unit is showing a recovery of species variety following the mud pumping.
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	23	1026794	11.08	16 Jul 2009	Unfavourable no change	Failed on number of positive and negative indicator species and amount of litter. Presence of False Oat-grass and Common Nettle appears to indicate that the habitat is drying out. Breeding bird assemblage and vascular plant assemblage require further investigation.
East Of	Suffolk	Waveney	Neutral	Patrick	24	1026795	11.26	16 Jul 2009	Unfavourable	Failed the Condition assessment for M22 on amount of

England	Suffolk	Waveney	grassland - lowland	Robinson						recovering	litter, but is under an ESA agreement to rectify any issues. Breeding bird assemblage and vascular plant assemblage require further investigation.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	25	1026796	5.56	16 Jul 2009	Unfavourable no change	Failed on number of positive and negative indicator species and amount of litter. Presence of Common Nettle appears to indicate that the habitat is drying out. Breeding bird assemblage and vascular plant assemblage require further investigation.	Inappropriate water levels	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - SSSI name - Blaxhall Heath - Staff member responsible for site - Monica O'Donnell

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Monica O-donnell	1	1009494	45.90	23 Sep 2009	Unfavourable recovering	Blaxhall Heath passes all criteria for H8, Dry Heath, apart from the amount of cover of dense mats of acrocarpous mosses (target occasional – result frequent). It passes all criteria for U1, Acid Grassland, apart from % cover of tree/scrub species (target <5% - result 8.6%). This is acceptable as there is a programme of scrub/tree clearance to bring the site into favourable condition. The vegetation structure and composition and desirable forbs pass the CSM criteria with dwarf shrubs Calluna vulgaris and Erica cinerea being Frequent, Graminoids pass the criteria with Agrostis spp., Carex spp. and Festuca spp. being Frequent and Galium saxatile and Rumex acetosa meeting the target for desirable forbs. Overall the site is under a HLS scheme and is being managed by the SWT for Blaxhall Parish Council. Silver studded blue butterfly re-introduced on the site 2007. Bird interest – Nightjar and woodlark	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Four Counties - **SSSI name** - Colne Estuary - **Staff member responsible for site** - Carol Reid

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	1	1004947	321.63	31 Mar 2010	Unfavourable recovering	"This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas. This unit comprises an expanse of mudflat, as well as saltmarsh. Saltmarsh loss of 3.14 ha (31,400 m ² / 7.76 acres) has occurred between 1997 and 2008 - based on a remote sensing contract undertaken by IECs for Natural England comparing ortho-rectified aerial photographs. This loss represents a significant loss of saltmarsh i.e. 31.56% from the 1997 baseline area. This condition assessment has only assessed the extent attribute. Ground truthing may be required to assess other attributes. Two units out of 43 have been assessed so far by the Natural England RO. Saltmarsh change shows a downward trend with a net loss of 2.82 ha (28,200 square metres/6.97 acres) over the reporting period. Reporting on arbitrary units, without a full account of the pattern of losses or gains throughout the whole estuary does not allow for a fuller understanding of the morphological changes taking place in the estuary.	
East Of England	Essex	Colchester	Earth heritage	Carol Reid	2	1004956	1.64	05 Nov 2008	Favourable	The cliff profile is exposed indicating that erosive processes are operating on the cliff face. Full report and photos on file.	
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	3	1004948	5.72	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 1.38 ha of saltmarsh present in 1997, a total of 0.28 ha were lost to erosion, with only 0.08 ha gained elsewhere through natural accretion resulting in a net loss of 0.20 ha by 2008. Saltmarsh was lost along the seaward marsh edge. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing	

East Of England	Essex	Colchester	Improved grassland	Carol Reid	4	1005016	16.21	05 Nov 2008	Favourable	may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	5	1004969	95.53	31 Mar 2010	Unfavourable recovering	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.
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	6	1004970	94.89	22 Oct 2010	Unfavourable recovering	"This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas. Saltmarsh gain of 0.32 ha (3,200 m ² / 0.79 acres) has occurred between 1997 and 2008 - based on a remote sensing contract undertaken by IECs for Natural England comparing ortho-rectified aerial photographs. This condition assessment has only assessed the extent attribute. Ground truthing may be required to assess other attributes. Two units out of 43 have been assessed so far by the Natural England RO. Saltmarsh change shows a downward trend with a net loss of 2.82 ha (28,200 square metres/6.97 acres) over the reporting period. Reporting on arbitrary units, without a full account of the pattern of losses or gains throughout the whole estuary does not allow for a fuller understanding of the morphological changes taking place in the estuary.
East Of England	Essex	Colchester	Littoral sediment	Carol Reid						The saltmarsh extent feature has been measured comparing ortho-rectified aerial photographs over the period 2000 to 2006/2008. Of the 67.6742 ha of saltmarsh present in 2000, 0.1860 ha were lost to erosion, with 0.8062 ha gained through accretion resulting in a net LOSS of 0.6202 ha. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal

										Studies, University of Hull. Ground truthing may also be required to confirm changes in extent, where this is feasible. Field survey would be required to undertake a qualitative assessment of saltmarsh - which would include reporting on negative indicators such as changes in extent of <i>Spartina anglica</i> (common cord grass). "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas.
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	7	1004971	123.23	22 Oct 2010	Unfavourable recovering	The saltmarsh extent feature has been measured comparing ortho-rectified aerial photographs over the period 2000 to 2006/2008. Of the 76.1094 ha of saltmarsh present in 2000, 0.2762 ha were lost to erosion, with 0.3701 ha gained through accretion resulting in a net LOSS of 0.094 ha. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may also be required to confirm changes in extent, where this is feasible. Field survey would be required to undertake a qualitative assessment of saltmarsh - which would include reporting on negative indicators such as changes in extent of <i>Spartina anglica</i> (common cord grass). "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas.
East Of England	Essex	Colchester	Neutral grassland - lowland	Carol Reid	8	1004996	66.57	27 Oct 2009	Favourable	An extensive grazing regime is being carried out. Field recording form on file.
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	9	1004972	78.35	22 Oct 2010	Unfavourable recovering	The saltmarsh extent feature has been measured comparing ortho-rectified aerial photographs over the period 2000 to 2006/2008. Of the 14.6133 ha of saltmarsh present in 2000, 0.0932 ha were lost to erosion, with 0.7829 ha gained through accretion resulting in a net LOSS of 0.6898 ha. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may also be

										required to confirm changes in extent, where this is feasible. Field survey would be required to undertake a qualitative assessment of saltmarsh - which would include reporting on negative indicators such as changes in extent of <i>Spartina anglica</i> (common cord grass). "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas.	
East Of England	Essex	Colchester	Coastal lagoon	Carol Reid	10	1005005	25.71	19 Nov 2010	Favourable	This unit is managed by the Garrison shoot and contains an extensive reed bed of common reed with sea club rush. There is a good balance of open water and emergent vegetation. Field recording form and photos on file.	
East Of England	Essex	Colchester	Neutral grassland - lowland	Carol Reid	11	1004997	188.56	19 Nov 2010	Unfavourable recovering	Though dominated by coarse grasses, the structure of the marshes and ditches is varied. The topography is uneven. There are areas of long ungrazed grass and long grazed grass; tussocky grass; short grass in low ways and short grazed turf; wet grassland; a few anthills; poached areas; areas of bare mud. Bare mud is exposed in the new scrape. The shallow areas of the scrape will provide a feeding and loafing habitat for birds. There are areas of shallow and deeper water in the scrape and throughout the ditch network within the unit. There are extensive brackish water reed beds dominated by <i>Phragmites australis</i> (common reed) and <i>Scirpus maritimus</i> (sea club rush). Though emergent vegetation is predominant, there are areas of open water supporting sub-surface and surface vegetation. Overall, there is an ongoing cycle of ditch management. The surface topography of the various vegetation types should provide suitable niches for invertebrates. Management recommendations: The thorn scrub removal programme undertaken by the MoD in this unit has been successful having significantly reduced scrub density. This along with the grazing management has transformed the appearance of the site. The remaining low scrub will provide food and shelter for passerine birds. The aim for grassland management would be to produce a shorter sward, 5 to 15cm, overall, reduce the dominance of the coarser grasses and maintain low scrub density. Field recording form and photographs on file.	
East Of England	Essex	Colchester	Boundary and linear features	Carol Reid	12	1024405	5.28	15 Oct 2009	Unfavourable declining	The strandline habitat here is undergoing steepening and cliffing of the foredune habitat is occurring. Migration landwards is prevented due to the presence of the sea wall or other land uses (hedge and ditch fronting arable land). The construction of the sea wall at the Essex County Council youth camp is likely to increase the	Coastal squeeze

										pressure on foreshore to the west (ie between the youth camp and Waldegrave's caravan park). The wave action is eroding the cliffed, 'foredune' along this stretch and has cut a channel into the arable land behind. Zonation is evident, particularly on the small dune system to the east of the youth camp and characteristic plants of strandline, foredune and semi-fixed dune are present. Recording forms are on file.	
East Of England	Essex	Colchester	Improved grassland	Carol Reid	13	1005017	86.03	22 Nov 2010	Favourable	Management of the ditch and grazing marsh on the west side of the upper South Geedon Creek is achieving a short, tussocky sward with poached ditch margins. The water table is high – the ditches are full and there is standing water in the lower parts of the marsh. The wide ditch running west?east through this marsh has an extensive reed bed of <i>Scirpus maritimus</i> (sea club rush) and <i>Phragmites australis</i> (common reed) and open water. Grazing of the marsh north of the upper South Geedon Creek has a predominantly longer sward, though there are patchy areas of shorter grass. This area also contains extensive reed beds. Water levels in the west of this section had previously been managed by closing the main sluice flap which unfortunately resulted in the water levels being held too high causing flooding of the ditch banks, including the folding, and creating problems for stock access and management. At the request of Natural England a water control structure was installed earlier this year which has reset the invert level to prevent flooding of the ditch banks and will allow much finer water level control. The management of these marshes will be kept under review over the next year to obtain optimal water levels for grazing management. The field recording form and photos are stored on file.	
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	14	1004974	273.89	22 Oct 2010	Unfavourable recovering	The saltmarsh extent feature has been measured comparing ortho-rectified aerial photographs over the period 2000 to 2006/2008. Of the 211.8484 ha of saltmarsh present in 2000, 1.9745 ha were lost to erosion, with 2.7367 ha gained through accretion resulting in a net LOSS of 0.7678 ha. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may also be required to confirm changes in extent, where this is feasible. Field survey would be required to undertake a qualitative assessment of saltmarsh - which would include reporting on negative indicators such as changes in extent of <i>Spartina anglica</i> (common cord grass). "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional	

										coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas.
East Of England	Essex	Colchester	Broadleaved, mixed and yew woodland - lowland	Carol Reid	15	1005013	31.82	18 Sep 2009	Favourable	Freshwater gravel lake - the water was clear for the whole of its length. Due to the dryness of the region over the past few weeks the water level has dropped by around half a metre. As a result of the drawdown moss and other pioneer species are colonising the exposed substrate (wet mud and gravel). Emergent vegetation in the form of Phragmites australis, common reed, was abundant. Migrant hawkler, and Sympetrum striolatum, common darter, dragonflies, were seen along the edges of the lake (some mating). A Falco subbuteo, hobby, was flying around the lake presumed to be preying on the dragonflies. Oxyura jamaicensis, ruddy duck, Anas platyrhynchos, mallard, Fulica atra, coot, Podiceps cristatus, great-crested grebe, and Cygnus olor, mute swan, were all present on the lake at the time of the assessment. A survey of the water body and a dragonfly survey from June onwards is recommended to provide a fuller assessment. Recording form and summary sheet on file.
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	16	1024399	114.59	22 Oct 2010	Unfavourable recovering	The saltmarsh extent feature has been measured comparing ortho-rectified aerial photographs over the period 2000 to 2006/2008. Of the 20.3221 ha of saltmarsh present in 2000, 0.1473 ha were lost to erosion, with 0.8264 ha gained through accretion resulting in a net LOSS of 0.6787 ha. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may also be required to confirm changes in extent, where this is feasible. Field survey would be required to undertake a qualitative assessment of saltmarsh - which would include reporting on negative indicators such as changes in extent of Spartina anglica (common cord grass). "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas.
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	17	1004975	26.04	25 Nov 2010	Unfavourable recovering	The observations made by the current survey, taking into account the findings of two published surveys on saltmarsh area and vegetation types, are: changes to the hydrology and drainage (drainage network increased) caused by historical soil winning in the saltmarsh to build/maintain the sea wall; possible increases in the

<http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdr13&category=S&reference=1000666>

East Of England	Essex	Tendring	Fen, marsh and swamp - lowland	Carol Reid	19	1005007	3.76	18 Sep 2009	Favourable	The freshwater lake is surrounded by emergent vegetation in the form of <i>Phragmites australis</i> , common reed - which is the key feature of this unit. <i>Anas platyrhynchos</i> , mallard, <i>Cygnus olor</i> , mute swans, <i>Gallinula chloropus</i> , moorhens and gulls were all present on the lake, as were several Migrant hawks and <i>Sympetrum striolatum</i> , common darter, dragonflies. Water Vole had been reported to be present on the site but <i>Mustela lutreola</i> , mink are now known to be in the vicinity. A mink raft has been placed within the lake to determine presence. Due to the recent excessive dry conditions, the water level in the lake has dropped by just under a third of a metre and algae is present along the edges of the lake. Numbers of dead <i>Scardinius erythrophthalmus</i> , rudd were seen on the lake surface, likely to be due to oxygen depletion due to the combination of algal blooms and low water levels, brought on by the adverse hot/dry conditions. Reduced flows may also have contributed to this situation. The presence of algae is likely to have impacted on other fauna. Recording form and summary on file.
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	20	1004977	22.29	22 Oct 2010	Unfavourable recovering	The saltmarsh extent feature has been measured comparing ortho-rectified aerial photographs over the period 2000 to 2006/2008. Of the 6.4967 ha of saltmarsh present in 2000, 0.1371 ha were lost to erosion, with 0.1016 ha gained through accretion resulting in a net GAIN of 0.0354 ha. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may also be required to confirm changes in extent, where this is feasible. Field survey would be required to undertake a qualitative assessment of saltmarsh - which would include reporting on negative indicators such as changes in extent of <i>Spartina anglica</i> (common cord grass). "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas.
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	21	1004978	25.10	22 Oct 2010	Unfavourable recovering	The saltmarsh extent feature has been measured comparing ortho-rectified aerial photographs over the period 2000 to 2006/2008. Of the 12.1979 ha of saltmarsh present in 2000, 0.0370 ha were lost to erosion, with 0.2286 ha gained through accretion resulting in a net LOSS of 0.1916 ha. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal

										Studies, University of Hull. Ground truthing may also be required to confirm changes in extent, where this is feasible. Field survey would be required to undertake a qualitative assessment of saltmarsh - which would include reporting on negative indicators such as changes in extent of <i>Spartina anglica</i> (common cord grass). "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas.
East Of England	Essex	Tendring	Neutral grassland - lowland	Carol Reid	22	1024403	11.16	22 Mar 2010	Favourable	The marsh is cut for hay and aftermath grazed with sheep and cattle as per the ESA prescription. The sward is tussocky. It is a typical semi-improved grazing marsh sward. Thistle control is carried out by topping. On the marsh to the east of the gate at TM 070193, there are freshwater flushes marked by rush vegetation with creeping buttercup; <i>Carex riparia</i> , greater pond sedge, is also present. The freshwater pond is supplied with water from the ditch bordering the grazing marsh to the south. It also receives run off directly from the higher ground. The marsh to the west of the gate which marks the narrowest part of the marsh contains rushes, and some dock. The water table is lower than the marsh on the east side. Species noted Heron calling, Thicks Wood (heronry?). Pair of mallard on low way at eastern end near road; coot in borrow dyke; green woodpecker heard; lapwings heard; curlew overflying marsh; shelduck feeding on mud flats in creek. A full account is available on file.
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	23	1004979	179.58	18 Nov 2010	Unfavourable recovering	The main vegetation types recorded within the Arlesford and Brightlingsea saltmarsh sections of this unit, concur with those mapped by the Posford survey (2003). The current survey records patches of SM6 <i>Spartina anglica</i> (common cord grass) marsh within these sections, which were not mapped previously. Comparing the field survey observations with the mapping of changes in extent of saltmarsh undertaken by the University of Newcastle in 2000, and circa. 2000 aerial photos, around 80% of the marsh area continues to be stable. Erosion was noted to be more extensive along the outer edge of the saltmarsh according to the studies quoted, with erosion also evident in many of the creeks, particularly along the eastern edge in the north section of the Arlesford marsh. The current survey noted erosion of the marsh at this end with slumping of sections of marsh; erosion of the seaward edge was also noted. It is not considered currently that significant erosive changes have occurred in the marsh since the Newcastle study, notably the stable areas have

										not noticeably deteriorated. Though, there may still be an erosive trend within these marshes the rate of change is not currently considered to be resulting in a significant decline. Field recording forms and photos are stored on file. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	
East Of England	Essex	Tendring	Neutral grassland - lowland	Carol Reid	24	1004998	48.91	03 Nov 2010	Favourable	At the time of the visit the unit was being grazed by cattle, with followers, on the west side of the main ditch, and with sheep on the east side. The grazing regime is maintaining the characteristic grazing marsh species within the sward and achieving a sward length of between 5cm and 10cm. Thistle has a frequent distribution within the sward. The water table in the marsh is sufficiently high to maintain damp grassland in the low ways. The water level management maintains a salinity gradient across the unit and the ditch management regime allows the development of a range of successional stages, with characteristic plants including nationally scarce species. Crassula helmsii (Australian swamp stonewort) has become invasive in the main ditch in this unit however, at present, it has not adversely affected other ditch species. There is an area of improved pasture within the unit which is managed for brent geese. This has been mown and aftermath grazed. The sward height is currently ideal for brent goose grazing. The site manager reports that the lower parts of this marsh retain water in the winter. Species seen: Chaffinch – feeding on thistle seed; 3 curlew; heron; snipe; 30 Canada geese on adjacent mud; swallows; house martin; breeding common darter dragonfly; southern/migrant hawk. Field recording forms and photos are available on file.	
East Of England	Essex	Tendring	Neutral grassland - lowland	Carol Reid	25	1024401	33.32	03 Nov 2010	Favourable	At the time of the visit the unit was being grazed by cattle with followers. The grazing regime is maintaining the characteristic grazing marsh species within the sward and achieving a sward length of between 5cm and 10cm. There is no over or undergrazing. The water table in the marsh is sufficiently high to maintain damp grassland in the low ways. The water level management maintains a salinity gradient across the unit and the ditch management regime allows the development of a range of successional stages, with characteristic plants including nationally scarce species. Crassula helmsii (Australian swamp stonewort) has become invasive in the main ditch in this unit. It is estimated that this species has affected about 15 per cent of the water body, but it has not adversely impacted on the features of interest. This unit	

										also contains some improved pasture managed for brent geese. This area has been mown and aftermath grazed. The sward height is currently ideal for brent goose grazing. The site manager reports that the lower parts of the site retain water in the winter. Species seen: Reed bunting; little egret; mallard and lapwing on wider section of ditch adjacent to sea wall. Tachina fera or similar tachinid fly. Field recording forms and photos are held on file.	
East Of England	Essex	Tendring	Neutral grassland - lowland	Carol Reid	26	1024402	3.25	03 Nov 2010	Favourable	Horse and cattle grazing is maintaining a short sward in this unit. The ditch mainly comprises emergent vegetation. Field recording form available on file.	
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	27	1004981	43.45	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 26.15 ha of saltmarsh present in 1997, a total of 0.66 ha were lost to erosion, but with 0.84 ha gained elsewhere through natural accretion resulting in a net gain of 0.18 ha by 2007. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	28	1004982	38.69	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 17.40 ha of saltmarsh present in 1997, a total of 0.56 ha were lost to erosion, with only 0.51 ha gained elsewhere through natural accretion resulting in a net loss of 0.06ha by 2008 (rounded up). Saltmarsh was lost along the seaward marsh edge. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	
East Of England	Essex	Tendring	Littoral	Carol Reid	29	1004983	14.73	28 Jun 2010	Unfavourable	Extent feature assessed from ortho-rectified aerial	

<http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdr13&category=S&reference=1000666>

	Essex	Tendring	Littoral sediment	Carol Reid	35	1024398	43.54	28 Jun 2010	Unfavourable recovering	Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	35	1024398	43.54	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 17.06 ha of saltmarsh present in 1997, a total of 0.60 ha were lost to erosion, with only 0.19 ha gained elsewhere through natural accretion resulting in a net loss of 0.41 ha by 2007. Saltmarsh was lost along the seaward marsh edge. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	36	1004987	44.70	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 20.06 ha of saltmarsh present in 1997, a total of 0.67 ha were lost to erosion, with only 0.64 ha gained elsewhere through natural accretion resulting in a net loss of 0.03 ha by 2008. Saltmarsh was lost along the seaward marsh edge. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	

East Of England	Essex	Tendring	Littoral sediment	Carol Reid	37	1004949	72.01	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 5.07 ha of saltmarsh present in 1997, a total of 0.19 ha were lost to erosion, but with 0.24 ha gained elsewhere through natural accretion resulting in a net gain of 0.05 ha by 2008. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas
East Of England	Essex	Tendring	Boundary and linear features	Carol Reid	38	1024397	11.74	22 Oct 2009	Favourable	The unit was assessed by walking west along the seawall up to the sewage works and then back along the borrowdyke. North of the sewage works was not assessed – the sea wall and the borrow dyke are uniform throughout. The dominant grasses along the seawall were <i>Agrostis stolonifera</i> , creeping bent, <i>Elymus pycnanthus</i> , sea couch, <i>Elymus repens</i> , couch, <i>Hordeum secalinum</i> , meadow barley, <i>Phleum bertolonii</i> , small-leaved timothy-grass. <i>Dactylis glomerata</i> , cock's foot, was also present. Some sections of the borrowdyke contained water, however just under half a metre of drawdown has occurred due to the dry spell over summer and autumn. The dominant emergent vegetation was <i>Scirpus maritimus</i> , sea clubrush. Areas of disturbed ground along the borrowdyke (caused by vehicle tracks) contained <i>Trifolium fragiferum</i> , strawberry clover. 60+ <i>Branta bernicla</i> , brent geese, were seen grazing on the adjacent saltmarsh, <i>Sympetrum striolatum</i> , common darter x 2, were seen along the seawall, and a female <i>Circus aeruginosus</i> , marsh harrier, was seen quartering the marshland to the east of Beach Road. Recording form and summary on file.
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	39	1022322	265.73	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 130.38 ha of saltmarsh present in 1997, a total of 1.12 ha were lost to erosion, with only 0.83 ha gained elsewhere through natural accretion resulting in a net loss of 0.29 ha by 2008. Saltmarsh was lost along the seaward marsh edge. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex.

										Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	40	1024395	6.94	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 0.19 ha of saltmarsh present in 1997, a total of 0.02 ha were lost to erosion, with 0.09 ha gained elsewhere through natural accretion resulting in a net gain of 0.07 ha by 2008. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	41	1022323	65.05	28 Jun 2010	Unfavourable recovering	Extent feature assessed from ortho-rectified aerial photographs: Of the 34.88 ha of saltmarsh present in 1997, a total of 1.61 ha were lost to erosion, with only 0.18 ha gained elsewhere through natural accretion resulting in a net loss of 1.42 ha by 2008. Saltmarsh was mainly lost along the seaward marsh edge, particularly in the east of the unit. Reference: Essex Coastal SSSIs - Assessment of Changes in Extent of Saltmarsh Over the Period 1997 to 2007. Volume 1, 2010. Report to Natural England by the Institute of Estuarine and Coastal Studies, University of Hull. Ground truthing may be required to assess other attributes. "This unit is encompassed within the Essex Estuaries complex. Sufficient habitat re-creation has commenced within the estuary complex for this unit to be assessed as 'recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation will need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status." Mike Burke, Target Delivery Manager, Protected Areas	
East Of England	Essex	Colchester	Earth heritage	Carol Reid	43	1024406	81.61	05 Nov 2008	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.	
East Of England	Essex	Colchester	Littoral sediment	Carol Reid	44	1024407	152.51	02 Jul 2010	Favourable		

East Of England	Essex	Tendring	Littoral sediment	Carol Reid	45	1024408	112.92	02 Jul 2010	Favourable		
Report completed.											

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - **SSSI name** - Deben Estuary - **Staff member responsible for site** - Emma Hay

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Emma Hay	1	1009465	9.08	04 May 2010	Favourable	The northern end of the unit is a mosaic of reedbed, saltmarsh, brackish pools, rough grassland and scrub. wole area influenced by saltwater with grass areas dominated by common saltmarsh grass and sea couch. The southern section comprises the estuary channel, saltmarsh and reedbed. The reedbed looks like 100% Phragmites with no signs of scrub invasion. There seemed little point in taking any quadrats and in any event most of the unit was difficult and potentially dangerous to access. Comparison of aerial photographs showed a small (not significant) increase in saltmarsh.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	2	1009467	33.53	13 Nov 2009	Unfavourable declining	On the northern side of the unit tidal muds back straight onto the sea wall which follows the length of the whole unit. Patches of Spartina anglica are present along the base of the sea wall, with some sea purslane and sea aster present on the base of the wall itself. On the south side of site, following the line of the old sea wall, a transition from marsh (with coarse grass and rush) and common reed phragmites australis to wet woodland occurs. Large areas of mud flat are also present within this area. On the peninsula (middle of unit) transition from Spartina anglica and rush to reed phragmites australis and on higher ground, woodland. Curlew, Dunlin, Egret, Turnstone, Oyster catcher, Redshank, Shelduck all recorded feeding on mud flats. Assessed as declining in condition due to loss of high tide roost within the unit. Tidal scour resulting from increased sea wall breaches has resulted in loss of salt marsh habitats.	Other - specify in comments
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	3	1009468	18.15	13 Nov 2009	Unfavourable declining	Tidal muds back straight onto the sea wall on the north side of the unit (Woodbridge town) which follows the whole unit. Patches of Spartina are present along the base of the sea wall, with some sea purslane and sea aster present on the base of the wall itself. A number of boatyards operate along the unit. On the south side of site, Spartina and purslane beds dominate edge of saltmarsh. Higher ground has coarse grass and rush growing. Agricultural land borders eastern edge of unit. Potential disturbance and management impacts include houseboats, boatyards and pontoons, as well as a number of Environment Agency	Coastal squeeze

										sluices along the western boundary of site. Also main channel is possibly dredged for recreational sailing. No other disturbance issues noted. Curlew, Dunlin, Egret, Turnstone, Oyster catcher, Redshank, Shelduck all feeding on tidal mud. This unit is backed by a sea wall and coastal squeeze could therefore be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep.) was commissioned and this showed a 0.27 ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that this unit is in unfavourable declining condition due to the loss of extent as a result of coastal squeeze.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	4	1009469	24.99	13 Nov 2009	Favourable	Tidal muds back straight onto the sea wall on the west side of site (Woodbridge town) which follows the whole unit. Patches of Spartina are present along the base of the sea wall, with some sea purslane, sea aster and sea beet present on the base of the wall itself. A number of boatyards and jetties operate along the NW of the unit. On south side of site, Spartina, aster and purslane beds dominate edge of saltmarsh. Behind a large creek separates this marsh from an area dominated by rush, reed and red fescue, with transition to sea couch, bramble and woodland sp. (sycamore, fir, hawthorn and field maple) forming a small tree belt on the higher ground. Agricultural land borders the eastern edge of unit, behind the tree belt. Possible dredging of main channel and a number of sluices present along the western edge of the estuary. No other management or disturbance impacts occurring. Curlew, Dunlin, Egret, Turnstone, Oyster catcher, Redshank, Shelduck all feeding on tidal mud. A study by IECs (2010 in prep.) was commissioned to investigate the change of extent in saltmarsh and this showed a 0.19ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	5	1009470	78.75	18 Nov 2009	Unfavourable declining	In the northeast corner of the unit an area of salt marsh is present close to the sea wall, with agricultural field abutting the marsh, gradually sloping upwards. Spartina anglica is dominant in low salt marsh while Purslane, Sea lavender and Sea arrowgrass are found on mid salt marsh. In the southeast section of the unit there are a number of deep and well established creeks with Spartina anglica dominant. The south of the unit there is a transition from saltmarsh to rush and reed and then woody scrub. Main channel is possibly dredged. No evidence of grazing or other disturbance occurring. Waders and wildfowl present within the unit. This unit is backed by a sea wall, meaning that coastal squeeze could be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep) was commissioned and this showed a 2.69ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that this unit is in unfavourable declining condition due to the loss of extent as a result of coastal squeeze.	Coastal squeeze

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	6	1009471	20.35	03 Nov 2009	Unfavourable declining	The unit is backed along the entire shoreline by a solid sea wall, along which runs a public right of way. A small area of salt marsh is present at the eastern end of the unit where Martlesham creek enters the Deben. The marsh is dominated by mid communities containing sea purslane, sea aster, Spartina and salt marsh grass. An area of sea couch is present towards the back of the marsh where the land rises toward the footpath. Vegetation is of even height, around 20-30cm, the area is fenced and therefore there is no trampling/grazing occurring. Aside from this area of marsh, the remainder of the unit has very little vegetation at the base of the sea wall. Large patches of Spartina anglica are present along the sea wall, particularly along the northern bank of the creek. This unit is backed by a sea wall and coastal squeeze could therefore be an issue. In order to investigate coastal squeeze a study by IECS (2010 in prep) was commissioned and this showed a 0.71ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that this unit is in unfavourable declining condition due to the loss of extent as a result of coastal squeeze.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Emma Hay	7	1009466	1.34	04 May 2010	Favourable	This unit comprises reedbed fronted by a narrow fringe of saltmarsh with sea purslane and common saltmarsh grass growing in with reeds adjacent to the estuary. There was tidal mud and patches of Spartina to seaward and rising land to landward. There is a narrow strip of oak woodland with some old oak trees and dead wood to landward. A study by IECS (2010) to assess changes in extent in saltmarsh was commissioned and this showed a 0.11ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. The unit is considered favourable as the loss in saltmarsh has occurred through natural processes (no sea wall). It would have been difficult and potentially dangerous to obtain quadrat data and in any event there would have been little advantage in doing so. It is unlikely that the habitat has changed in nature in the last 10 years or so and is probably still suitable for the Vertigo angustior (RDB mollusc).	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	8	1009472	29.73	03 Nov 2009	Unfavourable declining	Only small amounts of salt marsh present. A section of marsh in the centre of the unit contains mainly mid-level communities, with no low/pioneer level communities present. Towards the southern end is an additional area of marsh which could not be accessed. This area has many large and well-developed creeks, and is dominated by Spartina anglica. Elsewhere tidal muds back straight onto the sea wall which follows the river bank along the whole unit, in some places patches of Spartina are present along the base of the sea wall, with some sea purslane and sea aster present on the base of the wall itself. Dredging of the main river channel is likely. Enlarged creeks and steep shelf to the outer edge of the marsh suggest the marsh is eroding. No evidence of poaching or grazing, or additional human disturbance. This unit is backed by a sea wall,	Coastal squeeze

										meaning that coastal squeeze could be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep) was commissioned to investigate change in extent of saltmarsh. This showed a 1.61ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that this unit is in unfavourable declining condition due to the loss of extent as a result of coastal squeeze.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	9	1009473	74.33	11 Nov 2009	Unfavourable declining	Salt marsh comprises mainly mid and high level communities, with a network of well-developed creeks. The marsh shelves steeply into the muds of the river bed. No pioneer communities were observed. A solid sea defence wall backs the salt marsh along the majority of the unit, although the wall has been breached towards the northern end of the unit, allowing an area of marsh to develop behind the old sea wall. This area is dominated by Spartina anglica with some sea aster and purslane, and was not accessible during the survey. Behind this habitat is a large swathe of reed bed. An area of mid level marsh which is similar to that behind the sea wall has developed extending into the river channel in the central part of the unit, but was also not accessible. A large proportion of this marsh was made up of beds of Spartina with apparently few other species present. Behind the marsh most of the land is occupied by arable farming. Dredging of the main channel is likely, no other negative impacts (trampling/grazing) noted. This unit is backed by a sea wall and coastal squeeze could therefore be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep) was commissioned to and this showed a 3.62ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that this unit is in unfavourable declining condition due to the loss of extent as a result of coastal squeeze.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	10	1009474	91.78	18 Nov 2009	Favourable	The unit is backed by naturally rising ground with a public footpath following the river edge. In the northwest corner of the unit an area of saltmarsh is present which includes some shorter vegetation with thrift and sea plantain. South of The Hams tidal muds reach up to the river edge, with patches of Spartina, and sea beet and sea couch on higher ground. A transition from saltmarsh to reedbed to higher woodland is present on bank along northern section of the unit. Wildfowl and waders were recorded within the unit.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	11	1009475	47.24	17 May 2005	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. *EA, 2000. Saltmarsh change within the Suffolk estuaries between 1971, 1986 and 1998.	Coastal squeeze
East Of	Suffolk	Suffolk	Littoral	Emma Hay	12	1009476	76.97	08 Oct 2009	Unfavourable	Unit dominated by large swathes of sea aster, particularly	Coastal squeeze

England	Coastal	sediment					declining	in a band along the base of the sea wall. Cord grass is recorded as covering approximately 70% of the unit. Creeks are large and are present over around 50% of the unit area. The majority of the marsh is formed of low/mid level communities. Towards the southern end of the unit an area of reedbed is present towards the landward side of the saltmarsh behind which a soft cliff rises approximately 10m. North of this there is a transition from saltmarsh to shingle and dune. The rest of the unit is mainly backed by sea wall with a footpath running along the wall. The saltmarsh is accessible by cattle for grazing but there is no evidence of poaching on the salt marsh. Flocks of Canada geese present on the Deben. This unit is backed by a sea wall and coastal squeeze could be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep.) was commissioned and this showed a 1.41ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that this unit is unfavourable declining due to the loss of extent as a result of coastal squeeze.	
East Of England	Suffolk Coastal	Littoral sediment	13	1009478	62.79	17 May 2005	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.	
East Of England	Suffolk Coastal	Littoral sediment	14	1009479	37.26	17 May 2005	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.	
East Of England	Suffolk Coastal	Littoral sediment	15	1009480	57.82	08 Oct 2009	Unfavourable declining	At the southern end of the unit there are patches of vegetation dominated by Glasswort and Annual Sea-blite, patches of Spartina (15%) and patches of Sea Purslane all backed by sea wall. The majority of the salt marsh across the rest of the unit (95%) is low-mid marsh dominated by Sea Purslane and Saltmarsh Grass with extensive patches dominated by Cord Grass (more than 50% cover over about 50% of area). There are small areas of 'pioneer marsh' (approx 5%). Approximately 10% of area of salt marsh is saltpans and 15% creeks. At the northern end of the unit there is a sand/shingle beach fronting soft cliff then rising land with scrub. There is a natural and un-interrupted transition from salt marsh to reed bed with approximately 25 metres of reed bed, 10 metres transition and 50 metres of salt marsh. Behind this there is a soft cliff/rising land with willow scrub and woodland. No	Coastal squeeze

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	16	1009481	29.84	11 Nov 2009	Unfavourable declining	evidence of dredging or other negative impacts occurring. The unit was assessed as unfavourable declining because it is backed by a sea wall and coastal squeeze may therefore be an issue.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	17	1009482	58.99	12 Nov 2009	Unfavourable declining	Very little salt marsh habitat is present. A solid sea wall follows the estuary edge, which is vegetated with sea beet and sea couch, and supports the coastal footpath. Salt marsh habitat is present in two distinct areas along the unit, and is composed of mid/high level communities. A few small creeks are present. The edge of the marsh shelves sharply into the mud of the estuary bed. The marsh is backed by arable land intersected by drainage ditches. No other significant negative impacts noted other than dredging of main channel if this is taking place. No obvious transitions are present within the marsh. The unit was assessed as unfavourable declining because it is backed by a sea wall and coastal squeeze may therefore be an issue.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	18	1009483	54.26	17 May 2005	Unfavourable declining	Salt marsh comprises mainly low to mid level communities, with a network of well-developed creeks and salt pans. The marsh shelves into the muds of the river bed forming soft mud cliffs 0.5-1m in height. No pioneer communities were observed. The sea wall runs along the eastern boundary of the site with Sea beet, Sea couch, Sea wormwood and Common reed on the sea wall. Behind the sea wall is an area of reed with grazing marsh and arable land. At the northeastern end of the unit a transition occurs from saltmarsh through Phragmites australis reedbed to wooded bank. Some straight creeks are present which may have been dug out or enlarged previously, no evidence of other negative impacts. Wildfowl and waders present within the unit. Brown Hare recorded on marsh. This unit is backed by a sea wall, meaning that coastal squeeze could be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep) was commissioned and this showed a 0.36ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that this unit is in unfavourable declining condition due to the loss of extent as a result of coastal squeeze.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	19	1009484	55.71	12 Nov 2009	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
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	19	1009484	55.71	12 Nov 2009	Unfavourable declining	The unit runs northwest to southeast along the sea wall/bank and the saltmarsh comprises mainly low to mid level communities, with a network of well-developed creeks and salt pans throughout the unit. The northwestern edge is dominated by Spartina anglica except for creek edges which have a more diverse flora. The marsh shelves into the mud of the river bed forming soft mud cliffs 0.5-1m in height. Behind the sea wall is an area of reed with grazing	Coastal squeeze

										marsh and arable land. Towards the south-eastern end of the unit a large area of short open vegetation is present, which supports a high percentage of thrift and common sea lavender, with patches of bare ground and pools. Some straight creeks are present which were possibly dug out in the past, and the main channel may be dredged for recreational sailing. Non commercial bait digging was also noted. Large amounts of litter noted along the tide line against sea wall. Waders and wildfowl present. This unit is backed by a sea wall, meaning that coastal squeeze could be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep.) was commissioned and this showed a 0.22ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that this unit is unfavourable declining due to the loss of extent as a result of coastal squeeze.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	20	1009485	30.10	17 May 2005	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
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	21	1009486	40.62	18 May 2005	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
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	22	1009487	47.43	17 May 2005	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

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Four Counties - **SSSI name** - Hamford Water - **Staff member responsible for site** - Ian Black

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Essex	Tendring	Littoral sediment	Ian Black	1	1020292	225.05	11 Dec 2008	Favourable	Indications from fishermen, particularly oyster fishermen, say that there have been no significant changes to supporting habitat since last condition assessment.	
East Of England	Essex	Tendring	Littoral sediment	Ian Black	2	1020293	56.02	25 Jun 2010	Unfavourable recovering	Habitats: Intertidal, Saltmarsh including Salicornia, birds (non-breeding & breeding), vascular plant assemblage. Overall, unit provisionally regarded as unfavourable recovering (See file note) 1: Intertidal mudflats and sandflats: Unfavourable recovering - Evidence indicates that the extent of mud/sandflat habitats within the outer coastal units of the SSSI likely to have decreased due to coastal squeeze. The proposed creation of sufficient intertidal habitat has commenced adjacent to Hamford Water SSSI for this unit to be assessed as 'recovering' up until end Dec 2010. Beyond end Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'unfavourable recovering' status. 2: Saltmarsh: Unfavourable recovering - Broadly favourable in habitat terms (structural and plant variety) but likely to have been eroding at a site level and therefore not regarded as favourable on a precautionary basis. However, the Regional Habitat Creation Programme is regarded as having made sufficient progress adjacent to this SSSI for this unit to be assessed as 'unfavourable recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status. 3. Breeding birds: Unfavourable recovering- The population figures for Ringed Plover are below the required threshold however the proposed surveys, assessments & management actions within the NNR Management Plan are regarded as appropriate to help make progress towards breeding bird habitat quality targets for ringed plover. 4. Non-breeding birds: Favourable- The WeBS counts are above thresholds for all listed species.	
East Of England	Essex	Tendring	Littoral sediment	Ian Black	3	1020294	167.55	25 Jun 2010	Unfavourable recovering	Habitats: Intertidal, Saltmarsh including Salicornia, birds (non-breeding & breeding), vascular plant assemblage.	

East Of England	Essex	Tendring	Littoral sediment	Ian Black	4	1020295	19.53	25 Jun 2010	Unfavourable recovering	Overall, unit provisionally regarded as unfavourable recovering 1: Intertidal mudflats and sandflats: Unfavourable recovering - Evidence indicates that the extent of mud/sandflat habitats within the outer coastal units of the SSSI likely to have decreased due to coastal squeeze. The proposed creation of sufficient intertidal habitat has commenced adjacent to Hamford Water SSSI for this unit to be assessed as 'recovering' up until end Dec 2010. Beyond end Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'unfavourable recovering' status. 2: Saltmarsh: Unfavourable recovering - Broadly favourable in habitat terms (structural and plant variety) but likely to have been eroding at a site level and therefore not regarded as favourable on a precautionary basis. However, the Regional Habitat Creation Programme is regarded as having made sufficient progress adjacent to this SSSI for this unit to be assessed as 'unfavourable recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status. 3. Breeding birds: Unfavourable recovering- The population figures for Ringed Plover are below the required threshold however the proposed surveys, assessments & management actions within the NNR Management Plan are regarded as appropriate to help make progress towards breeding bird habitat quality targets for ringed plover. 4. Non-breeding birds: Favourable- The WeBS counts are above thresholds for all listed species. Habitats: Intertidal, saltmarsh, strandline, birds (o/w & breeding). Unit provisionally regarded as unfavourable recovering (file note) 1: Intertidal mud/ sandflats: Unfav rec - Extent of mud/sandflat habitats within the outer coastal SSSI units likely to have decreased due to coastal squeeze. Proposed creation of sufficient intertidal habitat has commenced adjacent to Hamford Water SSSI for this unit to be assessed as 'recovering' up until end Dec 2010. Beyond end Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans (SMP) &/or regional coastal habitat recreation programmes (RHCP) for this unit to remain in 'recovering' status. 2: Saltmarsh: Unfav rec - Broadly favourable in habitat terms (structural & plants) but likely to have been eroding at a site level & therefore unfavourable on a precautionary basis. However, the RHCP is regarded as having made sufficient progress adjacent to this SSSI for this unit to be assessed as 'unfav rec' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation may need to be delivered through SMP &/or RHCP for this unit to remain in 'recov' status. 3: Strandline: Fav - Snapshot
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										assessment indicates the range of vegetation zones & transitions are representative for the site & support positive indicator plants. Beyond Dec 2010 further additional habitat recreation may need to be delivered through SMP &/or RHCP for this interest feature to remain in 'fav condition' status. 4. Breeding birds:Unfavourable recovering- The population figures for Ringed Plover are below the required threshold however the proposed surveys, assessments & management actions within the NNR Management Plan are regarded as appropriate to help make progress towards breeding bird habitat quality targets for ringed plover. 5. Non-breeding birds: Fav- The WeBS counts are above thresholds for all listed species.
East Of England	Essex	Tendring	Littoral sediment	Ian Black	5	1020296	488.21	25 Jun 2010	Unfavourable recovering	Habitats: Intertidal, saltmarsh, strandline, birds (o/w & breeding). Unit provisionally regarded as unfavourable recovering (file note) 1: Intertidal mud/ sandflats: Unfav rec - Extent of mud/sandflat habitats within the outer coastal SSSI units likely to have decreased due to coastal squeeze. Proposed creation of sufficient intertidal habitat has commenced adjacent to Hamford Water SSSI for this unit to be assessed as 'recovering' up until end Dec 2010. Beyond end Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans (SMP) &/or regional coastal habitat recreation programmes (RHCP) for this unit to remain in 'recovering' status. 2: Saltmarsh: Unfav rec - Broadly favourable in habitat terms (structural & plants) but likely to have been eroding at a site level & therefore unfavourable on a precautionary basis. However, the RHCP is regarded as having made sufficient progress adjacent to this SSSI for this unit to be assessed as 'unfav rec' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation may need to be delivered through SMP &/or RHCP for this unit to remain in 'recov' status. 3: Strandline: Fav - Snapshot assessment indicates the range of vegetation zones & transitions are representative for the site & support positive indicator plants. Beyond Dec 2010 further additional habitat recreation may need to be delivered through SMP &/or RHCP for this interest feature to remain in 'fav condition' status. 4. Breeding birds:Unfavourable recovering- The population figures for Ringed Plover are below the required threshold however the proposed surveys, assessments & management actions within the NNR Management Plan are regarded as appropriate to help make progress towards breeding bird habitat quality targets for ringed plover. 5. Non-breeding birds: Fav- The WeBS counts are above thresholds for all listed species.
East Of England	Essex	Tendring	Littoral sediment	Ian Black	6	1020297	168.69	25 Jun 2010	Unfavourable recovering	Habitats: Intertidal, Saltmarsh including Salicornia, birds (non-breeding & breeding), vascular plant assemblage. Overall, unit provisionally regarded as unfavourable recovering (file note) 1: Intertidal mudflats and sandflats: Unfavourable recovering - Evidence indicates that the extent of mud/sandflat habitats within the outer coastal

										units of the SSSI likely to have decreased due to coastal squeeze. The proposed creation of sufficient intertidal habitat has commenced adjacent to Hamford Water SSSI for this unit to be assessed as 'recovering' up until end Dec 2010. Beyond end Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'unfavourable recovering' status. 2: Saltmarsh: Unfavourable recovering - Broadly favourable in habitat terms (structural and plant variety) but likely to have been eroding at a site level and therefore not regarded as favourable on a precautionary basis. However, the Regional Habitat Creation Programme is regarded as having made sufficient progress adjacent to this SSSI for this unit to be assessed as 'unfavourable recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'recovering' status. 3. Breeding birds: Unfavourable recovering- The population figures for Ringed Plover are below the required threshold however the proposed surveys, assessments & management actions within the NNR Management Plan are regarded as appropriate to help make progress towards breeding bird habitat quality targets for ringed plover. 4. Non-breeding birds: Favourable- The WeBS counts are above thresholds for all listed species.
East Of England	Essex	Tendring	Littoral sediment	Ian Black	7	1020298	134.51	25 Jun 2010	Unfavourable recovering	Habitats: Intertidal, Saltmarsh including Salicornia, birds (non-breeding & breeding), vascular plant assemblage. Overall, unit provisionally regarded as unfavourable recovering (file note) 1: Intertidal mudflats and sandflats: Unfavourable recovering - Evidence indicates that the extent of mud/sandflat habitats within the outer coastal units of the SSSI likely to have decreased due to coastal squeeze. The proposed creation of sufficient intertidal habitat has commenced adjacent to Hamford Water SSSI for this unit to be assessed as 'recovering' up until end Dec 2010. Beyond end Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for this unit to remain in 'unfavourable recovering' status. 2: Saltmarsh: Unfavourable recovering - Broadly favourable in habitat terms (structural and plant variety) but likely to have been eroding at a site level and therefore not regarded as favourable on a precautionary basis. However, the Regional Habitat Creation Programme is regarded as having made sufficient progress adjacent to this SSSI for this unit to be assessed as 'unfavourable recovering' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans and/or regional coastal habitat recreation programmes for

[http://www.\(sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdr13&category=S&reference=1001010](http://www.(sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdr13&category=S&reference=1001010)

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East Of England	Essex	Tendring	Broadleaved, mixed and yew woodland - lowland	Ian Black	10	1020301	34.15	11 Dec 2008	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 hogs fennell and its dependent moth. This management will be ongoing to maintain the expansion of the rare plant on the island.			
East Of England	Essex	Tendring	Supralittoral sediment	Ian Black	11	1020302	55.40	25 Jun 2010	Unfavourable recovering	Habitats: Intertidal, saltmarsh, strandline, birds (o/w & breeding). Unit provisionally regarded as unfavourable recovering (file note) 1: Intertidal mud/ sandflats: Unfav rec - Extent of mud/sandflat habitats within the outer coastal SSSI units likely to have decreased due to coastal squeeze. Proposed creation of sufficient intertidal habitat has commenced adjacent to Hamford Water SSSI for this unit to be assessed as 'recovering' up until end Dec 2010. Beyond end Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans (SMP) &/or regional coastal habitat recreation programmes (RHCP) for this unit to remain in 'recovering' status. 2: Saltmarsh: Unfav rec - Broadly favourable in habitat terms (structural & plants) but likely to have been eroding at a site level & therefore unfavourable on a precautionary basis. However, the RHCP is regarded as having made sufficient progress adjacent to this SSSI for this unit to be assessed as 'unfav rec' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation may need to be delivered through SMP &/or RHCP for this unit to remain in 'recov' status. 3: Strandline: Fav - Snapshot assessment indicates the range of vegetation zones & transitions are representative for the site & support positive			

East Of England	Essex	Tendring	Supralittoral sediment	Ian Black	12	1020303	150.17	25 Jun 2010	Unfavourable recovering	indicator plants. Beyond Dec 2010 further additional habitat recreation may need to be delivered through SMP &/or RHCP for this interest feature to remain in 'fav condition' status. 4. Breeding birds:Unfavourable recovering- The population figures for Ringed Plover are below the required threshold however the proposed surveys, assessments & management actions within the NNR Management Plan are regarded as appropriate to help make progress towards breeding bird habitat quality targets for ringed plover. 5. Non-breeding birds: Fav- The WeBS counts are above thresholds for all listed species.	
East Of England	Essex	Tendring	Supralittoral sediment	Ian Black	13	1020304	14.92	11 Dec 2008	Favourable	Habitats: Intertidal, saltmarsh, strandline, birds (o/w & breeding). Unit provisionally regarded as unfavourable recovering (file note) 1: Intertidal mud/ sandflats: Unfav rec - Extent of mud/sandflat habitats within the outer coastal SSSI units likely to have decreased due to coastal squeeze. Proposed creation of sufficient intertidal habitat has commenced adjacent to Hamford Water SSSI for this unit to be assessed as 'recovering' up until end Dec 2010. Beyond end Dec 2010 further additional habitat recreation may need to be delivered through Shoreline Management Plans (SMP) &/or regional coastal habitat recreation programmes (RHCP) for this unit to remain in 'recovering' status. 2: Saltmarsh: Unfav rec - Broadly favourable in habitat terms (structural & plants) but likely to have been eroding at a site level & therefore unfavourable on a precautionary basis. However, the RHCP is regarded as having made sufficient progress adjacent to this SSSI for this unit to be assessed as 'unfav rec' up until Dec 2010. Beyond Dec 2010 further additional habitat recreation may need to be delivered through SMP &/or RHCP for this unit to remain in 'recov' status. 3: Strandline: Fav - Snapshot assessment indicates the range of vegetation zones & transitions are representative for the site & support positive indicator plants. Beyond Dec 2010 further additional habitat recreation may need to be delivered through SMP &/or RHCP for this interest feature to remain in 'fav condition' status. 4. Breeding birds:Unfavourable recovering- The population figures for Ringed Plover are below the required threshold however the proposed surveys, assessments & management actions within the NNR Management Plan are regarded as appropriate to help make progress towards breeding bird habitat quality targets for ringed plover. 5. Non-breeding birds: Fav- The WeBS counts are above thresholds for all listed species.	
East Of England	Essex	Tendring	Supralittoral sediment	Ian Black	13	1020304	14.92	11 Dec 2008	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.
East Of England	Essex	Tendring	Coastal lagoon	Ian Black	14	1020305	6.56	11 Dec 2008	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.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	15	1020306	17.16	11 Dec 2008	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.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	16	1024839	15.34	11 Dec 2008	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.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	17	1024840	3.95	11 Dec 2008	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.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	18	1024841	10.19	11 Dec 2008	Favourable		Scrub control has been undertaken. Grass cutting in open areas on regular basis. Good structure throughout.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	19	1020310	6.07	11 Dec 2008	Favourable		Unit consist of semi-improved grazing marshes with water-filled ditches. Management by grazing. Important for wintering waterfowl.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	20	1020311	13.25	11 Dec 2008	Favourable		Unit consist of semi-improved grazing marshes with water-filled ditches. Management by grazing. Important for wintering waterfowl.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	21	1020312	59.85	11 Dec 2008	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 hogs fennell and its associated rare moth. The reedbeds contain breeding marsh harrier. Management, carried out by the owners, includes grass cutting and scrub control.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	22	1020313	13.61	11 Dec 2008	Favourable		This unit consists of grazing marsh and water bodies supporting wintering and breeding waterfowl, throughout the year. Management is through grazing by cattle.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	23	1020314	57.58	11 Dec 2008	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.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	24	1020315	59.13	11 Dec 2008	Favourable		Seawall - maintained by annual mowing creating a mixed structure due to cutting regime being split between top and bottom of the seawall.
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	25	1020316	20.75	11 Dec 2008	Favourable		Seawalls within this unit are cut and maintained by the owner. Provides a mixed diversity of habitats on the site.

East Of England	Essex	Tendring	lowland	Ian Black	26	1020317	18.57	11 Dec 2008	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 fennel in the country is found in this unit. Protection for this species is provided by fencing to prevent grazing.	
East Of England	Essex	Tendring	Neutral grassland - lowland	Ian Black	27	1020318	5.68	11 Dec 2008	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 fennel also found in this unit.	
East Of England	Essex	Tendring	Arable and horticulture	Ian Black	28	1020319	42.40	11 Dec 2008	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.	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - **SSSI name** - Leiston - Aldeburgh - **Staff member responsible for site** - Emma Hay

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Acid grassland - lowland	Emma Hay	1	1021930	69.57	05 Aug 2009	Unfavourable recovering	The Unit comprises a mosaic of acid grassland, heathland, sand sedge, bracken, coarse grasses and scrub and is being managed to expand and restore the areas of acid grassland and heath. During visit evidence was found of a recent fire resulting in a considerable loss of gorse and mature heather (4.2 Ha) in the south-west of the unit. The unit is usually grazed by Exmoor and Dartmoor ponies.	
East Of England	Suffolk	Suffolk Coastal	Acid grassland - lowland	Emma Hay	2	1021931	0.96	16 Aug 2009	Favourable	Being the old railway this unit is not part of a distinct management unit and does not fit readily into habitat feature categories. Management to maintain the diversity of habitats and structure, including bracken control should be continued so that the scrub and heathland species continue to support wildlife such as birds and butterflies and without leading to the loss of vegetation diversity and notable plants.	
East Of England	Suffolk	Suffolk Coastal	Acid grassland - lowland	Emma Hay	3	1021932	38.96	17 Dec 2009	Favourable	The acid grassland is present with varying species diversity across the whole site, apart from any playing surfaces such as fairway, tees and greens.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Emma Hay	4	1021924	1.59	26 Jul 2010	Unfavourable recovering	The unit is secondary woodland plus scrub with an open birch canopy, some oak and rowan, over dense bracken, plus gorse and bramble. The unit is very small and ringed by a track, although adjacent habitat is woodland/scrub which assists its integrity. RSPB manage the site. The woodland was found to be unfavourable recovering condition (fails on a number of targets including structural processes and regeneration potential). The unit contributes to the overall SSSI (a mosaic of habitats) and its interests, notably the woodland, heath and perhaps variety of bird species features. Limited RSPB management is undertaken.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Emma Hay	5	1021925	17.05	26 Jul 2010	Unfavourable recovering	The unit is a mosaic mix of secondary woodland, plantation woodland, scrub and heathland. The RSPB manage the unit and are undertaking ongoing work to clear and maintain more open heathland areas and are currently rewriting there management plan for the site. Although the site has a mosaic of different habitats the site was monitored on the basis of a woodland and found to be unfavourable-recovering, and fails on a number of targets including	

[http://www.\(sssi.naturalengland.org.uk/Special/sssireportAction.cfm?report=sdr13&category=S&reference=2000370](http://www.(sssi.naturalengland.org.uk/Special/sssireportAction.cfm?report=sdr13&category=S&reference=2000370)

										at the southern end of the site. Despite many indicator species (crambe, YH poppy, curled dock, etc) being present over the unit (and abundant in places, Stop 3 was spectacular), species composition targets were met for the strandline habitat but not the more stable shingle. Other species present were red valerian, sea holly, maram grass where sandy (eroding cliffs). SCDC wardening scheme has apparently been running, supported by a specific leaflet, to raise awareness of the importance of vegetated shingle. Evidence of this was not seen on site. Further action still needed possibly as part of wider strategy.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Emma Hay	9	1021927	14.43	22 Jul 2010	Favourable	Emma Hay and Alison Collins visited the Unit on 22 July 2010. Thorpeness Common, Unit 9, is a mosaic of habitats, with areas of scrub and bracken, interspersed with short acid grass areas (NVC U1) occurring mainly on the frequent paths, plus wider open areas. Heather is occasionally present in grass clearings and paths. The RSPB manage the site. This site is actively used by members of the public as a recreational area. The grassland is largely very closely grazed by rabbits with longer ranker sand sedge dominated areas in a few places. A number of paths and tracks cross the unit keeping the grassland open (suppresses bracken) but the grassland is worn/trampled by foot traffic in places (see photos). The scrub is dense and mature (gorse, hawthorn and brambles) in places, plus there are areas of birch/sycamore woodland. This is obviously beneficial for the bird interests. The bracken is very dense in areas and is encroaching into grassland along with bramble. The Unit was found to be in favourable maintained condition. The mosaic of habitats compliment the acid grassland feature and wider SSSI and any management should balance all the sites features/interests. However, management particularly bracken and bramble control to keep the grassland open, must be considered to prevent loss of the feature. It is understood that some bracken has been sprayed in the past. There is much localised ragwort and control of it should also be considered. RSPB and currently rewriting the Management Plan for the site.	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Emma Hay	10	1021944	28.33	05 Aug 2009	Favourable	This unit is predominantly phragmites swamp with areas of fen on the western boundary and an area of open water on the eastern boundary. The phragmites swamp passes all the common standards attributes.	
East Of England	Suffolk	Suffolk Coastal	Standing open water and canals	Emma Hay	11	1021937	28.31	12 Jul 2010	Favourable	Standing water feature monitored. No changes/loss of open water caused by active management, although clearing of marginal vegetation with floating digger has been undertaken in past. Characteristic species present at all stops when sampled from a boat (Myriophyllum spicatum, Ranunculus circinatus, Potamogeton sp). Naturalised Canadian pondweed present at all stops in low density but no Crassula sp, Azolla sp recorded. Blanket weed dense in areas (filamentous algae) indicative of nutrient enrichment, but less than 10% on survey date (could expand over	

										summer). Owner looking for solution to blanket weed. Characteristic zones of vegetation present including emergent and floating/submerged vegetation, open water and marginal vegetation. Meare edges natural (reeds, iris) and artificial (steep wooden revetment). Depth of water is even over the unit leading to uniform structure of open water habitat. No deep areas noted. Maximum depth distribution maintained but much silt on bottom silting up could become an issue in the future. From observation the water quality looked very good and clear with bottom visible. Nutrient levels appear appropriate to lake type (eutrophic) & oxygen levels adequate for health of characteristic fauna. Level fluctuations of the Meare are not affected by abstractions, but is affected by artificial lowering of water levels over the winter months to allow maintenance, exposing mud close to the shore. No evidence of impact from artificially lowered water levels. Small % shore heavily modified (<5%). Very limited erosion from boats with little impact on marginal vegetation cover. No evidence of increased sediment loads but bottom of Meare is layered relatively deeply with fine sediment. Many small fish, pond snails, duck mussels dragonflies and damselflies evident.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Emma Hay	12	1021922	6.64	16 Aug 2009	Favourable	This unit is largely non-intervention wet woodland with areas of more open fen. Water rail and Cetti's warbler have been recorded from the woodland edge. The woodland passes most of the common standards attributes. The understory is on the low side but as this wood is managed as non-intervention this is acceptable. There is also some sycamore in the north western end which should be monitored and controlled.	
East Of England	Suffolk	Suffolk Coastal	Acid grassland - lowland	Emma Hay	13	1021934	58.30	04 Aug 2009	Unfavourable recovering	Approximately three quarters of the unit is acid grassland with bracken and gorse encroachment. The other quarter is heathland, dominated by Calluna vulgaris with scrub and trees. The unit is being managed to control/reduce the cover of bracken and scrub and is grazed by rabbits and Dartmoor and Exmoor ponies with bracken treated by aerial spraying.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Emma Hay	14	1021936	116.95	12 Jul 2010	Favourable	Ditch system feature monitored. No loss of channel length & ditch lengths surveyed had water at least 0.5 m deep (minor drains), 1 m (major drains). Clear water in all ditches with only occasional slight turbidity. High algal cover in places but unlikely to be the effect of excessive nutrient enrichment, but result of brackish ditches and exceptional spell of hot and dry weather. Good indicators of local distiveness, including spiked water-milfoil Myriophyllum spicatum, fennel pondweed Potamogeton pectinatus and water-crowfoot Ranunculus sp. Channels were trapezoidal by nature but evidence of collapsed sides (not recent) and sinuous marginal vegetation line. Emergent vegetation present. Non trapezoidal lengths of channel probably 25% on surveyed dykes and possibly	

										greater in smaller side ditches that were not surveyed (Note for future management). Evidence of early, mid and late succession (determined by ditch clearing rotation) with majority of ditches surveyed being mid succession with submerged, floating and emergent vegetation. No stops at ditches cleared that year however. Complete (100%) marginal vegetation of Iris, reeds, rushes and sedge, etc, with very occasional open/poached edge. Occasional shrub, no trees, no heavy shading. Evidence of non-native plants resulting in distortion of aquatic plant community at one stop (Azolla spp and Crassula helmsii) with C. helmsii blanketing sections of ditch resulting in loss of diversity. Mean cover of both less than 1% so target met. Elodea canadensis present at one stop and can coexist with a diverse aquatic community, again mean cover of less than 1% so target met, however, it is desirable to limit its spread and remedial measures should be quickly be put in place to eliminate both or at least to prevent their spread. Salinity gradient not recorded but some ditches had obvious saline influence.	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	15	1021939	12.41	01 Sep 2009	Favourable	This unit is at the end of a transition between vegetated shingle and grassland with areas of fen and scrub. In places there is short shingle vegetation. Botanical interest includes adder's tongue fern. Management to maintain the diversity of habitats and structure should be continued so that the scrub continues to support birds but without leading to the loss of vegetation diversity and the notable plants.	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	16	1021940	9.38	18 Jun 2008	Unfavourable recovering	SCDC wardening scheme, supported by a specific leaflet, now in place to raise awareness of the importance of vegetated shingle	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	17	1021941	6.39	18 Jun 2008	Unfavourable recovering	SCDC wardening scheme supported by a specific leaflet now in place to raise awareness of the importance of vegetated shingle	
East Of England	Suffolk	Suffolk Coastal	Acid grassland - lowland	Emma Hay	18	1021935	1.47	16 Aug 2009	Favourable	Being the old railway this unit is not part of a distinct management unit and do not fit readily into habitat feature categories. Management to maintain the diversity of habitats and structure, including bracken control, should be continued so that the scrub and heathland species continue to support wildlife such as birds and butterflies and without leading to the loss of vegetation diversity and notable plants.	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Emma Hay	19	1021942	6.28	01 Sep 2009	Favourable	This unit is at the end of a transition between vegetated shingle and grassland with areas of fen, dry reed bed and gorse scrub on higher ground. In places there is short shingle vegetation. Botanical interest includes adder's tongue fern. Management to maintain the diversity of habitats and structure should be continued so that the scrub continues to support birds but without leading to the loss of vegetation diversity and the notable plants.	
East Of	Suffolk	Suffolk	Supralittoral	Emma Hay	20	1021943	17.50	08 Sep 2010	Unfavourable	Possible decrease in extent of unit due to natural change	Public

England	Coastal	sediment					declining	(erosion - there is a very steep shingle cliff along the unit length along the beach). No increase in constraints to shingle mobility in active foreshore zone apart from long established pier/groynes to north of unit. Species composition was not met for the strandline habitat or the more stable shingle, however, there were many characteristic species present within and outside the quadrats and a good mosaic of habitats (more acid grassland/heath like habitat to the west). The lack of strandline species, was possibly due to trampling and nature of zonation/erosion (shingle cliff). No negative species indicators apart from occasional ragwort. Other species present were occasional gorse and bramble closer to road, rest harrow, heath bedstraw, yarrow, lichens, toadflax and stonecrop on more stable shingle. Limited zonation was evident including to other habitats (acid grassland, heath etc) although much zonation disrupted by trampling/disturbance and constrained by road to the west. Loss of vegetated substrate within the habitat as a result of anthropogenic activities; The whole Unit is heavily used by people walking dogs, etc, There is much trampling throughout the unit but particularly where pedestrian access to the shell sculpture and beach is taken and generally from the car parks. Also much trampling of the ridge line. The surfaced recreational track through the unit running parallel to the road is heavily used also. Some areas of vegetation had been roped off which had marked benefit for vegetation present. SCDC wardening scheme has been running, supported by a specific leaflet, to raise awareness of the importance of vegetated shingle. Some interpretation on site re awareness of trampling impact on shingle vegetation but further action still needed possibly as part of wider strategy.	access/disturbance
East Of England	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Emma Hay	21	1021928	14.45	16 Nov 2010	Unfavourable recovering	Emma Hay visited the site on 29 July 2010. The overall condition of the unit was found to be unfavourable-recovering. It failed on its structure and natural processes units which should become favourable over time as the woodland matures. The unit is comprised of a Mosaic of woodland types (secondary dry wood, wet wood) adjacent to the Church Farm grazing marsh to the east, and close to the Meare and reedbeds at North Warren. It is RSPB owned and managed or under a management agreement. The RSPB management is essentially non-intervention, to contrast with the surrounding open grazing marshes. The main RSPB interest is warblers, but the unit used to hold nightingale but these now all gone. RSPB are currently rewriting the Management Plan for the area. Much of the wet woodland is relic reed bed reverting to scrub/wet woodland. . The drier areas of the unit are composed of oak and birch over bracken and bramble. Much of the dry area has a limited understorey and ground flora probably due to the dense oak canopy. The woodland NVC types include W2 and W6 (all wet). A recent NVC survey of the

East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Emma Hay	22	1021929	4.65	16 Nov 2010	Favourable	site would provide valuable background information. Emma Hay visited the site on 29 July 2010. The overall condition of the unit was found to be Favourable. Unit 22, Sheepwash Crossing Wood, is comprised of a Mosaic of habitats types including secondary dry wood, wet wood, reedbed and an open area of bracken. The Unit is adjacent to the Meare to the south east and reedbeds at North Warren to the south west. The wetter areas to the south and north is predominantly scrubby willow over fragmites, iris and nettle. The unit includes an open area of reedbed to the south east. Much of the wet woodland is relic reed bed reverting to scrub/wet woodland. The wet areas are fairly inaccessible. The drier area in the middle of the unit are composed of Oak (some quite old) and Birch over bracken, with some holly, hawthorn and rowan. The unit is RSPB owned and managed or under a management agreement. The RSPB management is essentially non-intervention, to contrast with the surrounding open grazing marshes. The main RSPB interest is warblers, but the unit used to hold nightingale but these now all gone. RSPB are currently rewriting the Management Plan for the area. The woodland NVC types include W2 and W6 (all wet). A recent NVC survey of the site would provide valuable background information. The unit is important as in invertebrate refuge according to RSPB, and the wainscote moth has been recorded here.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Emma Hay	23	1021923	40.47	10 Aug 2010	Unfavourable recovering	The site has been monitored on the basis of woodland and found to be unfavourable recovering, failing on a number of targets including structural processes and regeneration potential. The unit is woodland habitat, but woodland is not its only feature of the SSSI and the unit contributes to the overall site (a mosaic of habitats) and its interests, notably the woodland, heath and perhaps variety of bird species features. Management of the unit is appropriate and accordingly the site is in unfavourable recovering condition. The unit is comprised of 4 parts around Aldringham Walks; Margaret Wood & Alexander Wood, Rye Grass Walks, Coporal's Belts/Square Covert and Thorpe Vent Wood. They are a mixture of secondary birch/sycamore wood and mixed plantations. Mostly probably planted in the early 1900's, and largely destroyed in the 1987 gales and replanted in the 1990's. They are RSPB owned and managed or under management agreement with RSPB which provides for the introduction of trees/woodland management. The woodlands have formerly contributed 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, although currently there is not much in the way of bird interest. There is little scope to remove any of the woodland – most is part of Sizewell Screening and landowner is very keen on keeping the woodland. There is a relatively high % of sycamore and sweet chestnut within the Unit. It may not	

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - **SSSI name** - Minsmere-walberswick Heaths And Marshes - **Staff member responsible for site** - Adam Burrows

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	1	1009412	19.95	08 Sep 2009	Unfavourable recovering	Overall the site passes most criteria. It fails on % bankside cover by 1%, this could be considered acceptable as the unit has wet woodland on the north and south boundaries of the unit and the ditches were mostly scrub free. The number of species found at each stop was below the mean target number of fresh water species required, although overall 16 of the recommended species were recorded (CSM Ditch guidance). Water depth, clarity and channel form were all within the target and the vegetative successional stages were balanced between early, mid and late.	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	2	1009458	2.76	29 Sep 2010	Favourable	Breeding birds hitting turrets as are Ramsar invertebrates as demonstrated by regular moth trapping. Reed extent maintained and structural diversity within acceptable limits, dyke profiles 1in 5 some evidence of need for reinvigoration of dyke succession over the next epoch but currently at the upper level of acceptable diversity.	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	4	1009433	15.33	29 Sep 2010	Favourable	Breeding birds hitting turrets as are Ramsar invertebrates as demonstrated by regular moth trapping. Reed extent maintained and structural diversity within acceptable limits maintained by low intensity pony grazing, dyke profiles 1in 5 some evidence of need for reinvigoration of dyke succession over the next epoch but currently at the upper level of acceptable diversity. Unit supporting nesting by bittern and marsh harrier	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	8	1009498	35.71	24 Nov 2010	Unfavourable recovering		
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	9	1009417	14.48	27 Jul 2009	Unfavourable recovering	Unit inundated by tidal surge in November 2007 and largely sub tidal for 3 months following. Significant vegetation die back at the time now recovering and breeding bird numbers returning to target levels, dykes show signs of recovery. Cattle grazing reintroduced in 2009, sward structure returning towards breeding bird target over 75% + of site. Supporting overwintering birds.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	10	1009418	47.78	27 Jul 2009	Unfavourable recovering	Unit inundated by tidal surge in November 2007 and largely sub tidal for 3 months following. Significant vegetation die back at the time now recovering and breeding bird numbers returning to target levels, dykes	

East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	11	1009420	76.03	27 Aug 2009	Unfavourable recovering	show signs of recovery. Cattle grazing reintroduced in 2009, sward structure returning towards breeding bird target over 75%+ of site. Supporting overwintering birds.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	13	1009532	26.81	01 Sep 2009	Unfavourable recovering	Overall the unit consist species poor improved grassland which is important for wintering wildfowl and contributes to the breeding bird assemblage. The ditches were quite species poor and mostly dominated by common reed, sea club rush and rigid hornwort.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	16	1009446	31.32	08 Oct 2008	Unfavourable recovering	Secondary woodland, important for its breeding birds. Structure of the wood is acceptable with a range of ages and frequent deadwood including standing. The understorey is now recovering from earlier heavy deer pressure although more thickets would be desirable. Heavy disturbance pressure on breeding birds from corvids associated with the surrounding pig units. Management some coppice and glading, corvid control	
East Of England	Suffolk	Suffolk Coastal	Arable and horticulture	Adam Burrows	17	1009538	14.52	23 Sep 2010	Unfavourable no change	Dwarf shrub cover is good and meeting targets. Site shows a good diversity of Calluna age classes, with a variety of other heathland species at sufficient frequencies to meet targets. No indication of erosion or other disturbance recorded. Negative indicator species including gorse and tree saplings are only present at low levels. The site is important for Dartford Warbler, the presence of which was noted during the site visit.	Agriculture - other
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	18	1009534	9.17	01 Sep 2009	Unfavourable recovering	currently supporting a commercial outdoor pig enterprise significant eutrophication issues and direct runoff, high levels of corvids effecting this and adjoining units. Olg operation should move in October 2010	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	20	1009535	11.47	01 Sep 2009	Unfavourable recovering	Secondary woodland, important for its breeding birds. Structure of the wood is acceptable with a range of ages and frequent deadwood including standing. The understorey is now recovering from earlier heavy deer pressure although more thickets would be desirable. Heavy disturbance pressure on breeding birds from corvids associated with the surrounding pig units. Management some coppice and glading, corvid control	
East Of England	Suffolk	Suffolk Coastal	Arable and horticulture	Adam Burrows	21	1009540	11.37	23 Sep 2010	Unfavourable recovering	Secondary woodland, important for its breeding birds. Structure of the wood is acceptable with a range of ages and frequent deadwood including standing. The understorey is now recovering from earlier heavy deer pressure although more thickets would be desirable. Heavy disturbance pressure on breeding birds from corvids associated with the surrounding pig units. Management some coppice and glading, corvid control	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew	Adam Burrows	30	1009536	5.42	05 Nov 2010	Favourable	Supports breeding woodlark and stone curlew. Heavy pressure from high levels of corvids associated with surrounding pig units	

East Of England	Suffolk	Suffolk Coastal	woodland - lowland	Adam Burrows	34	1009450	22.75	18 Jul 2009	Unfavourable recovering	Good mosaic of different growth phases of Calluna vulgaris with mostly building/mature and some pioneer and degenerate phases. Dwarf shrub cover is good although localised in places, being frequent in around half of samples. Composition of dwarf shrubs is also good, with Calluna and Erica cinerea being frequent. Only low levels of erosion recorded, thought to be due to rabbit disturbance in places. Gorse cover is low, though tree and bracken cover are recorded as high in parts of the unit. There is risk of eutrophication of the unit from runoff from nearby pig farming activities.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	35	1009451	47.67	05 Aug 2009	Favourable	Cover of Calluna growth phases is good with a mosaic of the different age classes present, although very little pioneer phase is present. Dwarf shrub composition is dominated by Erica cinerea with Calluna, and cover is consistently high across the unit. Cover of Gorse and tree seedlings is low across the unit. No other negative indicators recorded.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	36	1009452	64.88	02 Dec 2008	Unfavourable recovering	Cover of Calluna growth phases is good with a mosaic of the different age classes present, although very little pioneer phase is present. Dwarf shrub composition is dominated by Erica cinerea with Calluna, and cover is consistently high across the unit. Cover of Gorse and tree seedlings is low across the unit. No other negative indicators recorded.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	37	1009453	65.49	01 Dec 2008	Unfavourable recovering	Cover of Calluna includes a mosaic of the different growth phases, dominated by building/mature plants with low levels of pioneer, degenerate and dead phases also present. Total cover of dwarf shrubs is high, and Erica species and Calluna are both frequent. Parts of the unit are heavily grazed by rabbits, maintaining a short sward. An area which has been clear felled should allow development of heath in mosaic with secondary woodland. No evidence of erosion identified. Rare occurrence of Pine seedlings, and occasional bracken and gorse were noted.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	39	1009454	61.36	02 Dec 2008	Unfavourable recovering	A good mosaic of different growth phases of Calluna is present, including pioneer, building/mature and degenerate phases. Dwarf shrub cover as a whole is high and meets the targets set, and comprises frequent Calluna and Erica cinerea. A good variety of other heathland species are also represented. Negative indicator species are rare, with low levels of gorse and bracken present, and very few weed species or tree saplings. Very little evidence of erosion was recorded, and no other negative impacts noted. On-going management includes management, removal of birch and conifers and bracken control.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew	Adam Burrows	40	1009519	53.87	05 Nov 2010	Unfavourable recovering	Would be desirable to increase structural diversity to maintain and enhance breeding bird interest in woodland area, possible deer browsing effect on understorey subject	

			woodland - lowland								of RSPB research in coming year. Heathland restoration areas continue to recover	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	41	1009440	26.52	11 Aug 2009	Favourable		Habitat – S4 Phragmites swamp with wet woodland and transitional scrub Extent – Managed by cut and removal on a ten year rotation. This management should maintain favourable condition. Undesirable species – No Urtica dioica, Galium aperine or Impatiens grandilifera recorded. Nb. Reedbed managed for bittern and other birds eg. water rail and bearded tit.	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	44	1009441	25.08	12 Aug 2009	Unfavourable recovering		Lowland fen meadow with large area of surrounding reedbed and transition to wet woodland. The reedbed covers approximately a quarter of the unit and was assessed from afar. Scrub encroachment is under control and no other dominant species seen other than reed. Fen Meadow – A small number of Konik ponies used to graze the meadow. The fen meadow passes all the attributes set in CSM apart from sward height. This alone is not enough to lead to the unit being unfavourable.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	45	1009456	17.78	11 Aug 2009	Unfavourable recovering		Larger unit mostly covered by birch woodland and bracken. Contains two disused quarries with sand/gravel cliff edges and closely rabbit grazed floors. Calluna cover shows a variety of age classes, mostly building/mature as well as considerable pioneer phase and some degenerate/dead. Cover of dwarf shrubs is good across the unit, however composition is mainly dominated by Calluna with Erica recorded in some places. Little evidence of erosion recorded, however rabbit grazing was noted throughout the unit, and evidence that heather may have been topped, as well as tree removal and bracken control.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	46	1009521	18.80	05 Nov 2010	Favourable		Would be desirable to increase structural diversity to maintain and enhance breeding bird interest. Possible deer browsing effects on understorey regeneration subject of RSPB research over coming 12 months	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	47	1009442	72.77	11 Aug 2009	Favourable		This unit comprises Reedbed with scattered scrub and ditches with a large open mere in centre. Extent – Managed by cut and removal on a ten year rotation. This management should maintain favourable condition. Undesirable species - No Urtica dioica, Galium aperine or Impatiens grandilifera recorded. Woody species – scattered scrub and transitions at acceptable levels.	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	48	1009443	84.92	11 Aug 2009	Favourable		Reedbed with scattered scrub and ditches (with Berula, Carex rip. and marsh sow thistle). Extent – Managed by cut and removal on a ten year rotation. This management should maintain favourable condition. Undesirable species - No Urtica dioica, Galium aperine or Impatiens grandilifera recorded. Woody species – scattered scrub and transitions at acceptable levels.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland -	Adam Burrows	49	1009425	40.80	11 Aug 2009	Unfavourable recovering		The western half of the unit is reedbed and fen and is managed by topping and grazing with Konik ponies and	

		lowland								Highland cattle. The fen communities were in favourable condition passing all the attributes set under the common standards that were measured but the number/frequency of positive indicators was borderline.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	53	1009426	24.44	25 Aug 2009	Favourable	This unit constitutes species poor wet grassland with ditches. There are some relatively species rich areas of grassland to the western end of the unit. Sward composition and level of scrub pass the target required. No indicators of waterlogging were recorded. Bare ground and litter cover pass the criteria set. No loss of ditch system	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	54	1009531	111.94	17 Aug 2009	Unfavourable recovering	The site passes on all criteria apart from % successional vegetation which does not fit the % target criteria. However, the majority of ditches were in mid succession, with some early and late succession. This is acceptable as there is a positive active management plan in place to ensure full expression of submerged, floating and emergent elements of ditch vegetation (about 10% of ditches cleared every 2 years). The number of species was good with the target (Annexe 2 CSM guidance) being adequately met and water depth, clarity and channel form were also within the target. There was some algae cover reported but this was within acceptable levels and indicates transition between fresh and brackish	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	55	1009457	4.40	17 Aug 2009	Unfavourable recovering	Acid grassland in mosaic with bracken, mature silver birch and scrub. Willow and rush also present in wetter hollows. Grassland is mainly livestock grazed and shows signs of undergrazing in places. Areas of tightly rabbit-grazed grass show signs of harebells, centaury and bird's-foot trefoil. Unit is being managed by Suffolk Wildlife Trust using bracken control and sheep grazing in order to maintain the habitat mosaic.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	57	1009509	8.88	05 Nov 2010	Favourable	Would be desirable to increase structural diversity to maintain and enhance breeding bird interest. Possible deer browsing effects on understorey regeneration subject of RSPB research over coming 12 months	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	58	1026982	7.06	29 Sep 2010	Favourable	Breeding birds hitting targets as are Ramsar invertebrates as demonstrated by regular moth trapping. Reed extent maintained and structural diversity within acceptable limits maintained by low intensity pony grazing, dyke profiles in 5 some evidence of need for reinvigoration of dyke succession over the next epoch but currently at the upper level of acceptable diversity. Unit supporting nesting by bittern and marsh harrier	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	59	1026983	9.55	29 Sep 2010	Favourable	Breeding birds hitting targets as are Ramsar invertebrates as demonstrated by regular moth trapping. Reed extent maintained and structural diversity within acceptable limits maintained by low intensity pony grazing, dyke profiles in 5 some evidence of need for reinvigoration of dyke succession over the next epoch but currently at the upper level of acceptable diversity. Unit supporting nesting by	

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	60	1026911	115.44	04 May 2005	Favourable	bittern and marsh harrier 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.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	61	1026913	43.65	04 May 2005	Favourable	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 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.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	62	1026916	3.79	05 May 2005	Favourable	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.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	63	1026984	20.78	06 May 2005	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 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 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	

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	64	1026918	39.15	06 May 2005	Unfavourable declining	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.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	65	1026919	20.25	06 May 2005	Favourable	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.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	66	1026981	1.36	23 Sep 2010	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.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	67	1026920	11.96	05 Aug 2009	Unfavourable recovering	Unit predominantly acid grassland with scattered ericaceous heath 4-5%. Vegetation short <8cm mainly with occasional scattered trees 12%, bare ground 5%. Management bracken swiping and rabbit grazing meeting management objectives	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	68	1026921	50.54	15 Mar 2010	Unfavourable recovering	unit is a mix of secondary woodland(pine and birch)20%, ericaceous heath 50%, acid grassland and gorse and birch scrub 10%. Botanical species diversity is acceptable although some areas are still bracken dominated 5-8% of site, bare ground at 2% is a little low. Management by bracken swiping, rotational scrub coppice and rotavation. Would benefit from grazing	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	68	1026921	50.54	15 Mar 2010	Unfavourable recovering	Unit predominantly acid grassland with scattered ericaceous heath 4-5%. Vegetation short <8cm mainly with occasional scattered trees 2%, bare ground 5%. Management bracken swiping and sheep grazing meeting management objectives. Concern over vehicle use of agricultural track crossing the unit 1% of unit area also concern over uncontrolled dogs March to September, woodlark not recorded as a breeding species despite history of breeding on unit and suitable habitat	

East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	69	1026922	21.75	05 Aug 2009	Favourable	An area of mixed acid grassland, ericaceous heath and birch and gorse scrub (7-8%). Management by bracken swiping and sheep grazing. Good structural and species diversity in vegetation including 10% bare ground. Some concerns over uncontrolled dogs during the bird breeding season particularly with reduced evidence of woodlark and nightjar
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	70	1026943	2.64	13 Aug 2009	Unfavourable recovering	Unit is half reedbed with willow and silver birch encroaching and covering much of the fen, as well as the transitions to wet /dry heath. Now in HLS agreement and management issues are being addressed.
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	71	1026944	2.99	23 Sep 2010	Unfavourable no change	Undergrazing
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	72	1026945	26.37	13 Aug 2009	Unfavourable recovering	Unit is a mosaic of heather, gorse and bracken with patches of acid grassland. Bracken being controlled by patch cutting and there are good signs of regeneration in areas of cleared bracken/ degenerate heather. Unit being managed under HLS
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	73	1026946	9.90	01 Sep 2009	Unfavourable recovering	Secondary woodland, important for its breeding birds. Structure of the wood is acceptable with a range of ages and frequent deadwood including standing. The understorey is now recovering from earlier heavy deer pressure although more thickets would be desirable. Heavy disturbance pressure on breeding birds from corvids associated with the surrounding pig units. Management some coppice and glading, corvid control
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	74	1026947	5.83	01 Sep 2009	Favourable	Secondary woodland, important for its breeding birds. Structure of the wood is acceptable with a range of ages and frequent deadwood including standing. The understorey is now recovering from earlier heavy deer pressure although more thickets would be desirable. Heavy disturbance pressure on breeding birds from corvids associated with the surrounding pig units. Management some coppice and glading, corvid control
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	75	1026948	2.41	13 Jul 2009	Favourable	Mowing marsh, species diversity at target, water levels at ground level, splashy. Reed fringed dykes at northern edge supporting target birds and range of aquatic macrophytes. 5% scrub at margins supporting appropriate breeding birds. Management, late summer cutting, meeting objectives
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	76	1026949	1.67	23 Sep 2010	Unfavourable recovering	Dwarf shrub cover is good and meeting targets. With a variety of heathland species at sufficient frequencies to meet targets. No indication of erosion or other disturbance recorded. Negative indicator species including gorse and tree saplings are only present at low levels.
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	77	1026951	0.23	15 Mar 2010	Unfavourable recovering	unit submerged by saline inundation in November 2007, loss of plant diversity, lower than target for fen vegetation, invert diversity lower than expected. Supports target breeding birds. Now recovering to fresh water system.

East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	78	1026952	4.22	14 Jul 2009	Unfavourable recovering	Management non intervention with long rotation scrub clearance (15years)	unit submerged by saline inundation in November 2007, largely Phragmites australis dominated loss of Sow thistle in inundation, invert diversity lower than expected. Supports target breeding birds. Now recovering to fresh water brackish transition system. Management non intervention with long rotation scrub clearance (15years) for 20% of site. 80% mosaic annual cut reed maximising edge area
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	79	1026953	7.82	02 Sep 2009	Favourable	The area is dominated by reedbed with some scrub encroachment on NW boundary. Site meeting objectives.	The area is dominated by reedbed with some scrub encroachment on NW boundary. Site meeting objectives.
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	80	1026954	10.13	14 Jul 2009	Unfavourable recovering	unit submerged by saline inundation in November 2007, largely Phragmites australis dominated loss of Sow thistle in inundation, invert diversity lower than expected. Supports target breeding birds. Now recovering to fresh water brackish transition system. Management non intervention with long rotation scrub clearance (15years) for 20% of site. 80% mosaic annual cut reed maximising edge area	unit submerged by saline inundation in November 2007, largely Phragmites australis dominated loss of Sow thistle in inundation, invert diversity lower than expected. Supports target breeding birds. Now recovering to fresh water brackish transition system. Management non intervention with long rotation scrub clearance (15years) for 20% of site. 80% mosaic annual cut reed maximising edge area
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	81	1026955	1.79	29 Sep 2010	Favourable	Breeding birds hitting taretals as are Ramsar invertebrates as demonstrated by regular moth trapping. Reed extent maintained and structural diversity within acceptable limits maintained by commercial cutting. Some evidence of need for reinvigoration of dyke succession over the next epoch but currently at the upper level of acceptable diversity. Disturbance by PROW ongoing concern	Breeding birds hitting taretals as are Ramsar invertebrates as demonstrated by regular moth trapping. Reed extent maintained and structural diversity within acceptable limits maintained by commercial cutting. Some evidence of need for reinvigoration of dyke succession over the next epoch but currently at the upper level of acceptable diversity. Disturbance by PROW ongoing concern
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	82	1026956	5.69	14 Jul 2009	Favourable	Brackish reedbed close to Walberswick village, largely meeting target of monoculture of reed, disturbance high from surrounding Public Rights of Way limiting bittern and marsh harrier nesting. Other target birds successful	Brackish reedbed close to Walberswick village, largely meeting target of monoculture of reed, disturbance high from surrounding Public Rights of Way limiting bittern and marsh harrier nesting. Other target birds successful
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Adam Burrows	83	1026957	3.80	27 Aug 2009	Favourable	This unit comprises salt marsh, some reedbed and shingle with some brackish pools and saline lagoons.	This unit comprises salt marsh, some reedbed and shingle with some brackish pools and saline lagoons.
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Adam Burrows	84	1027030	2.16	13 Aug 2009	Unfavourable declining	Unit is made up of approximately 50% sand dune and 50% shingle, with approximately half of the shingle present being vegetated. Plant species where present are noted to be small and not well established. Annual vegetation is sparse, with only occasional sea sandwort recorded. - Fail. Perennial vegetation is dominated by marram grass and other sand dune and grassland species, with positive indicator species, curled dock and sea pea, occurring only occasionally and bristly oxtongue and sea-kale rarely. - Fail Field notes state that the site is busy and heavily trampled because of the number of visitors accessing the area.	Unit is made up of approximately 50% sand dune and 50% shingle, with approximately half of the shingle present being vegetated. Plant species where present are noted to be small and not well established. Annual vegetation is sparse, with only occasional sea sandwort recorded. - Fail. Perennial vegetation is dominated by marram grass and other sand dune and grassland species, with positive indicator species, curled dock and sea pea, occurring only occasionally and bristly oxtongue and sea-kale rarely. - Fail Field notes state that the site is busy and heavily trampled because of the number of visitors accessing the area.
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Adam Burrows	85	1027031	2.82	13 Aug 2009	Unfavourable declining	The shingle appears to have been bulldozed to create a cliff like edge which forms a sea wall. The majority of the vegetation present is against this bulldozed edge. Below this the shingle is heavily trampled and little vegetation is recorded. Strandline vegetation consists of frequent spear-	The shingle appears to have been bulldozed to create a cliff like edge which forms a sea wall. The majority of the vegetation present is against this bulldozed edge. Below this the shingle is heavily trampled and little vegetation is recorded. Strandline vegetation consists of frequent spear-

East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Adam Burrows	86	1027032	8.85	30 Sep 2010	Part destroyed	Unit 86 is now in part tidal or sub-tidal as a result of natural coastal processes. The vegetated shingle communities should now be represented within unit 88. The remainder of the unit is subject to high trampling pressure from visitors which limits vegetation growth although on the remnant (no longer maintained)shingle bank colonies of sea pea have established	Inappropriate coastal management, Public access/disturbance
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Adam Burrows	87	1026959	6.58	09 Oct 2009	Unfavourable recovering	This unit has changed markedly over the last 4 years with the implementation of remedies by the EA. The previous management of bulldozing shingle has ceased and the shingle beach been allowed to develop a natural profile, the structure is now significantly larger, up to 100 metres wide rather than 14m, this has led to a reduction in trampling pressure although locally 8-10% of the site this remains a concern. Annual vegetation shows good signs of recovery and little terns, ringed plover and oystercatcher have successfully bred.	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	88	1026960	30.69	26 Aug 2009	Favourable	Unit now a mosaic of annual and perennial shingle, saline lagoons salt marsh and brackish grasses. Inverts representing the Ramsar transitions well represented as are the breeding bird interests of the SSSI including avocet, little tern, redshank and oystercatcher. Saline lagoons show good productivity particularly for Nematostella. Management non intervention, with the erection of protective fences between April and September to maximise breeding bird success	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	89	1026961	6.68	02 Sep 2009	Favourable	Unit dominated by sea couch with areas of reedbed throughout. There were several dry saline lagoons in the unit and no pioneer salt marsh species were recorded.	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	90	1026962	127.86	29 Sep 2010	Unfavourable recovering	Management on unit maintaining habitat in suitable conditions, ditches 1 in 5 profile with a variety of age structure maintained by rotational clearance, 10% reedbed cut to maintain age diversity, fish stocks and aquatic macrophyte diversity recovering from 2007 saline inundation. Breeding bird numbers currently repressed by large numbers of corvids associated with the pig operation on the adjoining unit 17, this effecting territory establishment and fledgling viability. direct effluent run off and phosphorous leaching have taken the P levels in water system over the .1mg/l in COs. Pig unit agreed to be removed in October 2010, thus recovering status.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	91	1026963	4.29	16 Sep 2009	Unfavourable recovering	Secondary wet woodland birch with some alder, structure good with well developed understorey, breeding birds lower than expected evidence of high corvid numbers associated with pig units in the area. Management; long rotation coppice to maintain age structure working, corvid control undertaken	

East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	92	1026964	63.74	06 Aug 2009	Unfavourable recovering	unit a mix of acid grassland 45%, ericaceous heath 10%, scrub 10% and woodland 30%. Acid grass and ericaceous heath show target species diversity although limited mature and degenerate Calluna 1%. Age structure of woodland uniform with noted absence of understorey vegetation leading to lower than expected breeding bird numbers and diversity. High numbers of corvids associated with the adjacent pig units in evidence all year, up to 5000 during June July limiting breeding bird success. Management bracken control by herbicide and cutting, sheep grazing, corvid control	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	93	1026965	19.29	01 Sep 2009	Unfavourable recovering	Secondary woodland, important for its breeding birds. Structure of the wood is acceptable with a range of ages and frequent deadwood including standing. The understorey is now recovering from earlier heavy deer pressure although more thickets would be desirable. Heavy disturbance pressure on breeding birds from corvids associated with the surrounding pig units. Management some coppice and glading, corvid control	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	94	1026966	26.56	07 Aug 2009	Unfavourable recovering	unit a mix of acid grassland, ericaceous heath gorse and birch scrub and birch woodland. Vegetation diversity near target with good range of Calluna age structures and mosaic, acid grassland shows target species diversity 10% bare ground throughout unit. Good understorey in woodlands and scrub at 10% of unit area. Supporting breeding woodlark, stone curlew and stable population of silver studded blue butterflies. West end shows evidence of high corvid numbers and associated disturbance/predation. Management by Dartmoor pony grazing, rotavation and swiping of bracken. Corvids control measures in place	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	95	1026967	11.68	29 Sep 2010	Unfavourable no change	Evidence of pig run off from adjacent units, reduction in understorey vegetation, possibly by deer browsing. High levels of corvids suppressing breeding bird success. loss of heath vegetation to willowherb	Agriculture - other, Deer grazing/browsing
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	96	1026968	10.65	26 Aug 2009	Unfavourable no change	The heathland appears to have been neglected for some years but has recently undergone extensive management. Some pioneer and building/mature Calluna is present in areas of regeneration following management, but large areas of gorse and bracken are also present with very little ground flora. Some graminoid species were recorded. Lying dead vegetation from mowing is present in these areas. Silver birch trees and seedlings, and some conifers, were recorded. Habitats present may also represent important fabric for breeding bird species.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	97	1026969	5.95	01 Sep 2009	Unfavourable recovering	Secondary woodland, important for its breeding birds. Structure of the wood is acceptable with a range of ages and frequent deadwood including standing. The understorey is now recovering from earlier heavy deer pressure although more thickets would be desirable. Heavy	

East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	98	1026970	52.84	16 Sep 2009	Unfavourable recovering	unit submerged by saline inundation in November 2007, largely Phragmites australis dominated loss of Sow thistle in inundation, invert diversity lower than expected. Supports target breeding birds. Now recovering to fresh water brackish transition system. Management non intervention with long rotation dyke and open water clearance (15years) for 10% of site. Some mosaic annual cut reed maximising edge area	disturbance pressure on breeding birds from corvids associated with the surrounding pig units. Management some coppice and glading, corvid control
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	99	1026971	4.54	02 Sep 2009	Unfavourable recovering	The heathland has recently undergone extensive management, with the northern section now fenced ready for stock grazing. Gorse cutting has also been carried out here, although regrowth appears vigorous. The remaining area is unmanaged, with a mix of open vegetation and large gorse, secondary woodland and scrub. Some rabbit grazing noted.	
East Of England	Suffolk	Suffolk Coastal	Fen, marsh and swamp - lowland	Adam Burrows	100	1026972	1.99	16 Sep 2009	Unfavourable recovering	The unit has recently undergone some management, with the top area cut as a clearing, gorse cutting has also been carried out here, although regrowth appears vigorous. The remaining area is unmanaged, with a mix of open vegetation and large gorse, secondary woodland and scrub.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	101	1026973	6.22	02 Sep 2009	Unfavourable recovering	Unit comprises a mosaic of acid grassland, rank grassland and gorse scrub. There is a transition to reedbed on the eastern and southern boundary, and sycamore is invading on the western boundary. Habitats present would also be valuable as fabric for bird assemblages. Unit is managed by Suffolk Wildlife Trust, by cutting and grazing in order to remove gorse cover. Also noted that erosion is taking place at the seaward edge of the unit causing influx of saltwater influence.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	102	1026974	78.85	26 Aug 2009	Favourable	The northern section of Unit 102 appears to be going through natural coastal processes with frequent overtopping of the sea wall which is resulting in a change of habitat to lagoons, reedbed and saltmarsh communities. In the southern section of the site the species, water clarity, depth and channel form of the ditches meets the CSM criteria set.	
East Of England	Suffolk	Suffolk Coastal	Coastal lagoon	Adam Burrows	103	1026975	16.89	16 Sep 2009	Favourable	Unit now a mosaic of annual and perennial shingle, saline lagoons salt marsh and brackish grasses. Inverts representing the Ramsar transitions well represented as are the breeding bird interests of the SSSI including avocet, little tern, redshank and oystercatcher. Saline lagoons show good productivity particularly for Nematostella. Management non intervention, with the erection of protective fences between April and September to maximise breeding bird success	
East Of	Suffolk	Suffolk	Supralittoral	Adam Burrows	104	1026976	21.27	09 Oct 2009	Unfavourable	This unit has changed markedly over the last 4 years with	

England	Coastal	sediment					recovering	the implementation of remedies by the EA. The previous management of bulldozing shingle has ceased and the shingle beach been allowed to develop a natural profile, the structure is now significantly larger, up to 100 metres wide rather than 14m, this has led to a reduction in trampling pressure although locally 8-10% of the site this remains a concern. Annual vegetation shows good signs of recovery and little terns, ringed plover and oystercatcher have successfully bred.	
East Of England	Suffolk Coastal	Supralittoral sediment	Adam Burrows	105	1027033	5.05	Destroyed	Unit 105 is now tidal or sub-tidal as a result of natural coastal processes. The vegetated shingle communities should now be represented within unit 104.	Other - specify in comments
East Of England	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	106	1026977	7.69	Favourable	The Environment agency no longer maintain the sea wall fronting this unit and there is seepage/overtopping of sea water leading to formation of brackish/salt water lagoons, reedbed, sea club rush beds and salt marsh communities.	
East Of England	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	107	1027089	3.58	Unfavourable recovering	Unit is half covered in dense bracken, with the other half comprising pioneer heathland and acid grassland mosaic. Grassland is closely grazed by rabbits, with patches of bracken and ragwort. Some birch encroachment is occurring from surrounding woodland edges.	
East Of England	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	108	1027090	14.63	Unfavourable recovering	Heather is made up of approximately equal amounts of pioneer and building/mature phases, with some degenerate phase plants also recorded. Dwarf shrub cover across the site is good, with both Calluna and Erica cinerea frequent. Birch and pine clearance has restored areas of open heath. Negative indicator species are uncommon, and only localised evidence of erosion recorded.	
East Of England	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	109	1027091	84.97	Favourable	Good diversity of different age classes of Calluna, building/mature forming the majority with some pioneer and degenerate phases present also. Total cover of dwarf shrubs is good across the unit, with Calluna and Erica cinerea both frequent. Gorse is recorded as having limited presence, and bracken and bramble are also occasional. Erosion across the unit is not significant, and no other evidence of negative impacts is recorded. Presence of Dartford warbler noted also.	
East Of England	Suffolk Coastal	Supralittoral sediment	Adam Burrows	110	1027092	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, Public access/disturbance
East Of England	Suffolk Coastal	Supralittoral sediment	Adam Burrows	111	1027093	3.32	Favourable	The condition of the unit was changed to favourable at the last assessment in 2004. This decision was based on evidence that the trampling by visitors was not significantly damaging the important plant communities (see paragraph	

East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Adam Burrows	112	1027094	40.13	14 Aug 2009	Favourable	below) and that the Environment Agency had provisionally agreed to modify sea defence plans to negate any damage as a result of coastal squeeze. The Environment Agency plans have now been approved. The dune and shingle flora were monitored within and without enclosure areas between 1993 and 2004. This demonstrated that there was no measurable improvement of the plant communities within the enclosure areas compared to the unprotected areas. It also showed a general improvement across this unit and unit 112. Based on the Environment Agency approval of the agreed management and the previous evidence on the effect of trampling on the plant communities this unit is considered in favourable condition.	
East Of England	Suffolk	Suffolk Coastal	Supralittoral sediment	Adam Burrows	113	1027095	8.34	01 Dec 2010	Part destroyed	The condition of the unit was changed to favourable at the last assessment in 2004. This decision was based on evidence that the trampling by visitors was not significantly damaging the important plant communities (see paragraph below) and that the Environment Agency had provisionally agreed to modify sea defence plans to negate any damage as a result of coastal squeeze. The Environment Agency plans have now been approved. The dune and shingle flora were monitored within and without enclosure areas between 1993 and 2004. This demonstrated that there was no measurable improvement of the plant communities within the enclosure areas compared to the unprotected areas. It also showed a general improvement across this unit and unit 111. Based on the Environment Agency approval of the agreed management and the previous evidence on the effect of trampling on the plant communities this unit is considered in favourable condition.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	114	1027658	20.38	20 Aug 2009	Unfavourable recovering	Much of unit lost to sea, remainder unable to migrate inland due to structures behind, public pressure remains high	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	115	1027659	21.49	24 Nov 2010	Unfavourable recovering	Overall the unit consist species poor improved grassland with species rich ditches. The site comprises of a mosaic of lowland, wet grassland habitats.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Adam Burrows	116	1027662	4.06	26 Oct 2010	Favourable		
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	117	1027660	15.14	26 Oct 2010	Unfavourable recovering	EA completed Minsmere river works	
East Of	Suffolk	Suffolk	Neutral	Adam Burrows	118	1027661	5.96	20 Aug 2009	Unfavourable	Wet, species rich rush pasture, dissected by ditches	

England		Coastal	grassland - lowland							recovering	varying from two/three year old ditches to those in very late succession which are all but dry. Along each ditch and surrounding the parcel is small scrub of willow and birch, with some mature trees. Continue to graze the site.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Adam Burrows	119	1027665	1.37	20 Aug 2009	Unfavourable recovering	Unfavourable recovering	Wet, species rich rush pasture, dissected by ditches. Along each ditch and surrounding the parcel is small scrub of willow and birch, with some mature trees. The most east part of the unit is scrubbed over with young willow and birch, plus silverweed and docks.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Adam Burrows	120	1029535	66.24	17 Aug 2006	Unfavourable recovering	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.	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - **SSSI name** - Orwell Estuary - **Staff member responsible for site** - Emma Hay

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	1	1009576	42.94	11 Sep 2009	Unfavourable declining	Outlet of Levington creek has prevented development of extensive salt marsh in this area, mostly mid level marsh is present around the edges of the creek mouth. A number of smaller creeks are present within the marsh, which are flooded at high tide, and along the sides of these creeks areas of lower marsh are found where bare ground and Salicornia dominate. Large areas of mud-flats are exposed at low tide, with only patches of <i>Spartina anglica</i> present. The unit is backed by sea wall approximately 2m high along the whole length, beyond which are pasture fields, as well as an artificially created wetland lagoon managed by the Suffolk Wildlife Trust. The coastal footpath runs around the landward edge of the marsh along the sea wall, not causing any significant erosion/disturbance. No other obvious management impact occurring. This unit is backed by a sea wall and coastal squeeze could be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep) to assess saltmarsh extent was commissioned. This showed a 0.15ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that the unit is unfavourable declining due to the loss of extent as a result of coastal squeeze.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	2	1009577	48.72	22 Sep 2009	Favourable	Tidal muds front a sand/shingle beach which leads to a short, soft cliff, behind which is an area of woodland. Patches of spear-leaved orache are found at the base of the cliff, and towards the southern end of the unit sea couch, grass-leaved orache and sea beet are also present. Unit backed by natural cliffs, tidal muds are used by wading birds.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	3	1009578	79.68	22 Sep 2009	Favourable	The western end of the unit comprises soft mud fronting a narrow sand/shingle beach. Patches of <i>Spartina</i> are present on the foreshore. Behind this is a soft cliff with woodland behind. Towards the east the cliff is no longer present and salt marsh grades into higher marsh communities which are then separated by a ditch from mown grassland of a golf course. There is public access through Country Park to the western end of the unit, though this disturbance is more likely to affect fauna than plant communities. Some transition from mid to higher marsh is seen in places.	

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	4	1009579	58.81	11 Sep 2009	Favourable	Salt marsh at the north-western end of the unit is cattle grazed and grades into pasture and wood pasture behind. In front of the marsh a small dune is formed of sand and gravel with spear-leaved orache and annual sea blite. Tidal muds present in front of the dune. Salt marsh seen to be eroding slightly, forming a low cliff edge. Towards the south-eastern end of the unit tidal muds are present in front of sand and shingle at higher levels, with patches of sea sandwort, which lead up to a soft cliff with grassland and woodland beyond. The salt marsh is not backed by a sea wall so is not being 'squeezed' by manmade flood defences. Transition from high to mid-level marsh was apparent, and a variety of salt marsh species were encountered including lax-flowered sea lavender.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	5	1009580	51.77	22 Sep 2009	Favourable	Tidal mud fronting sand/shingle beach with large quantities of <i>Spartina anglica</i> and some glasswort at the interface between the two. A small area of higher marsh is present at the mouth of an inlet at the western boundary of the unit. The unit is mainly backed by rising arable land, with an area of woodland in the eastern section. A low soft cliff supporting blackthorn scrub and sea couch is present at the back of the unit.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	6	1009581	55.73	23 Sep 2009	Favourable	North-western end of the unit comprises low to mid-level salt marsh with signs of erosion to the seaward edge. Behind this is a natural bank with woodland, and a clump of sea club-rush at the base of the bank. Towards the eastern end of the unit a number of houseboats are moored in front of a natural bank and woodland. No salt marsh was evident here.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	7	1009582	85.06	22 Sep 2009	Favourable	Unit comprises patches of <i>Spartina anglica</i> fronting a sand/shingle beach, behind which is a mix of woodland with some veteran trees, and pasture/parkland. No artificial sea wall is present within the unit, which is backed by soft cliffs. Towards the eastern end of the unit the land rises behind supporting mown amenity grassland with sea couch, spear-leaved orache, sea purslane and scrub adjacent to beach.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	8	1009583	66.57	23 Sep 2009	Unfavourable declining	Salt marsh is present along approximately 50% of the shore, where an inlet has allowed deposition and vegetation development in front of the sea wall. Creeks and pools are frequent in this area resulting in a diverse habitat mosaic. Behind the sea wall are pasture fields and woodland. The remainder of unit has no salt marsh vegetation present, and tidal muds are backed by the concrete sea wall, with no land exposed at high tide. Behind the sea wall in this eastern part of the unit are areas of grazing marsh and wet ditches. Other than dredging of the estuary, no sign of any management activities resulting in adverse impacts. No significant transition noted within the unit, mosaic of mid-high marsh present. No pioneer marsh present due to coastal squeeze and erosion of outer marsh edge. This unit is backed by a	Coastal squeeze

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	9	1009584	51.42	24 Sep 2009	Favourable	sea wall and coastal squeeze could be an issue. In order to investigate coastal squeeze a study by IECS (2010 in prep) to assess saltmarsh extent was commissioned. This showed a 1.52ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that the unit is unfavourable declining due to the loss of extent as a result of coastal squeeze.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	10	1009590	40.14	21 Apr 2010	Favourable	Unit comprises tidal muds fronting sand beach, and is backed by mud cliffs approx 12m high, behind which the western end of the unit is wooded, the eastern end backed by pasture. A small area of salt marsh is present at the eastern end of the unit, which is predominantly mid-level with occasional pioneer-type vegetation.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Emma Hay	11	1009585	49.00	24 Sep 2009	Unfavourable no change	The unit as a whole has a cover of short fine grasses (5-15cm) with different fields having varying densities and cover of grass tussocks and patches of rush providing a variety of structures for different bird species. Water levels are kept high with all the fields still wet enough to push a pencil full length into the soil. There was standing water in the ditches, and in some low lying areas, at the time of the visit and evidence of standing water over winter (i.e bare ground and dried algae). Nine lapwing were seen on the fields with one pair showing clear signs of nesting behaviour. Two pairs of curlew were seen and one snipe. Shelduck were present at the time of the visit and goose droppings indicate that brent geese may have used these fields (grassland condition would have been suitable).	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	12	1009586	36.59	24 Sep 2009	Unfavourable no change	Outlet of Levington creek has prevented development of extensive salt marsh in this area, mostly mid level marsh is present around the edges of the creek mouth. A number of smaller creeks are present within the marsh, which are flooded at high tide, and along the sides of these creeks areas of lower marsh are found where bare ground and Salicornia dominate. Large areas of mud-flats are exposed at low tide, with only patches of Spartina anglica present. The unit is backed by sea wall approximately 2m high along the whole length, beyond which are pasture fields, as well as an artificially created wetland lagoon managed by the Suffolk Wildlife Trust. The coastal footpath runs around the landward edge of the marsh along the sea wall, not causing any significant erosion/disturbance. No other obvious management impact occurring. An assessment of saltmarsh extent by IECS (2010 in prep.) showed a 0.33ha gain in saltmarsh in this unit between 1999/00 to 2006/07. However as the natural development of the saltmarsh is constrained by the sea wall the unit has been assessed as unfavourable no change due to coastal squeeze.	Coastal squeeze

									comprises an area of mid-level marsh which is divided by many frequent and well-established creeks, and with many pools also present. The main estuary channel is dredged, and is well used by vessels of various sizes. No other significant negative impacts noted. No transitions noted, with the majority of the marsh comprising mid-level communities, and no pioneer/low level communities due to coastal squeeze. An assessment of saltmarsh extent by IECs (2010 in prep.) showed a 0.27ha gain in saltmarsh in this unit between 1999/00 to 2006/07. However as the natural development of the saltmarsh is constrained by the sea wall the unit has been assessed as unfavourable no change due to coastal squeeze.	
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	13	1009587	47.77	23 Sep 2009	Unfavourable declining	Coastal squeeze
									The northern edge of this unit consists of a small area of salt marsh and tidal mud behind a sill/breached sea wall and backed by natural woodland with sea wall to either side. A marina stands to the west of this area and Loompit Lake to the east. This area of salt marsh comprises approximately 30% lower marsh, 45% middle marsh and 25% upper marsh. A stand of Sea Club-rush <i>Bolboschoenus maritimus</i> runs along the back of the marsh with Common Reed <i>Phragmites australis</i> present where a freshwater inlet enters the estuary. The salt marsh is eroding with wide creeks. A soft cliff with natural woodland fronts the unit south of Loompit Lake up to where the sea wall resumes at the area of managed retreat. Both the sea wall and soft cliff are fronted by a small shingle/sand beach with a thin line of salt marsh in front of the seawall. Three areas of shingle which appear to have been dumped onto the edge of the salt marsh were present and are possibly for nesting terns. No evidence of vehicle damage or bait digging and public access is restricted to the adjacent footpath. Only damaging activities include the dredging of the channel and the presence of the seawall. No evident transition between salt marsh zones. This unit is backed by a sea wall and coastal squeeze could be an issue. In order to investigate coastal squeeze a study by IECs (2010 in prep) to assess saltmarsh extent was commissioned. This showed a 0.25ha loss in extent of saltmarsh between 1999/00 to 2006/07 in this unit. This leads us to the conclusion that the unit is unfavourable declining due to the loss of extent as a result of coastal squeeze.	
East Of England	Suffolk	Suffolk Coastal	Neutral grassland - lowland	Emma Hay	14	1009591	47.59	21 Apr 2010	Favourable	
									The unit as a whole has a cover of short fine grasses (5-15cm) with different fields having varying densities and cover of grass tussocks and patches of rush providing a variety of structures for different bird species. There were some small isolated patches of scrub within two of the fields but spread controlled by grazing. Water levels are kept high with standing water in the ditches and in some low lying areas at the time of the visit and evidence of standing water over winter (i.e bare ground and dried algae). Five isolated lapwing seen within fields (possibly breeding). Shelduck seen adjacent to scrapes. Goose	

East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	15	1009588	34.23	23 Sep 2009	Unfavourable no change	droppings on the fields indicate that brent geese probably use these field in the winter – the condition of the grass ward would have been suitable. Reed warbler heard adjacent to borrow dyke.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	16	1009589	10.13	24 Sep 2009	Unfavourable no change	A sand and shingle dune encloses an area of salt marsh backed by a seawall. Sea Couch <i>Elymus pycnanthus</i> is dominant on the seaward side of sea wall and at the top end of the salt marsh. Salt marsh comprises approximately 40% pioneer, 40% mid marsh and 20% high marsh. At the south-western end shingle banks dominated by sea couch with black medick and mayweed separate marsh communities. At northern end <i>Atriplex hasta</i> , grass-leaved orache and sea rocket. North-east of this area there is no salt marsh with a sand/shingle beach to base of sea wall with stone/concrete protection fronting wall. Dredging of estuary channel is the main impact occurring, no evidence of negative impact from other management practices. No significant transitions noted. An assessment of saltmarsh extent by IECs (2010 in prep.) showed a 0.61ha gain in saltmarsh in this unit between 1999/00 to 2006/07. However as the natural development of the saltmarsh is constrained by the sea wall the unit has been assessed as unfavourable no change due to coastal squeeze.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	18	1025852	418.61	10 Nov 2010	Favourable	This unit comprises of a stretch of the estuary adjacent to Trimley Marshes nature reserve. The marshes are separated from the estuary by a sea wall with the majority of the salt marsh having developed in small stretches towards the eastern end of the unit. A sand and shingle Island is situated adjacent to the salt marsh and appears to be an important site for Avocets, Little Egrets and Godwits which were all observed during the survey using the tidal mud which separates the island from the shore. The main area of salt marsh surrounded an inlet almost halfway along the unit, 25% of this marsh consisted of pioneer species, 25% middle marsh and approximately 50% high marsh. The areas of sea wall north of this inlet to the boundary with unit 13 contained no salt marsh. There appears to be little disturbance from the port of Felixstowe. Public access is via footpath, however this results in little impact on the marsh as the footpath follows the sea wall and access onto the marsh is unlikely. The channel is dredged. Avocets, Little Egrets and Godwits which were all observed during the survey using the tidal mud. A number of rare plant species were also observed during the survey, the nationally scarce Shrubby Sea-blite <i>Suaeda vera</i> and Golden samphire <i>Inula crithmoides</i> ; and the vulnerable Prickly Saltwort <i>Salsola kali</i> . No significant transitions between salt marsh zones observed. As the natural development of the saltmarsh is constrained by the sea wall this unit has been assessed as unfavourable no change.	Coastal squeeze
East Of England	Suffolk	Suffolk Coastal	Littoral sediment	Emma Hay	18	1025852	418.61	10 Nov 2010	Favourable	This condition assessment is a Desk top study using	

England	Coastal	sediment							Worsfold, T.M., 2005. Stour, Orwell and Harwich approaches benthos: review of data, Unicomarine report HHABiot05. The extent of the feature is favourable. The River Orwell Channel is dredged from Harwich Haven approach to the Port of Ipswich to maintain access. Frequency of dredging is as needed by navigation requirements: approximately once per year. The channel depth is kept at 5.6 metres at low tide. This dredging has scope physical damage and indirect losses due to erosion or changes in sedimentary transport patterns; changes in sediment structure leading to potential change in infauna and birds; noise / visual disturbance of feeding / roosting birds; disposal of dredgings leading to siltation / smothering of habitats and food; potential release of contaminants through sediment redistribution; plus beneficial accretion through sediment redistribution. The dredge disposal is licensed by Defra, and takes into account environmental considerations. HHA and ABP Ipswich redistribute some maintenance sediments within the estuary system under a FEPA licence and undertake regular surveys of depths. Sediment samples are provided for analysis as part of FEPA licensing. Chemical analyses of sediment and water are undertaken by the EA. Baseline document requirement under the Defra maintenance Dredging Protocol has been agreed. Given the above licence assessment and approval re dredging this target can be deemed as favourable but a risk should be attached and future consents be carefully considered. The topography target is favourable with no lowering of shore profiles (but note above re dredging). Sediment character is favourable with no known change in composition of sediment type across feature. They are soft sediments in intertidal and sub tidal area.
East Of England	Suffolk Coastal	Neutral grassland - lowland	Emma Hay	19	1026671	14.16	21 Apr 2010	Favourable	The unit as a whole has a cover of short fine grasses (5-15cm) with varying densities and cover of grass tussocks providing a variety of structures for different bird species. Water levels are kept high with standing water in the ditches and in some low lying areas at the time of the visit and evidence of standing water over winter (i.e bare ground and dried algae). Two isolated lapwing seen within fields (possibly breeding) and one curlew. Shelduck seen adjacent to scrapes. 6 Brent geese seen during visit and goose droppings on the fields indicate that brent geese probably use these field in the winter – the condition of the grass sward would have been suitable.
East Of England	Suffolk Coastal	Littoral sediment	Emma Hay	21	1028221	16.69	24 Sep 2009	Favourable	An area of managed retreat where old sea wall has been deliberately breached resulting in an area of mud-flat where salt marsh is gradually developing in a sheltered environment. The majority of the salt marsh is mid-level with lower level pioneer type areas towards the outer edge, where glasswort and purslane are present at low densities. Some transition is seen from pioneer to mid-level marsh, where new vegetation has developed on exposed mud

East Of England	Suffolk	Suffolk Coastal	Standing open water and canals	Emma Hay	22	1028222	18.00	07 Sep 2010	Favourable	flats. Loompit Lake Unit comprises a mosaic of open water with islands, reedbed, natural and mown margins, and woodland. The lake itself is an artificial fishing lake behind a narrow unsubstantial sea wall that has been patched with rubble recently. Unit is noted as being notified for its standing open water feature and as thus it has been CA as such. However, it is arguably not of SSSI quality for its standing open water, but is hugely important as a freshwater habitat adjacent to the estuary for birds and the most important feature of this unit is its Assemblages of breeding birds – open waters and their margins. It is also very important as a breeding site for cormorants (limited in the area) (not a feature in its own right but perhaps should be). Many ducks with young and other birds were seen during the visit (many that score for assemblages of breeding birds -lowland open waters and their margins). Bird numbers for the site as a whole will be assessed separately.	
East Of England	Suffolk	Suffolk Coastal	Standing open water and canals	Emma Hay	23	1028223	61.90	04 May 2010	Favourable	Trimley Marshes is managed well for the bird species that are important for the site. The habitat comprises a mosaic of open water and reedbed with extensive area of grazing marsh. The grazing marsh comprises short fine grasses with grass tussocks and rush. The open water has well managed islands and water margins with mixtures of bare ground and different vegetation structures. 2 pair of Avocet were seen at the time of the visit as well as marsh harrier, shelduck, mute swan, gadwall, little grebe, shoveler, pintail, redshank, reed bunting, cetti's warbler, sedge warbler, and reed warbler (all birds that score for assemblages of breeding birds -lowland open waters and their margins).	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - SSSI name - Pakefield To Easton Bavents - Staff member responsible for site - Patrick Robinson

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Waveney	Earth heritage	Patrick Robinson	1	1029104	44.09	17 Nov 2010	Unfavourable recovering	Assessed for two features: Pleistocene vertebrata and Quaternary of East Anglia. The features were assessed against the extensive buried interest and coastal cliffs and foreshore Earth Science Conservation Classification types. For the former it passes on the following attributes: vegetation, agricultural practices, tree planting, landfill or tipping, engineering works, recreational activities and geological specimen collection. For the coastal cliffs and foreshore attribute the unit passed on the vegetation, scree and sediment build up, tree planting, coastal processes and geological specimen collection. The unit failed on the following attributes: exposure of features of interest, tipping or landfill, and engineering works. It fails because of the construction of a sacrificial sea defence along the beach. However as this structure is currently being eroded away the unit is in an unfavourable recovering condition.	
East Of England	Suffolk	Waveney	Earth heritage	Patrick Robinson	2	1029105	8.14	23 Nov 2010	Favourable	Unit assessed against two Earth Science Conservation Classification types, Extensive Buried Interest (EB) and Coastal Cliffs and Foreshore (EC). The unit passed on all the attributes for both types.	
East Of England	Suffolk	Waveney	Earth heritage	Patrick Robinson	3	1029106	15.45	23 Nov 2010	Favourable	Unit assessed against two Earth Science Conservation Classification types, Extensive Buried Interest (EB) and Coastal Cliffs and Foreshore (EC). The unit passed on all the attributes for both types.	
East Of England	Suffolk	Waveney	Earth heritage	Patrick Robinson	4	1029107	65.97	23 Nov 2010	Favourable	Unit assessed against three Earth Science Conservation Classification types, Extensive Buried Interest (EB) Coastal Cliffs and Foreshore (EC) and Active Process geomorphological (IA). The unit passed on all the attributes for all three types.	
East Of England	Suffolk	Waveney	Earth heritage	Patrick Robinson	5	1029108	48.69	22 Mar 2011	Unfavourable recovering	Clearance of the buidlers waste consented.	
East Of England	Suffolk	Waveney	Earth heritage	Patrick Robinson	6	1029109	19.80	09 Dec 2005	Favourable		
East Of England	Suffolk	Waveney	Earth heritage	Patrick Robinson	7	1029110	56.74	30 Mar 2011	Unfavourable recovering	Works on the flume completed March 2011	
East Of	Suffolk	Waveney	Earth	Patrick	8	1029111	22.23	01 Dec 2010	Favourable	Unit passed on the following attributes: Condition of	

England			heritage	Robinson								feature of interest, vegetation, tipping or landfill, tree planting, engineering works, quarrying, natural processes, capacity for re-creation, context and surroundings, and geological specimen collecting.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	9	1029112	16.84	11 Jul 2005	Unfavourable declining			Inappropriate coastal management	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	10	1029113	45.40	11 Jul 2005	Unfavourable declining			Inappropriate coastal management, inappropriate water levels, inappropriate weirs dams and other structures	
East Of England	Suffolk	Waveney	Coastal lagoon	Patrick Robinson	11	1029114	22.86	14 Apr 2005	Favourable				
East Of England	Suffolk	Waveney	Coastal lagoon	Patrick Robinson	12	1029115	43.37	14 Apr 2005	Favourable				
East Of England	Suffolk	Waveney	Coastal lagoon	Patrick Robinson	13	1029116	1.80	14 Apr 2005	Favourable				
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	14	1029117	23.62	11 Jul 2005	Unfavourable recovering				
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	15	1029118	35.25	11 Jul 2005	Unfavourable recovering				
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	16	1029119	0.49	11 Jul 2005	Favourable				
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	17	1029120	0.05	08 Jul 2005	Unfavourable recovering				
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	18	1029121	1.83	11 Jul 2005	Unfavourable recovering				
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	19	1029122	19.57	11 Jul 2005	Unfavourable recovering				
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	20	1029123	2.49	11 Jul 2005	Unfavourable recovering				
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	21	1029124	0.13	08 Jul 2005	Favourable				

East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	22	1029125	4.37	12 Nov 2010	Favourable	Unit passes the woodland breeding birds target and is meeting its objectives successfully.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	23	1029126	1.23	12 Nov 2010	Favourable	Unit passes the lowland open water breeding birds target and has a good level of species diversity. Unit is meeting its objectives successfully.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	24	1029127	1.21	12 Nov 2010	Favourable	Unit passes the lowland open water breeding birds target and has maintained a good level of species diversity. Unit is meeting objectives successfully.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	25	1029128	1.86	12 Nov 2010	Favourable	Unit passes the lowland open water breeding birds target and has maintained good species diversity. Unit is meeting its objectives.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	26	1029129	9.35	12 Nov 2010	Favourable	Unit passes on lowland open water breeding birds target, good species diversity, unit meeting objectives.	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	27	1029130	1.38	12 Nov 2010	Favourable	Unit passes on woodland breeding birds target, good maintenance of species diversity, unit meeting objectives.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	28	1029131	1.99	12 Nov 2010	Favourable	Unit passes on lowland open water breeding birds target, species diversity being maintained. Unit meeting objectives.	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	29	1029132	1.88	12 Nov 2010	Unfavourable no change	This unit is considered favourable for the breeding bird assemblage for woodlands. However it is unfavourable for the assemblage of breeding birds for scrub habitats.	Deer grazing/browsing
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	30	1029133	1.80	12 Nov 2010	Favourable	Unit passes the lowland open water breeding birds target and is maintaining its levels of species diversity. Unit is meeting objectives.	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	31	1029134	0.42	12 Nov 2010	Favourable	Unit passes the woodland breeding birds target and is meeting objectives.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	32	1029135	3.48	12 Nov 2010	Favourable	Unit passes the lowland open water breeding birds target and is meeting its objectives successfully.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	33	1029136	4.02	12 Nov 2010	Unfavourable no change	This unit fails on the assemblage of breeding birds lowland open water. It passed on the breeding aggregations of very rare birds feature and localities used by non-breeding birds. The unit was assessed on the composite habitat approach agreed by the specialist ornitologists.	Inappropriate ditch management, inappropriate scrub control
East Of England	Suffolk	Waveney	Dwarf shrub heath -	Patrick Robinson	34	1029137	10.46	15 Mar 2010	Favourable	Unit acid grassland and ericaceous heath 70% with 10% scrub and 10% mature pine in a belt on the south side.	

East Of England	Suffolk	Waveney	lowland	Patrick Robinson	35	1029138	7.68	03 Aug 2009	Unfavourable recovering	Sward short cropped by rabbits 5% bare ground supports target breeding birds including stone curlew and woodlark
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	36	1029139	29.15	30 Mar 2010	Unfavourable recovering	Secondary woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	37	1029140	3.06	15 Mar 2010	Unfavourable recovering	ASN woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	38	1029141	1.94	13 Jul 2009	Unfavourable recovering	Unit is acid grassland 90% scrub 10%. history of undergrazing vegetation coarse/rank and >20cm long with scattered bramble.Species diversity lower than expected Management cutting and reintroduction of grazing will meet objectives
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	39	1029142	23.33	13 Jul 2009	Favourable	Secondary woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	40	1029143	6.99	13 Jul 2009	Favourable	Reedbed dominated by phragmites australis, supporting target bird species including bittern, marsh harrier and bearded tit in numbers. 15% scrub (needs future attention to avoid being a problem) 10% open water. Management of water levels and long term rotation of scrub meeting unit objectives
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	41	1029144	15.13	23 Sep 2009	Unfavourable recovering	Reedbed dominated by phragmites australis, supporting target bird species including bittern, marsh harrier and bearded tit in numbers. 20% open water. Management of water levels and long term rotation of scrub meeting unit objectives
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	42	1029145	7.52	23 Sep 2009	Unfavourable recovering	Secondary woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	43	1029146	4.96	23 Sep 2009	Unfavourable recovering	Secondary woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	44	1029147	6.79	23 Sep 2009	Unfavourable	Secondary woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place

England			mixed and yew woodland - lowland	Robinson					recovering	pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	45	1029148	5.74	23 Nov 2010	Favourable	Unit assessed against one Earth Science Conservation Classification type, Active Process geomorphological (1A). The unit passed on all the attributes for both types.	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	46	1029149	34.97	23 Sep 2009	Unfavourable recovering	Secondary woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	47	1029150	8.38	23 Sep 2009	Unfavourable recovering	Secondary woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	48	1029151	9.13	14 Apr 2005	Favourable		
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	49	1029152	3.40	23 Sep 2009	Favourable	Secondary woodland, previously subject to high deer pressure leading to a reduction in extent of the understorey vegetation and consequent reduction in breeding birds numbers and diversity. Deer control programme now in place	
East Of England	Suffolk	Waveney	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	50	1029153	25.57	23 Nov 2010	Favourable	Unit assessed against one Earth Science Conservation Classification type, Active Process Geomorphological (1A). The unit passed on all the attributes for both types.	
East Of England	Suffolk	Waveney	Bracken	Patrick Robinson	51	1029154	3.35	24 Mar 2011	Part destroyed	Coastal erosion a benefit to this unit level 1 features.	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - SSSI name - Sandlings Forest - Staff member responsible for site - Monica O'Donnell

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Coniferous woodland	Monica O'Donnell	1	1026103	1053.40	21 Dec 2010	Unfavourable recovering	Assessment of woodlark and nightjar numbers in 2010 indicate a decline since notification. Plans are in place to manage the open areas in the forest to encourage more Woodlark and Nightjar. Numbers of these birds were assessed in 2010 season.	
East Of England	Suffolk	Suffolk Coastal	Coniferous woodland	Monica O'Donnell	2	1026104	1430.37	21 Dec 2010	Unfavourable recovering	Assessment of woodlark and nightjar numbers in 2010 indicate a decline since notification. Plans are in place to manage the open areas in the forest to encourage more Woodlark and Nightjar. Numbers of these birds were assessed in 2010 season	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - SSSI name - Snape Warren - Staff member responsible for site - Monica O'Donnell

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Monica O'Donnell	1	1008792	47.96	12 Feb 2010	Unfavourable recovering	The heathland at Snape Warren has a high proportion of Bell heather (Erica cinerea) and building/mature Ling (Calluna vulgaris) mixed with areas of gorse (Ulex spp), and acid grassland. There are some patches of bracken and young birch coming through in previously cleared areas. The active management on the site over last few years has clearly benefited the site and maintained target condition.	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - **SSSI name** - Sprat's Water And Marshes, Carlton Colville - **Staff member responsible for site** - Patrick Robinson

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	1	1008982	9.15	01 Dec 2010	Favourable	This unit was assessed on its bird data and targets, and it meets all of the target thresholds for breeding and wintering birds. The unit has gained several species that were not present at time of notification, including Cetti's Warbler.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	2	1008984	1.21	03 Dec 2010	Favourable	This unit was assessed on its bird data and targets, and it meets all of the target thresholds for breeding birds. The unit has gained several species that were not present at time of notification, including Cetti's Warbler.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	3	1008986	15.79	01 Dec 2010	Favourable	This unit was assessed on its bird data and targets, and it meets all of the target thresholds for breeding and wintering birds. The unit has gained several species that were not present at time of notification, including Cetti's Warbler.	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	4	1008988	2.84	01 Dec 2010	Favourable	This unit was assessed on its bird data and targets, and it meets all of the target thresholds for breeding and wintering birds. The unit has gained several species that were not present at time of notification, including Cetti's Warbler.	
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	5	1008967	4.92	21 Jul 2009	Unfavourable recovering	Failed the Condition assessment for the ditch survey on species-richness, but is under an ESA agreement to rectify any issues. Breeding Bird assemblage and Vascular plant assemblage require further investigation.	
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	6	1008968	7.12	26 Feb 2010	Favourable	Passed the ditch survey. Breeding Bird assemblage and Vascular plant assemblage require further investigation.	
East Of England	Suffolk	Waveney	Neutral grassland - lowland	Patrick Robinson	7	1008969	9.58	26 Feb 2010	Favourable	Passed the ditch survey. Breeding Bird assemblage and Vascular plant assemblage require further investigation.	
East Of England	Suffolk	Waveney	Standing open water and canals	Patrick Robinson	9	1028708	0.09	25 Nov 2010	Unfavourable no change	This waterbody was dominated by a dense layer of duckweeds beneath which was an anoxic layer dominated by a pink/purple bacteria which stained the water when disturbed. The plants identified included common duckweed, frogbit , ivy leaved duckweed, least duckweed, and rigid hornwort as the dominant.	Siltation
East Of	Suffolk	Waveney	Standing	Patrick	10	1028709	0.24	25 Nov 2010	Favourable	Monitoring by the Broads Authority indicates that there has	

England			open water and canals	Robinson							been an improvement in water quality and a decline in filamentous algae and Enteromorpha. Ceratophyllum demersum is the abundant species, although Lemna trisulca was also present at a lower level.	
East Of England	Suffolk	Waveney	Standing open water and canals	Patrick Robinson	11	1028710	0.10	25 Nov 2010	Unfavourable no change	Unit heavily covered by duckweed and consequently in a similar condition to Round Water	Siltation	
East Of England	Suffolk	Waveney	Fen, marsh and swamp - lowland	Patrick Robinson	12	1028987	6.10	26 Feb 2010	Unfavourable recovering	Failed the CA survey for S24 vegetation on number of positive indicators and amount of Litter.		

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - SSSI name - Stanley And Alder Carrs, Aldeby - Staff member responsible for site - Chris Bielby											
Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Norfolk	South Norfolk	Fen, marsh and swamp - lowland	Chris Bielby	1	1004693	19.40	24 Dec 2010	Unfavourable recovering	Diffuse Water Pollution plan now in place for all Waveney sites.	
East Of England	Norfolk	South Norfolk	Fen, marsh and swamp - lowland	Chris Bielby	2	1016124	8.25	24 Dec 2010	Unfavourable recovering	Diffuse Water Pollution plan now in place for all Waveney sites.	
East Of England	Norfolk	South Norfolk	Fen, marsh and swamp - lowland	Chris Bielby	3	1016125	15.00	24 Dec 2010	Unfavourable recovering	Diffuse Water Pollution plan now in place for all Waveney sites.	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - SSSI name - Staverton Park And The Thicks, Wantisden - Staff member responsible for site - Patrick Robinson

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	1	1008814	62.00	14 Apr 2005	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	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	2	1008815	19.54	14 Apr 2005	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.	
East Of England	Suffolk	Suffolk Coastal	Broadleaved, mixed and yew woodland - lowland	Patrick Robinson	3	1008816	2.74	19 Apr 2005	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.	

Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Four Counties - **SSSI name** - Stour Estuary - **Staff member responsible for site** - Carol Reid

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	1	1007088	44.81	27 Nov 2010	Unfavourable declining	The unit contains the biotopes typically associated with upper estuarine soft muds and sandy muds. It also contains the biotope known to support the burrowing anemone, <i>Nematostella vectensis</i> , and the tentacled lagoon worm, <i>Alkmaria romijni</i> . However the latter biotope is not well as well represented in this unit as it is in other units on the Stour. There is some upper foreshore erosion and evidence of active erosion of saltmarsh types associated with <i>Limonium humile</i> (lax-flowered sea lavender). However it is difficult to assess whether this has significantly increased since the Environment Agency (2000) report on saltmarsh losses between 1988 and 1998. On balance the unit is assessed as unfavourable declining. However, the assessment of this unit will be revisited following consideration of the findings of a Royal Haskoning report on saltmarsh change and changes in land surface elevation commissioned by Harwich Haven and due to report in March 2011. The following factors were taken into account to determine condition: The sea wall length in this unit maintained by the Environment Agency is approximately 1.58 km out of a total shoreline in this unit of approximately 3.29 km. The remainder of the frontage is in private ownership or possibly local authority responsibility. Historical aggregate dredging on the Stour between 1967 and 1989 removing 4.4Mm ³ of material, significantly increasing the subtidal volume. Combined with port related activities – predating current mitigation work - these factors may be continuing to influence estuary geomorphology possibly contributing to erosion of the seaward edges of the intertidal mud and saltmarsh. Mitigation for the channel dredging of the Harwich Approaches (1998-2000) is reported to be effective and not accelerating background erosion External influences, such as sea level rise, may be operating on the site Field recording forms and photos are stored on file.	Coastal squeeze
East Of England	Suffolk	Babergh	Littoral sediment	Carol Reid	2	1007089	388.45	01 Nov 2010	Favourable	The site features assessed for this unit are: vascular plants, littoral sediments and populations of internationally important populations of waterfowl. The sediment character of the estuary - predominantly littoral muds consisting of sandy muds, with soft muds in the upper estuary - and the	

East Of England	Essex	Tendring	Littoral sediment	Carol Reid	3	1007090	374.97	15 Oct 2010	Favourable	infaunal community have not significantly altered. This unit contains the biotope which is known to support the burrowing anemone, <i>Nematostella vectensis</i>, and the tentacled lagoon worm, <i>Alkmaria romijni</i>. The vascular plant species represented in this unit are <i>Limonium humile</i> (lax-flowered sea lavender), <i>Lepidium latifolium</i> (dittander) and <i>Sarcocornia perennis</i> (perennial glasswort). Dittander is found at Stutton Ness where the spit connects to the foreshore in front of the cliffs. It is currently viable at this location. Perennial glasswort is present on the foreshore fronting low cliff. Lax-flowered sea lavender is well represented in this unit. This species is particularly widespread within the saltmarshes at the eastern and western ends of Seafield Bay. The sea wall extends along this section but this species is not currently adversely impacted by coastal squeeze. There is erosion of the marsh edges but the internal structure of the marshes where it is abundant are in good condition. The marshes at either end of Seafield Bay are important high tide roosts. Seafield Bay supports the highest total mean peak count of wildfowl and waders over the last 5 years – 22per cent of the waterfowl on the Stour Estuary. The saltmarshes are currently functioning as viable high tide roosts. Historical aggregate dredging and port-related activities have significantly increased the subtidal volume of the estuary and this is likely to be impacting on the foreshore. Studies show that the mitigation for the channel dredging of the Harwich Approaches (1998-2000) is effective and not accelerating background erosion. Further details on file. The site is notified for littoral muds and vascular plants: The supporting biotope for the Schedule 5 species: tentacled lagoon worm – and starlet sea anemone is present. There appear to be no adverse changes to biotope composition and distribution of littoral muds. The vascular plant features represented in this unit are lax-flowered sea lavender and perennial glasswort. Eel grass (<i>Zostera noltii</i>) requires specialist survey to establish its status and distribution. In 1977 it was known from 5 locations estuary wide but it is expected to have declined since then. Rationale for CA Coastal squeeze is unlikely to be having an adverse effect on the features of interest at present. The sea wall length represents 16.5% of the coastline length in unit 3. The saltmarsh in front of the sea wall has a stable internal creek network . The predominantly low cliffs (83.5% of the shoreline in this unit) are a natural dynamic feature. There is erosion at the seaward edge of the marshes and lowering of the shore profile. Historical aggregate dredging on the Stour throughout the estuary has removed 4.4Mm³ of material, significantly increasing the subtidal volume of the estuary . This, combined with port related activities predating current mitigation work, may be contributing to erosion of the seaward edges of the intertidal mud and saltmarsh. The mitigation for the
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East Of England	Suffolk	Babergh	Littoral sediment	Carol Reid	4	1007091	713.77	27 Oct 2010	Favourable	channel dredging of the Harwich Approaches (1998-2000) is reported to be effective and not accelerating background erosion. Monitoring is ongoing. External influences, such as sea level rise, may be operating on the site Field recording forms are available on file.	
East Of England	Suffolk	Babergh	Littoral sediment	Carol Reid	6	1007094	162.83	11 Oct 2010	Favourable	The site features assessed for this unit are: vascular plants and littoral sediments. The habitat requirements of the following vascular plants are present: ie perennial glasswort and golden samphire. Their condition is currently stable. The sediment character, biotope composition and distribution, and species composition of representative biotopes appears to be favourable - they are not completely stable and change position but there do not appear to be any adverse changes. With the consideration that.... • that 'coastal squeeze' is unlikely to be having an adverse effect on the features of interest at present. Sea defences align 36% of the coastline in this unit and do not appear to be directly impacting on the features of interest at the present time. There is some local erosion around the sluices connected with areas of historical soil winning within the marsh. • the cliffs (accounting for 61% of the shoreline in this unit) are eroding allowing a natural landward retreat of the foreshore along the eastern section of Erwardon Bay, where they are unprotected by saltmarsh. • that the possible impacts of historical aggregate dredging and port related activities may be continuing to influence estuary geomorphology possibly contributing to erosion of the seaward edges of the intertidal mud and saltmarsh. • that the mitigation for the channel dredging of the Harwich Approaches (1998-2000) is reported to be effective and not accelerating background erosion • that external influences, such as sea level rise, may be operating on the site ...the condition of the features in Unit 6 for which the site is notified are assessed as favourable. Field recording forms with the rationale for the condition assessment are available on file.	
East Of England	Essex	Tendring	Earth heritage	Carol Reid	7	1007081	2.77	22 Sep 2010	Favourable	Bands of volcanic ash are clearly exposed in the upper face of the cliff. Wave action is eroding the cliff base leading to slumping. There are vegetated areas on the cliff face but these are not extensive. Trees on the cliff top have become unstable and fallen onto the foreshore. A cement stone platform is exposed on the foreshore.	
East Of England	Suffolk	Babergh	Earth heritage	Carol Reid	8	1007080	3.45	15 Sep 2010	Favourable	The cliff face is exposed - except for some slumping and vegetation cover in places. Coastal processes are eroding the cliff face. Field recording form and photographs are held on electronic file.	
East Of England	Essex	Tendring	Littoral sediment	Carol Reid	9	1028137	84.04	11 Oct 2010	Favourable	All of the bird interest features for this unit: dark-bellied brent geese; dunlin; knot; ringed plover; grey plover; redshank; and shelduck all have populations on the site	

East Of England	Essex	Tendring	Littoral sediment	Carol Reid	10	1028138	472.93	06 Oct 2010	Favourable	that are above their conservation objectives threshold.	The features assessed for this site are: littoral sediment and vascular plants. The vascular plants considered here are those where the habitat requirements of these species are thought to be present: ie <i>Althaea officinalis</i> - marsh-mallow; <i>Limonium humile</i> (lax-flowered sea lavender); <i>Sarcocornia perennis</i> – perennial glasswort; <i>Verbascum pulverulentum</i> – hoary mullein. The condition of the plants is recorded as viable and/or subject to natural change and likely to be subject to geomorphological changes due to historical impacts. The sediment character, biotope composition and distribution, and species composition of representative biotopes appears to be favourable. The biotopes change position but there do not appear to be any adverse changes. The extent of littoral sediment appears to be reducing, eroding at the seaward edge and the shoreline profile is changing and appears to be lowering. The condition of the littoral sediments is subject to natural change and likely to be subject to geomorphological changes due to historical impacts. The condition assessment has taken into account the following: • the cliffs (accounting for 75% of the shoreline in this unit) are eroding allowing a natural landward retreat of the foreshore • that the possible impacts of historical dredging (pre 1986) may be continuing to influence estuary geomorphology and erosion of the intertidal area • that 'coastal squeeze' is unlikely to be having an adverse effect on the features of interest (sea defences align 25% of the coastline in this unit) and do not appear to be impacting on the features of interest at the present time. • that the mitigation for the channel dredging of the Harwich Approaches is reported to be effective and not accelerating background erosion • that external influences, such as sea level rise, may be operating on the site Field recording forms with the rationale behind the condition assessment are available on file.
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Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk And Suffolk - **SSSI name** - Sutton And Hollesley Heaths - **Staff member responsible for site** - Monica O-Donnell

Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Monica O-Donnell	1	1009151	11.80	15 Mar 2009	Unfavourable declining	The heather is mostly mature/degenerate ling with occasional bell heather and areas of acid grassland. There are also areas of dense bracken and bracken is interspersed throughout the rest of the site. Small clumps of trees were planted towards the rear of the site where there is also area of mature birch and pine. A sandy pit on the site, about a metre deep, has developed a more diverse flora with plentiful lichen and bell heather and this forms an excellent habitat for invertebrates.	Inappropriate scrub control
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Monica O-Donnell	2	1009152	52.16	15 Mar 2009	Unfavourable recovering	Unit 2 is due to be grazed with Exmoor ponies and Hebridean sheep, which will benefit the site. This unit has mature heather in sometimes thick stands with occasional Erica and heath bedstraw and frequent sheep's sorrel, although it is generally species poor, as is expected with this type of heathland. Extensive tree and scrub clearance has taken place, retaining occasional trees and areas of bracken have been sprayed. In cleared areas there is heather and gorse re-establishment.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Monica O-Donnell	3	1009153	40.00	15 Mar 2009	Unfavourable recovering	Unit 3 is due to be grazed with Exmoor ponies and Hebridean sheep, which will benefit the site. Unit 3 has a diverse range of habitats including heather dominated heath, mature pine, stands of birch over heather, large and smaller areas of clear fell, rotivated and bare areas. Pioneer/building heather and tree saplings are coming through in areas previously felled, and here the development of heath will be encouraged by grazing. Suffolk Wildlife Trust report that there are good populations of Woodlark and Redstart in this area.	
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Monica O-Donnell	4	1009154	23.32	24 Sep 2010	Unfavourable declining	Whilst small areas of heathland vegetation can be found, most of this unit is dominated by secondary woodland with dense bracken beneath the trees, which is suppressing the heathland species. Although a small area has been cleared of scrub at the western end, most of the area has remained unmanaged since the last assessment and the effect the trees and bracken have had on the soils would have increased.	Inappropriate scrub control
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath -	Monica O-Donnell	5	1009155	23.08	15 Mar 2009	Unfavourable recovering	In the open areas of this unit there is a good mix of ling and bell heather (both abundant) with appropriate amounts	

<http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdr13&category=S&reference=1001701>

East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Monica O- Donnell	12	1009162	43.50	15 Mar 2009	Unfavourable recovering	The adjacent units 11 and 12 are very similar in composition. They are dominated by mature/degenerate heather, with some sheep sorrel and heath bedstraw, but few other herb species, as is usual for this type of heathland. Bare ground is mostly confined to the tracks and there are occasional areas of dense bracken. Young and mature birch & pine are scattered though the site and some areas of trees have been cleared, to help to create more diverse heathland vegetation.
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Report completed.

Condition of SSSI units

Compiled: 01 Apr 2011

See the [SSSI glossary](#) for an explanation of terms.

Team - Norfolk and Suffolk - SSSI name - Tunstall Common - Staff member responsible for site - Monica O'Donnell											
Region	County	District	Main habitat	Staff member responsible for unit	Unit number	Unit ID	Unit area (ha)	Latest assessment date	Assessment description	Condition assessment comment	Reason for adverse condition
East Of England	Suffolk	Suffolk Coastal	Dwarf shrub heath - lowland	Monica O'Donnell	1	1009206	36.60	04 Sep 2009	Unfavourable recovering	The site comprises a mosaic of lowland heath and lowland acid grassland, but suffers from invading scrub and bracken as well as coniferous trees originating from the adjacent forestry plantation. Management has been carried out over the years, recently involving tree clearance in the north-east and south-east of the site. A new management agreement is in negotiation at present, so that effective management may continue.	
Report completed.											

Appendix 4

APPENDIX 04

Policy No:	Preferred Option Policy:	Likely Significant Impact? (LSE)	Comments:	Appropriate Assessment required?
	STRATEGIC POLICIES:			
	SPATIAL STRATEGY:			
SP1	Sustainable Development	No	There is a commitment to “Conserve and enhance the natural and built environment” within this policy which will assist in the mitigation of any new development.	No
SP2	Settlement Policy	No	It is likely that the strategic growth envisaged by the Regional Spatial Strategy will bring increased pressure upon the European sites. The Policy specifically states that development will be strictly controlled in the countryside and will not be permitted unless it conforms with the strategy for the countryside. The hierarchy in itself is unlikely to have a LSE, however the policies that come from it will subject to an HRA as detailed below. There may be an in combination effect when all the policies are considered as a whole which will need to be addressed in the HRA.	No
SP3	Area East of Ipswich	Yes	Any development is likely to bring additional pressure to any of the sites of European interest, however the area near Martlesham identified as a “preferred option” could have particularly negative impacts upon the Deben Estuary SPA/SSSI.	Yes
SP4	Felixstowe	Yes	Any development is likely to bring additional pressure to any of the sites of European interest, however the areas north of Candlet Road and Felixstowe town could have particularly negative impacts upon the Deben Estuary SPA/SSSI.	Yes

Policy No:	Preferred Option Policy:	Likely Significant Impact? (LSE)	Comments:	Appropriate Assessment required?
SP5	Aldeburgh	Yes	Although further strategic housing is not envisaged, improving tourism could lead to increased pressures on the Sandlings SPA and Alde/Ore Estuary SAC.	Yes
SP6	Framlingham	No	The policy as it stands is unlikely to have a LSE.	No
SP7	Leiston	Yes	Further development in and around Leiston could result in increased pressure upon nearby sites such as the Minsmere-Walberswick SPA/SAC/Ramsar and Sandlings SPA.	Yes
SP8	Nuclear Energy	No	Construction of a further power station could bring negative impacts to the nearby European sites through, inter alia, coastal protection issues, higher populations and increased construction disturbance. Site-specific Appropriate Assessment will be required by any proposer to a nuclear power station at this location. Anything in the policy not covered by the HRA for the planning application needs to be considered further.	No
SP9	Saxmundham	No	Increased development is limited and unlikely to increase pressure on European designated sites.	No
SP10	Woodbridge	Yes	Increased tourist activity is likely to result in negative impacts upon nearby European designated sites particularly Heaths and Estuaries.	Yes
SP11	Key Service Centres & Local Service Centres	No	This policy is aimed at serving the needs of existing communities rather than large-scale development bringing in an influx of new residents.	No
SP12	The Countryside	No	This policy specifically states that “development must not conflict with the strategy for the protection of the environment”.	No
SP13	The Coastal Zone	No	This policy implicitly recognises the areas of International wildlife importance and is committed to having an integrated approach to management of the coastal area including consultation with	No

Policy No:	Preferred Option Policy:	Likely Significant Impact? (LSE)	Comments:	Appropriate Assessment required?
			Natural England. Schemes arising from this policy might have an LSE and would therefore require individual HRAs.	
SP14	Accessibility	No	Policies that include improving public transport between rural communities and the key service areas are unlikely to result in negative impacts upon European designated sites.	No
SP15	A12 & A14	No	Improving the A12 connection between the north and south of the County and improving the capacity of the A14 are unlikely to result in direct impacts.	No
HOUSING:				
SP16	New Housing	No	The policy is a general strategy for meeting increased housing provision as set out from the East of England Plan which has already been subject to an HRA. Further consideration will need to be given to specific housing allocations in the more sensitive parts of the District which may result in negative impacts.	No
SP17	Housing Numbers	No	The policy is a general strategy for meeting increased housing provision as set out from the East of England Plan which has already been subject to an HRA. Further consideration will need to be given to specific housing allocations in the more sensitive parts of the District which may result in negative impacts.	No
SP18	Housing Distribution	Yes	Increased housing allocations in the more sensitive parts of the District would likely result in negative impacts.	Yes
SP19	Affordable Housing	No	The price or type of house is unlikely to have negative impacts upon European designated sites.	No
SP20	Allocations in the Key Service Centres	Yes	This policy does not expressly recognise the importance of European designated sites.	Yes
SP21	THE ECONOMY: Employment Land	Yes	The areas identified are Felixstowe Port and Martlesham Heath	Yes

Policy No:	Preferred Option Policy:	Likely Significant Impact? (LSE)	Comments:	Appropriate Assessment required?
			Business Campus; further development at these sites could result in negative impacts upon the Stour & Orwell Estuaries SPA and Deben Estuary SPA respectively.	
SP22	Economic Development in the Rural Areas	No	This policy expressly recognises objectives in respect of the environment.	No
SP23	Regeneration	No	In itself this policy is unlikely to have an impact.	No
SP24	Tourism	Yes	Although this policy does recognise the importance of the AONB designation, no specific mention is made of the suite of European designated sites within the District. Increased tourist pressure within these sites could result in serious negative impacts.	Yes
SP25	Retail Centres	No	The emphasis in this policy is on maintenance and enhancement of existing retail centres. It is unlikely that this policy will have any impact upon European designated sites.	No
	THE ENVIRONMENT:			
SP26	Biodiversity and Geodiversity	No	This policy specifically recognises the SPAs and SACs within the District and provides for them to be protected and enhanced.	No
SP27	Landscape and Townscape	No	In itself this policy will not have a LSE.	No
SP28	Climate Change	No	In itself this policy will not have a LSE.	No
	COMMUNITY WELL-BEING:			
SP29	Sport and Play	No	In itself this policy will not have a LSE.	No
SP30	Green Space	Yes	Increased public access activity may result in negative impacts upon the District's European designated sites particularly Heaths and Estuaries.	Yes
SP31	Infrastructure	No	In itself this policy will not have a LSE.	No

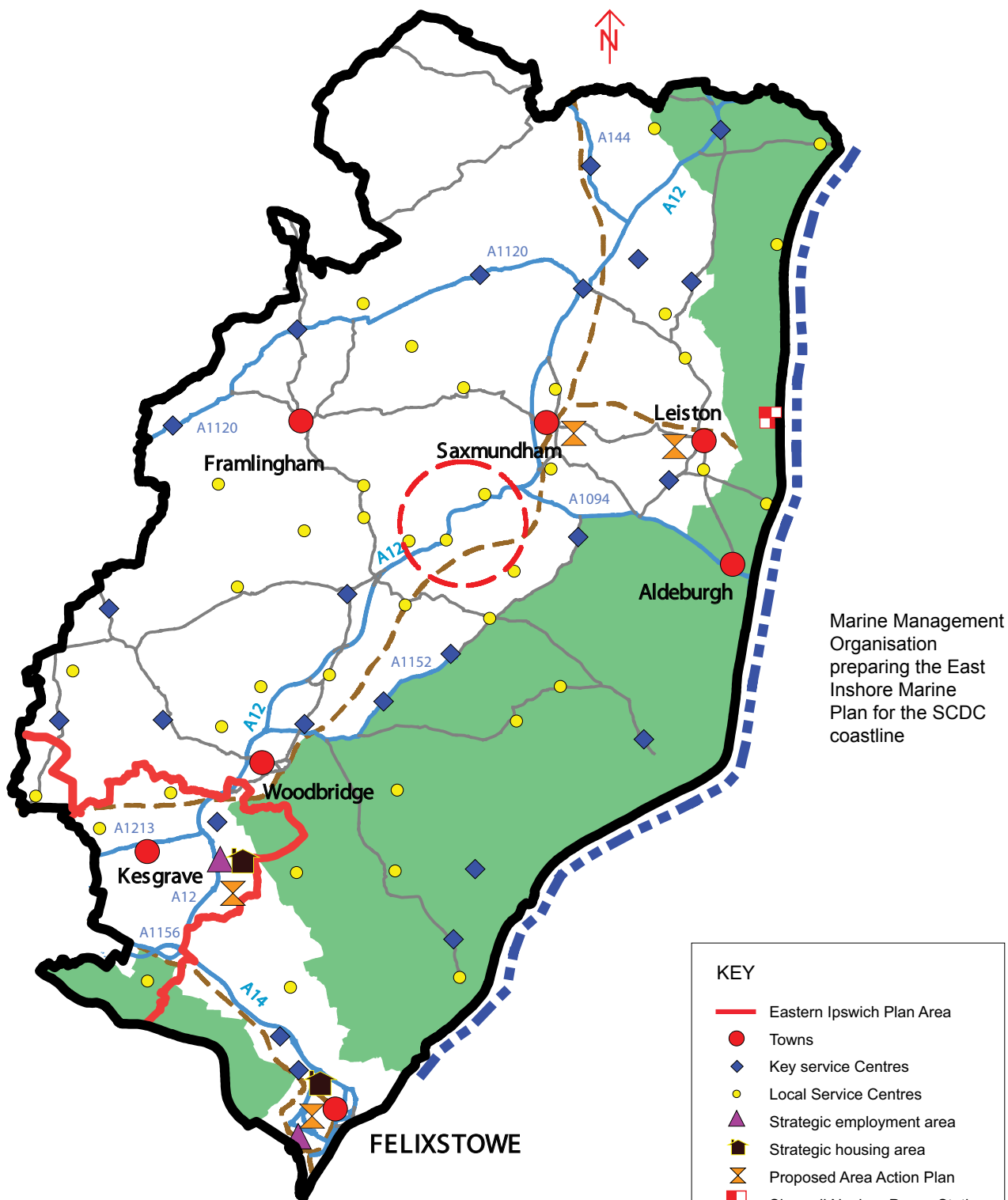
Policy No:	Preferred Option Policy:	Likely Significant Impact? (LSE)	Comments:	Appropriate Assessment required?
DEVELOPMENT CONTROL POLICIES:				
HOUSING:				
DC1	Affordable Housing on Exception Sites	No	It is unlikely that small scale development adjacent to the main towns will result in negative impacts.	No
DC2	Affordable Housing on Residential Sites	No	It is unlikely that apportioning part of a new development to affordable housing will result in negative impacts.	No
DC3	Retention of Small Dwellings	No	It is unlikely that allowing extensions to small dwellings will result in negative impacts.	No
DC4	Housing in the Countryside	No	This policy in itself will not have a LSE.	No
DC5	Clusters	No	This policy in itself will not have a LSE.	No
DC6	Houses in Multiple Occupation	No	This policy in itself will not have a LSE.	No
DC7	Residential Annexes	No	This policy in itself will not have a LSE.	No
DC8	Infilling and Backland Development	No	This policy in itself will not have a LSE.	No
DC9	Extensions to Residential Curtilages	No	This policy in itself will not have a LSE.	No
DC10	Gypsies, Travellers and Travelling Showpersons	No	As this policy concentrates on providing permanent and temporary sites linked to existing major centres and the primary road network it is unlikely that there will be negative impacts upon SPAs or SACs.	No
THE ECONOMY:				
DC11	Protection of Employment Sites	No	It is unlikely that changing or redeveloping sites will result in negative impacts unless they are within or near SPAs or SACs in which case site-specific Appropriate Assessment may require seasonal restrictions on certain types of construction activity.	No

Policy No:	Preferred Option Policy:	Likely Significant Impact? (LSE)	Comments:	Appropriate Assessment required?
DC12	Warehousing and Storage	No	In itself this policy is unlikely to have a LSE.	No
DC13	Expansion and Intensification of Employment Sites	No	This policy explicitly recognises conservation of the environment.	No
DC14	Conversion and Re-use of Redundant Buildings in the Countryside	No	It is unlikely that converting buildings will have negative impacts but there could be seasonal restrictions on certain types of construction activities dependent upon location. In itself this policy is unlikely to have a LSE.	No
DC15	Farm Diversification	No	A site-specific Appropriate Assessment may be necessary to determine if the divergent activity (and any construction or other activity associated with it) is likely to have an impact upon European designated sites, but this policy in itself is unlikely to have a LSE	No
DC16	Large Agricultural Buildings and Structures	No	In itself this policy is unlikely to have a LSE.	No
DC17	Farm Shops	No	In itself this policy is unlikely to have a LSE.	No
DC18	Touring Caravan and Camping Sites	No	This policy specifically states that there should be no materially adverse impacts upon landscape or wildlife (would be better if designated sites were also mentioned). In itself this policy is unlikely to have a LSE.	No
DC19	Static Holiday Caravans, Cabins and Chalets	No	Although this policy recognises the importance of refusing development within the Heritage Coast area (including estuaries), there are other European designated areas within the District that could suffer negative impacts. Minor change in wording of policy required to include species and designated sites.	No
TRANSPORT:				
DC20	Parking Standards	No	It is unlikely that this policy will have any impact upon European	No

Policy No:	Preferred Option Policy:	Likely Significant Impact? (LSE)	Comments:	Appropriate Assessment required?
			designated sites.	
DC21	Travel Plans	No	It is unlikely that this policy will have any impact upon European designated sites.	No
DC22	Airfields	Yes	This policy does not expressly recognise the importance of European designated sites or the effect of powered aircraft flights upon the specific features of interest.	Yes
	THE ENVIRONMENT:			
DC23	Design: Aesthetics	No	It is unlikely that this policy will have any impact upon European designated sites.	No
DC24	Design: Function	No	It is unlikely that this policy will have any impact upon European designated sites.	No
DC25	Sustainable Construction	No	It is unlikely that this policy will have any impact upon European designated sites.	No
DC26	Art	No	It is unlikely that urban public art will have an impact on European sites however some installations in the countryside may.	No
DC27	Residential Amenity	No	It is unlikely that this policy will have any impact upon European designated sites.	No
DC28	Shop Fronts	No	It is unlikely that this policy will have any impact upon European designated sites.	No
DC29	Advertisements	No	It is unlikely that this policy will have any impact upon European designated sites.	No
DC30	Lighting	No	This policy recognises the issue of light intrusion into the countryside.	No
DC31	Biodiversity and Geodiversity	No	This policy specifically recognises the status and designations of sites, habitats and species.	No
DC32	Flood Risk	No	Dependent upon location, it is unlikely that this policy will have a negative impact upon European sites.	No

Policy No:	Preferred Option Policy:	Likely Significant Impact? (LSE)	Comments:	Appropriate Assessment required?
DC33	Telecommunications	No	This policy specifically recognises sites with “special” designations.	No
	COMMUNITY WELL-BEING:			
DC34	Key Facilities	No	It is unlikely that redevelopment of existing facilities will have negative impacts but there could be seasonal restrictions on certain types of construction activities dependent upon location.	No
DC35	Public Buildings	No	It is unlikely that redevelopment of existing facilities will have negative impacts but there could be seasonal restrictions on certain types of construction activities dependent upon location.	No
DC36	Sport and Play	No	Dependent upon location, it is unlikely that this policy will have a negative impact upon European sites.	No
DC37	Allotments	No	Dependent upon location, it is unlikely that this policy will have a negative impact upon European sites however.	No

Appendix 5



Suffolk Coastal District Council

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Suffolk Coastal District Council 100019684, 2010.

Scale 1:225000

KEY

- Eastern Ipswich Plan Area
- Towns
- ◆ Key service Centres
- Local Service Centres
- ▲ Strategic employment area
- Strategic housing area
- ✕ Proposed Area Action Plan
- Sizewell Nuclear Power Station
- Potential 4 villages A12 bypass
- A roads
- B roads
- Railways
- - - Heritage Coast
- AONB
- District Boundary

Appendix 6

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.

Visitor impacts at present

IF CAR PARK PRESENT LOCAL PEOPLE FROM ANYWHERE.

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 RESERVE, SENSITIVE SITES SUCH AS REED BED, MUDFLATS, SALT MARSH USED AS RECREATIONAL AREAS ESPECIALLY BY DOGS

P.T. 0

PEOPLE FAIL TO REALIZE THAT A DOG IS A PREDATOR WHEN IT IS RUNNING FREE.

PEOPLE WANDERING WAY OFF FOOTPATHS & CREATING THEIR OWN WALKS (ON PURPOSE).

DOG OWNERS NOT FENCED, LEAVE STOCK GATES OPEN (MANY HAVE TO BE LOCKED NOW). THEY CONSTANTLY TEAR DOWN INTERPRETIVE SIGNS.

TRAILING BY DOGS

PLASTIC BAGS WITH DOG EXCREMENT THROWN IN HEDGES ETC.

MOUNTAIN BIKES ON PUBLIC FOOTPATHS / MODERATES ETC

THE SHEER 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 / No	DEPENDS ON SITE / SOME SITES - PROBLEMS / IMPACTS ALREADY PRESENT FOR REASONS GIVEN ABOVE
5%	Yes / No	_____ u _____
10%	Yes / No	_____ u _____
20%	Yes / No	_____ u _____
30%	Yes / No	IT DOES NOT BEAR THINKING ABOUT
50%	Yes / No	_____ 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 GOES ON UNMATED. AUTHORITIES ARE COMPLACENT

IN MANY AREAS THESE DAYS THE PLEASURE & AMBIENCE OF A COUNTRYSIDE WALK IS SPOILT (FOR A VARIETY OF REASONS)

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?

11.

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

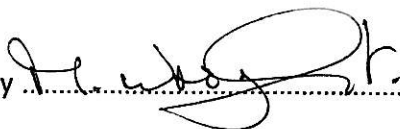
4. WARDENING WITH BACK UP FROM THE AUTHORITIES.

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 7

Five year summary for Deben Estuary

Table1: 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	15016 (JAN)	7846	19511	4348
03/04	15051 (JAN)	7687	20598	3142
04/05	21389 (JAN)	11998	22342	4300
05/06	15905 (JAN)	8957	21020	4282
06/07	13505 (JAN)	8917	17654	3484
MEAN		9081	20225	3911

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			128(4,1)	134(4,1)	158(5,,)	161(4,1)	165(5,,)	142(3,1)	147(5,,)	113(4,1)		
Bewick's Swan			0(5,,)	0(4,1)	1(5,,)	5(4,1)	1(5,,)	1(3,1)	0(5,,)	0(5,,)		
Whooper Swan			0(5,,)	0(5,,)	0(5,,)	5(4,1)	0(4,1)	0(4,,)	0(5,,)	0(5,,)		
European White-fronted Goose			2(4,1)	1(4,1)	0(5,,)	4(4,1)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Greylag Goose (re-established)			74(3,2)	270(4,1)	140(5,,)	250(4,1)	78(5,,)	38(3,1)	14(5,,)	24(5,,)		
Bar-headed Goose			3(4,1)	3(4,1)	0(5,,)	0(5,,)	0(5,,)	0(4,,)	0(5,,)	0(5,,)		
Canada Goose			305(3,2)	212(4,1)	150(5,,)	100(4,1)	122(5,,)	123(3,1)	91(5,,)	52(4,1)		
Brent Goose			0(5,,)	0(5,,)	0(5,,)	0(4,1)	1(5,,)	6(3,1)	0(5,,)	0(5,,)		
Dark-bellied Brent Goose			0(4,1)	6(4,1)	420(5,,)	1036(4,1)	1247(5,,)	1057(3,1)	209(5,,)	2(4,1)		
Light-bellied Brent Goose (Svalbard population)			0(5,,)	0(5,,)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	0(4,1)		
Egyptian Goose			0(5,,)	0(5,,)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	0(4,1)		
Ruddy Shelduck			0(5,,)	0(5,,)	0(5,,)	0(5,,)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Shelduck			64(4,1)	153(4,1)	330(5,,)	504(4,1)	710(5,,)	685(3,1)	784(5,,)	457(4,1)		
Wigeon			54(4,1)	466(4,1)	825(5,,)	1051(3,2)	1119(5,,)	818(3,1)	644(5,,)	4(4,1)		
Gadwall			14(3,2)	3(4,1)	3(5,,)	3(3,2)	2(5,,)	18(3,1)	9(5,,)	8(5,,)		
Teal			77(4,1)	182(4,1)	297(5,,)	505(4,1)	359(5,,)	361(3,1)	203(5,,)	36(5,,)		
Mallard			73(4,1)	129(4,1)	145(5,,)	193(4,1)	207(5,,)	196(3,1)	129(5,,)	118(4,1)		
Pintail			2(4,1)	26(4,1)	63(5,,)	110(2,3)	154(5,,)	184(3,1)	72(5,,)	1(5,,)		
Garganey			0(5,,)	0(5,,)	0(5,,)	0(5,,)	0(5,,)	0(4,,)	0(5,,)	0(4,1)		
Shoveler			0(5,,)	0(4,1)	1(5,,)	0(3,2)	1(5,,)	1(3,1)	3(5,,)	1(5,,)		
Pochard			0(4,1)	1(4,1)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	1(4,1)		
Tufted Duck			15(3,2)	2(4,1)	6(5,,)	17(4,1)	10(5,,)	34(3,1)	22(5,,)	34(4,1)		
Eider			0(4,1)	0(4,1)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Goldeneye			0(4,1)	0(4,1)	0(5,,)	17(3,2)	20(5,,)	25(3,1)	7(5,,)	0(5,,)		
Red-breasted Merganser			0(5,,)	0(4,1)	0(5,,)	1(3,2)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Goosander			0(5,,)	0(5,,)	0(5,,)	0(4,1)	2(5,,)	0(3,1)	0(5,,)	0(5,,)		
Ruddy Duck			0(5,,)	0(5,,)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Red-throated Diver			0(4,1)	0(4,1)	0(5,,)	0(4,1)	0(4,1)	0(3,1)	0(5,,)	0(4,1)		
Great Northern Diver			0(5,,)	0(5,,)	0(5,,)	0(3,2)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Little Grebe			27(3,2)	31(4,1)	64(5,,)	60(4,1)	52(5,,)	41(3,1)	30(5,,)	5(4,1)		
Great Crested Grebe			4(4,1)	3(4,1)	7(5,,)	19(3,2)	16(5,,)	11(3,1)	21(5,,)	12(5,,)		
Red-necked Grebe			0(5,,)	0(5,,)	0(5,,)	0(2,3)	0(5,,)	1(3,1)	0(5,,)	0(5,,)		
Slavonian Grebe			0(4,1)	0(4,1)	0(5,,)	0(3,2)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Cormorant			76(4,1)	75(4,1)	51(5,,)	34(4,1)	41(5,,)	36(3,1)	30(5,,)	24(4,1)		
Little Egret			25(4,1)	22(4,1)	15(5,,)	12(4,1)	9(5,,)	4(3,1)	6(5,,)	7(4,1)		
Grey Heron			26(4,1)	24(4,1)	16(5,,)	12(4,1)	7(5,,)	8(3,1)	19(5,,)	23(5,,)		
Water Rail			1(4,1)	0(4,1)	1(5,,)	1(4,1)	0(5,,)	1(3,1)	1(5,,)	1(4,1)		
Moorhen			22(4,1)	26(4,1)	26(5,,)	39(4,1)	31(5,,)	42(3,1)	33(5,,)	26(4,1)		
Coot			49(4,1)	63(4,1)	46(5,,)	54(3,2)	41(5,,)	63(3,1)	29(5,,)	27(4,1)		
Oystercatcher			109(4,1)	135(4,1)	79(5,,)	117(4,1)	199(4,1)	157(3,1)	188(5,,)	196(5,,)		
Avocet			75(4,1)	132(4,1)	182(5,,)	174(4,1)	212(5,,)	219(3,1)	39(5,,)	18(5,,)		
Little Ringed Plover			0(4,1)	0(4,1)	0(5,,)	0(5,,)	0(5,,)	0(4,,)	0(5,,)	0(4,1)		
Ringed Plover			105(4,1)	86(4,1)	54(5,,)	69(4,1)	80(5,,)	40(3,1)	26(5,,)	4(4,1)		

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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
Golden Plover			9(4,1)	54(4,1)	487(5,,)	731(4,1)	1314(5,,)	258(3,1)	279(5,,)	8(4,1)		
Grey Plover			270(4,1)	240(4,1)	370(5,,)	262(4,1)	518(4,1)	337(3,1)	340(5,,)	15(4,1)		
Lapwing			539(4,1)	634(4,1)	1279(5,,)	2403(4,1)	2722(5,,)	981(3,1)	296(5,,)	24(4,1)		
Knot			9(4,1)	9(4,1)	8(5,,)	107(4,1)	54(5,,)	138(3,1)	54(5,,)	15(4,1)		
Sanderling			0(5,,)	0(5,,)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Curlew Sandpiper			0(4,1)	0(4,1)	0(5,,)	0(4,1)	0(5,,)	0(4,,)	0(5,,)	0(5,,)		
Purple Sandpiper			0(5,,)	0(5,,)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	0(5,,)		
Dunlin			219(4,1)	550(4,1)	2046(5,,)	2180(4,1)	2552(5,,)	2612(3,1)	948(5,,)	214(4,1)		
Ruff			1(4,1)	1(4,1)	0(5,,)	0(4,1)	0(5,,)	1(3,1)	0(5,,)	1(4,1)		
Jack Snipe			0(4,1)	1(4,1)	0(5,,)	1(3,2)	1(5,,)	1(3,1)	1(5,,)	0(5,,)		
Snipe			5(4,1)	12(4,1)	12(5,,)	14(3,2)	24(5,,)	22(3,1)	23(5,,)	3(4,1)		
Black-tailed Godwit			394(4,1)	320(4,1)	211(5,,)	288(4,1)	242(5,,)	216(3,1)	276(5,,)	338(4,1)		
Bar-tailed Godwit			8(4,1)	10(4,1)	0(5,,)	7(4,1)	18(4,1)	10(3,1)	1(5,,)	1(4,1)		
Whimbrel			1(4,1)	0(4,1)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	9(5,,)		
Curlew			629(4,1)	614(4,1)	526(5,,)	374(3,2)	690(5,,)	596(3,1)	547(5,,)	339(5,,)		
Common Sandpiper			9(4,1)	1(4,1)	1(5,,)	1(4,1)	1(5,,)	0(3,1)	1(5,,)	1(4,1)		
Green Sandpiper			2(4,1)	1(4,1)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	0(4,1)		
Spotted Redshank			0(4,1)	0(4,1)	1(5,,)	2(4,1)	1(5,,)	2(3,1)	0(5,,)	0(4,1)		
Greenshank			14(4,1)	5(4,1)	0(5,,)	0(4,1)	0(5,,)	1(3,1)	0(5,,)	9(4,1)		
Redshank			1948(4,1)	1618(4,1)	1409(5,,)	1289(4,1)	1599(5,,)	1369(3,1)	1277(5,,)	680(4,1)		
Turnstone			42(4,1)	73(4,1)	47(5,,)	56(4,1)	86(5,,)	39(3,1)	40(5,,)	37(5,,)		
Black-headed Gull			1959(4,1)	772(4,1)	1094(5,,)	960(4,1)	1362(5,,)	1089(3,1)	1006(5,,)	1121(4,1)		
Mediterranean Gull			0(4,1)	0(4,1)	0(5,,)	0(4,1)	0(5,,)	0(3,1)	0(5,,)	0(4,1)		
Common Gull			5(4,1)	5(4,1)	19(5,,)	27(4,1)	38(5,,)	25(3,1)	16(5,,)	2(4,1)		
Lesser Black-backed Gull			21(4,1)	16(4,1)	29(4,1)	9(3,2)	9(5,,)	12(3,1)	28(5,,)	12(4,1)		
Herring Gull			81(4,1)	75(4,1)	77(5,,)	129(4,1)	77(5,,)	82(3,1)	101(5,,)	86(4,1)		
Yellow-legged Gull			0(5,,)	0(5,,)	0(5,,)	0(5,,)	0(5,,)	0(3,1)	0(5,,)	0(4,1)		
Great Black-backed Gull			4(4,1)	6(4,1)	3(5,,)	4(4,1)	3(5,,)	4(3,1)	3(5,,)	5(4,1)		
Black Tern			0(5,,)	0(4,,)	0(3,,)	0(3,,)	0(3,,)	0(2,,)	0(3,,)	0(3,1)		
Sandwich Tern			3(3,2)	0(2,2)	0(3,,)	0(3,,)	0(3,,)	0(2,,)	0(3,,)	1(2,2)		
Common Tern			12(3,2)	3(2,2)	0(3,,)	0(3,,)	0(3,,)	0(2,,)	0(3,,)	5(2,2)		
Arctic Tern			0(4,1)	0(3,1)	0(3,,)	0(3,,)	0(3,,)	0(2,,)	0(3,,)	0(4,,)		
Kingfisher			5(3,2)	5(4,1)	4(5,,)	3(4,1)	3(5,,)	1(3,1)	0(5,,)	0(4,1)		

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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
Mute Swan			160	153	204	225	205	171	190	160		
Bewick's Swan			0	0	5	18	3	3	0	0		
Whooper Swan			0	0	0	18	0	0	0	0		
European White-fronted Goose			8	2	0	10	0	0	0	0		
Greylag Goose (re-established)			154	345	285	366	211	91	31	46		
Bar-headed Goose			10	12	0	0	0	0	0	0		
Canada Goose			464	540	205	215	170	161	141	66		
Brent Goose			0	0	0	0	3	23	0	0		
Dark-bellied Brent Goose			0	13	631	2234	1759	1449	660	3		
Light-bellied Brent Goose (Svalbard population)			0	0	0	0	0	1	0	0		
Egyptian Goose			0	0	0	0	0	0	1	0		
Ruddy Shelduck			0	0	0	0	0	0	1	0		
Shelduck			82	285	430	637	883	784	864	551		
Wigeon			132	870	1063	1547	1333	978	921	6		
Gadwall			22	10	6	7	7	45	16	14		
Teal			151	431	488	819	484	419	301	70		
Mallard			90	172	233	240	253	199	189	143		
Pintail			8	92	127	128	247	249	186	6		
Garganey			0	0	0	0	0	0	0	1		
Shoveler			0	0	4	0	5	2	8	3		
Pochard			0	2	2	1	0	0	1	5		
Tufted Duck			31	5	10	42	17	70	51	49		
Eider			0	0	0	0	1	0	0	0		
Goldeneye			0	0	1	24	35	39	18	0		
Red-breasted Merganser			0	0	1	1	1	1	0	0		
Goosander			0	0	0	0	8	0	0	0		
Ruddy Duck			0	0	0	0	1	0	0	0		
Red-throated Diver			1	0	0	1	0	0	1	1		
Great Northern Diver			0	0	0	1	2	0	0	0		
Little Grebe			32	41	82	72	74	56	90	8		
Great Crested Grebe			8	6	9	34	23	15	30	19		
Red-necked Grebe			0	0	0	0	1	2	0	0		
Slavonian Grebe			0	0	0	0	1	0	0	0		
Cormorant			95	100	74	41	94	49	64	30		
Little Egret			42	41	27	17	19	5	11	20		
Grey Heron			33	29	23	15	13	14	29	33		
Water Rail			2	1	2	3	1	2	3	2		
Moorhen			41	39	40	65	34	48	49	42		
Coot			89	178	84	100	72	92	40	39		
Oystercatcher			156	178	108	189	309	164	263	241		
Avocet			121	183	315	236	323	353	87	61		
Little Ringed Plover			0	0	0	0	0	0	0	1		
Ringed Plover			165	129	136	106	162	79	71	9		
Golden Plover			28	101	1056	1558	2195	740	1087	30		

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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
Grey Plover			402	326	534	317	1037	656	487	36		
Lapwing			657	1059	2394	3049	4835	1390	1109	41		
Knot			15	22	24	285	103	290	177	54		
Sanderling			0	0	0	0	1	0	0	0		
Curlew Sandpiper			1	0	0	0	0	0	0	0		
Purple Sandpiper			0	0	0	0	2	0	0	0		
Dunlin			243	1221	2704	2648	4371	3504	2355	482		
Ruff			2	2	0	0	0	2	0	2		
Jack Snipe			1	2	2	2	2	3	3	1		
Snipe			10	18	37	15	61	37	47	6		
Black-tailed Godwit			622	506	305	575	372	299	448	468		
Bar-tailed Godwit			20	20	2	14	44	31	4	5		
Whimbrel			3	0	1	0	0	0	0	36		
Curlew			870	875	707	617	863	675	657	466		
Common Sandpiper			24	5	2	1	2	1	2	2		
Green Sandpiper			4	3	0	0	0	1	0	0		
Spotted Redshank			1	1	4	7	3	6	1	1		
Greenshank			25	14	1	1	0	1	0	18		
Redshank			2710	1794	1930	1644	2017	1869	1670	795		
Turnstone			53	114	74	92	228	58	60	56		
Black-headed Gull			3477	1036	2397	1826	2909	1929	1293	1556		
Mediterranean Gull			2	0	0	0	0	0	0	0		
Common Gull			6	13	54	74	89	30	31	3		
Lesser Black-backed Gull			35	36	79	25	20	18	64	22		
Herring Gull			139	93	126	283	172	86	176	154		
Yellow-legged Gull			0	0	0	0	0	0	1	0		
Great Black-backed Gull			7	10	7	8	9	5	6	17		
Black Tern			0	0	0	0	0	0	0	1		
Sandwich Tern			8	0	0	0	0	0	0	3		
Common Tern			23	3	0	0	0	0	0	16		
Arctic Tern			1	0	0	0	0	0	0	0		
Kingfisher			9	10	8	5	6	3	1	1		

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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	145 (OCT)	(90) (SEP)	160 (SEP)	153 (OCT)	106 (OCT)	141
European White-fronted Goose	0	(0)	8 (SEP)	0	0	2
Greylag Goose (re-established)	130 (OCT)	(154) (SEP)	345 (OCT)	330 (OCT)	273 (OCT)	270
Bar-headed Goose	0	(0)	0	0	12 (OCT)	3
Canada Goose	378 (SEP)	(230) (SEP)	540 (OCT)	73 (SEP)	(174) (SEP)	330
Dark-bellied Brent Goose	0	(3) (OCT)	13 (OCT)	3 (OCT)	7 (OCT)	6
Shelduck	65 (SEP)	(98) (OCT)	285 (OCT)	184 (OCT)	102 (OCT)	159
Wigeon	150 (OCT)	(275) (OCT)	870 (OCT)	664 (OCT)	180 (OCT)	466
Gadwall	2 (SEP)	(2) (SEP)	17 (SEP)	22 (SEP)	(0)	14
Teal	88 (SEP)	(117) (SEP)	225 (OCT)	431 (OCT)	39 (OCT)	196
Mallard	120 (OCT)	(129) (OCT)	172 (OCT)	135 (OCT)	87 (OCT)	129
Pintail	6 (OCT)	(1) (OCT)	92 (OCT)	2 (OCT)	4 (OCT)	26
Pochard	0	(0)	2 (OCT)	0	0	1
Tufted Duck	31 (SEP)	(7) (SEP)	7 (SEP)	7 (SEP)	(8) (SEP)	15
Red-throated Diver	0	(1) (SEP)	0	0	0	0
Little Grebe	38 (OCT)	(41) (OCT)	27 (SEP)	(25) (SEP)	28 (OCT)	34
Great Crested Grebe	1 (OCT)	(4) (SEP)	4 (SEP)	8 (SEP)	3 (SEP)	4
Cormorant	100 (OCT)	(63) (SEP)	78 (SEP)	73 (OCT)	63 (OCT)	79
Little Egret	5 (SEP)	(13) (OCT)	24 (SEP)	30 (SEP)	42 (SEP)	25
Grey Heron	29 (OCT)	(23) (OCT)	29 (OCT)	33 (SEP)	20 (SEP)	28
Water Rail	0	(0)	1 (OCT)	2 (SEP)	1 (SEP)	1
Moorhen	41 (SEP)	(34) (SEP)	32 (OCT)	14 (SEP)	16 (OCT)	27
Coot	54 (SEP)	(178) (OCT)	69 (SEP)	39 (OCT)	12 (OCT)	70
Oystercatcher	123 (OCT)	(147) (SEP)	126 (OCT)	156 (SEP)	178 (OCT)	146
Avocet	20 (OCT)	(72) (OCT)	183 (OCT)	161 (OCT)	162 (OCT)	132
Ringed Plover	63 (SEP)	(165) (SEP)	88 (SEP)	91 (OCT)	151 (SEP)	112
Golden Plover	28 (SEP)	(12) (SEP)	101 (OCT)	27 (OCT)	86 (OCT)	61
Grey Plover	402 (SEP)	(256) (SEP)	280 (OCT)	225 (OCT)	342 (SEP)	312
Lapwing	335 (SEP)	(523) (SEP)	657 (SEP)	852 (OCT)	1059 (OCT)	726
Knot	15 (SEP)	(18) (OCT)	3 (SEP)	22 (OCT)	11 (SEP)	14
Curlew Sandpiper	1 (SEP)	(1) (SEP)	0	0	0	0
Dunlin	243 (SEP)	(228) (OCT)	1221 (OCT)	503 (OCT)	285 (OCT)	563
Ruff	0	(0)	0	2 (SEP)	2 (OCT)	1
Jack Snipe	2 (OCT)	(0)	0	1 (OCT)	0	1
Snipe	18 (OCT)	(10) (OCT)	7 (OCT)	10 (SEP)	14 (OCT)	12
Black-tailed Godwit	319 (SEP)	(466) (SEP)	260 (SEP)	506 (OCT)	622 (SEP)	435
Bar-tailed Godwit	20 (SEP)	(5) (OCT)	3 (OCT)	3 (OCT)	14 (OCT)	10
Whimbrel	1 (SEP)	(3) (SEP)	0	0	0	1
Curlew	645 (SEP)	(752) (OCT)	870 (SEP)	545 (OCT)	875 (OCT)	737
Common Sandpiper	24 (SEP)	(3) (SEP)	2 (SEP)	8 (SEP)	0	9

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Table4a: Five-year autumn peak counts, and month in which this was recorded, of each species. 7

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
Green Sandpiper	4 (SEP)	(1) (SEP)	1 (SEP)	1 (SEP)	3 (OCT)	2
Spotted Redshank	1 (OCT)	(1) (SEP)	1 (SEP)	0	0	1
Greenshank	25 (SEP)	(11) (OCT)	14 (SEP)	6 (SEP)	10 (SEP)	14
Redshank	1751 (OCT)	(1633) (OCT)	1494 (SEP)	2037 (SEP)	2710 (SEP)	1998
Turnstone	79 (OCT)	(28) (OCT)	79 (OCT)	114 (OCT)	44 (SEP)	79
Black-headed Gull	2206 (SEP)	(1666) (SEP)	3477 (SEP)	1332 (SEP)	1036 (OCT)	2013
Mediterranean Gull	0	(2) (SEP)	0	0	0	0
Common Gull	5 (SEP)	(6) (SEP)	13 (OCT)	6 (SEP)	1 (SEP)	6
Lesser Black-backed Gull	20 (SEP)	(36) (OCT)	12 (SEP)	20 (SEP)	17 (SEP)	21
Herring Gull	84 (OCT)	(139) (SEP)	86 (SEP)	87 (SEP)	93 (OCT)	98
Great Black-backed Gull	7 (SEP)	(10) (OCT)	6 (OCT)	4 (SEP)	3 (OCT)	6
Sandwich Tern	1 (SEP)	(0)	(0)	1 (SEP)	8 (SEP)	3
Common Tern	11 (SEP)	(23) (SEP)	(10) (SEP)	7 (SEP)	11 (SEP)	12
Arctic Tern	0	(0)	1 (SEP)	0	0	0
Kingfisher	10 (OCT)	(7) (SEP)	3 (SEP)	2 (OCT)	3 (OCT)	5

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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	141 (FEB)	177 (MAR)	225 (DEC)	205 (JAN)	173 (NOV)	184
Bewick's Swan	18 (DEC)	3 (JAN)	0	2 (JAN)	5 (NOV)	6
Whooper Swan	18 (DEC)	0	0	0	0	4
European White-fronted Goose	6 (DEC)	0	10 (DEC)	0	0	3
Greylag Goose (re-established)	168 (NOV)	347 (DEC)	285 (DEC)	249 (DEC)	(366) (DEC)	283
Canada Goose	149 (NOV)	215 (DEC)	170 (JAN)	184 (NOV)	205 (NOV)	185
Brent Goose	0	0	0	(23) (FEB)	0	5
Dark-bellied Brent Goose	1251 (JAN)	2234 (DEC)	984 (JAN)	(1449) (FEB)	1759 (JAN)	1557
Light-bellied Brent Goose (Svalbard population)	1 (FEB)	0	0	0	0	0
Egyptian Goose	0	0	1 (MAR)	1 (MAR)	0	0
Ruddy Shelduck	1 (MAR)	0	0	0	0	0
Shelduck	864 (MAR)	802 (MAR)	883 (JAN)	707 (JAN)	837 (MAR)	819
Wigeon	1327 (JAN)	(1547) (DEC)	1333 (JAN)	1066 (DEC)	(797) (DEC)	1318
Gadwall	8 (FEB)	45 (FEB)	7 (MAR)	13 (MAR)	8 (MAR)	16
Teal	313 (JAN)	604 (DEC)	819 (DEC)	488 (NOV)	285 (JAN)	502
Mallard	253 (JAN)	240 (DEC)	215 (DEC)	187 (JAN)	217 (JAN)	222
Pintail	133 (FEB)	140 (FEB)	215 (FEB)	(249) (FEB)	247 (JAN)	197
Shoveler	4 (NOV)	5 (JAN)	7 (MAR)	8 (MAR)	2 (MAR)	5
Pochard	2 (NOV)	1 (DEC)	0	1 (MAR)	0	1
Tufted Duck	70 (FEB)	16 (JAN)	29 (DEC)	51 (MAR)	(42) (DEC)	42
Eider	1 (JAN)	0	0	0	0	0
Goldeneye	33 (JAN)	39 (FEB)	18 (FEB)	13 (JAN)	6 (JAN)	22
Red-breasted Merganser	1 (DEC)	1 (JAN)	1 (NOV)	0	1 (JAN)	1
Goosander	8 (JAN)	0	0	0	0	2
Ruddy Duck	0	0	0	0	1 (JAN)	0
Red-throated Diver	1 (DEC)	0	0	0	(1) (DEC)	0
Great Northern Diver	1 (DEC)	0	0	0	2 (JAN)	1
Little Grebe	73 (NOV)	76 (NOV)	74 (JAN)	90 (MAR)	82 (NOV)	79
Great Crested Grebe	30 (MAR)	19 (JAN)	23 (JAN)	34 (DEC)	21 (MAR)	25
Red-necked Grebe	0	2 (FEB)	0	0	0	0
Slavonian Grebe	1 (JAN)	0	0	0	0	0
Cormorant	64 (MAR)	72 (NOV)	94 (JAN)	74 (NOV)	45 (NOV)	70
Little Egret	6 (DEC)	15 (NOV)	19 (JAN)	16 (NOV)	27 (NOV)	17
Grey Heron	29 (MAR)	22 (MAR)	16 (NOV)	19 (MAR)	17 (NOV)	21
Water Rail	3 (MAR)	0	2 (NOV)	3 (DEC)	1 (JAN)	2
Moorhen	40 (NOV)	65 (DEC)	49 (MAR)	(48) (FEB)	28 (JAN)	46
Coot	92 (FEB)	(100) (DEC)	84 (NOV)	34 (MAR)	16 (NOV)	65
Oystercatcher	263 (MAR)	224 (MAR)	309 (JAN)	188 (MAR)	233 (JAN)	243
Avocet	170 (JAN)	353 (FEB)	323 (JAN)	236 (DEC)	315 (NOV)	279
Ringed Plover	79 (FEB)	73 (DEC)	162 (JAN)	77 (DEC)	136 (NOV)	105

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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
Golden Plover	1056 (NOV)	758 (JAN)	2195 (JAN)	1812 (JAN)	(1558) (DEC)	1476
Grey Plover	344 (MAR)	656 (FEB)	1037 (JAN)	(719) (JAN)	338 (NOV)	619
Lapwing	2394 (NOV)	2554 (JAN)	3442 (JAN)	4835 (JAN)	(2803) (DEC)	3306
Knot	285 (DEC)	69 (FEB)	93 (FEB)	(290) (FEB)	75 (JAN)	162
Sanderling	0	0	0	1 (JAN)	0	0
Purple Sandpiper	2 (JAN)	0	0	0	0	0
Dunlin	4371 (JAN)	3504 (FEB)	3301 (JAN)	2395 (DEC)	(2648) (DEC)	3393
Ruff	2 (FEB)	0	0	0	0	0
Jack Snipe	2 (NOV)	3 (FEB)	3 (MAR)	1 (DEC)	1 (MAR)	2
Snipe	61 (JAN)	37 (FEB)	21 (MAR)	(16) (FEB)	47 (MAR)	42
Black-tailed Godwit	304 (MAR)	258 (JAN)	305 (NOV)	575 (DEC)	448 (MAR)	378
Bar-tailed Godwit	31 (FEB)	23 (JAN)	44 (JAN)	(24) (JAN)	(2) (DEC)	33
Whimbrel	0	0	0	0	1 (NOV)	0
Curlew	657 (MAR)	707 (NOV)	675 (FEB)	789 (JAN)	863 (JAN)	738
Common Sandpiper	2 (MAR)	2 (NOV)	1 (NOV)	2 (JAN)	0	1
Green Sandpiper	0	0	1 (FEB)	0	0	0
Spotted Redshank	7 (DEC)	6 (FEB)	2 (DEC)	1 (JAN)	0	3
Greenshank	1 (FEB)	0	1 (NOV)	0	(1) (DEC)	1
Redshank	2017 (JAN)	1869 (FEB)	1707 (JAN)	1930 (NOV)	(1460) (DEC)	1881
Turnstone	74 (JAN)	51 (NOV)	59 (NOV)	228 (JAN)	74 (NOV)	97
Black-headed Gull	1826 (DEC)	2397 (NOV)	2909 (JAN)	1522 (NOV)	1355 (JAN)	2002
Common Gull	89 (JAN)	54 (NOV)	29 (JAN)	41 (JAN)	15 (JAN)	46
Lesser Black-backed Gull	64 (MAR)	79 (NOV)	18 (MAR)	18 (NOV)	(25) (DEC)	45
Herring Gull	283 (DEC)	126 (NOV)	130 (DEC)	98 (MAR)	(56) (DEC)	159
Yellow-legged Gull	0	0	0	1 (MAR)	0	0
Great Black-backed Gull	9 (JAN)	3 (FEB)	8 (DEC)	(4) (FEB)	(5) (DEC)	7
Kingfisher	8 (NOV)	5 (NOV)	4 (NOV)	3 (JAN)	4 (NOV)	5

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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	41 (APR)	(158) (APR)	136 (APR)	160 (APR)	72 (APR)	113
Greylag Goose (re-established)	46 (APR)	19 (APR)	18 (APR)	20 (APR)	15 (APR)	24
Canada Goose	66 (APR)	(58) (APR)	45 (APR)	46 (APR)	45 (APR)	52
Dark-bellied Brent Goose	1 (APR)	(0)	1 (APR)	2 (APR)	3 (APR)	2
Shelduck	507 (APR)	(437) (APR)	551 (APR)	466 (APR)	304 (APR)	457
Wigeon	2 (APR)	(0)	5 (APR)	6 (APR)	3 (APR)	4
Gadwall	2 (APR)	10 (APR)	7 (APR)	14 (APR)	6 (APR)	8
Teal	41 (APR)	6 (APR)	48 (APR)	70 (APR)	17 (APR)	36
Mallard	132 (APR)	(132) (APR)	143 (APR)	96 (APR)	85 (APR)	118
Pintail	0	0	6 (APR)	0	0	1
Garganey	0	(0)	0	0	1 (APR)	0
Shoveler	0	0	2 (APR)	2 (APR)	3 (APR)	1
Pochard	0	(0)	0	5 (APR)	0	1
Tufted Duck	36 (APR)	(25) (APR)	18 (APR)	32 (APR)	49 (APR)	34
Red-throated Diver	1 (APR)	(0)	0	0	0	0
Little Grebe	4 (APR)	(2) (APR)	6 (APR)	8 (APR)	1 (APR)	5
Great Crested Grebe	10 (APR)	4 (APR)	16 (APR)	19 (APR)	13 (APR)	12
Cormorant	26 (APR)	(30) (APR)	16 (APR)	20 (APR)	29 (APR)	24
Little Egret	0	(4) (APR)	4 (APR)	4 (APR)	20 (APR)	7
Grey Heron	23 (APR)	33 (APR)	12 (APR)	16 (APR)	32 (APR)	23
Water Rail	0	(0)	2 (APR)	0	0	1
Moorhen	25 (APR)	(23) (APR)	23 (APR)	42 (APR)	15 (APR)	26
Coot	27 (APR)	(39) (APR)	30 (APR)	28 (APR)	13 (APR)	27
Oystercatcher	224 (APR)	182 (APR)	154 (APR)	180 (APR)	241 (APR)	196
Avocet	8 (APR)	8 (APR)	61 (APR)	6 (APR)	6 (APR)	18
Little Ringed Plover	0	(1) (APR)	0	0	0	0
Ringed Plover	5 (APR)	(6) (APR)	0	2 (APR)	9 (APR)	4
Golden Plover	0	(0)	0	0	30 (APR)	8
Grey Plover	9 (APR)	(5) (APR)	2 (APR)	36 (APR)	11 (APR)	15
Lapwing	17 (APR)	(31) (APR)	10 (APR)	21 (APR)	41 (APR)	24
Knot	0	(8) (APR)	2 (APR)	54 (APR)	5 (APR)	15
Dunlin	252 (APR)	(482) (APR)	27 (APR)	43 (APR)	267 (APR)	214
Ruff	0	(2) (APR)	1 (APR)	0	0	1
Jack Snipe	0	0	0	1 (APR)	0	0
Snipe	2 (APR)	(0)	6 (APR)	2 (APR)	1 (APR)	3
Black-tailed Godwit	171 (APR)	(170) (APR)	298 (APR)	468 (APR)	416 (APR)	338
Bar-tailed Godwit	5 (APR)	(1) (APR)	0	0	0	1
Whimbrel	1 (APR)	36 (APR)	2 (APR)	0	4 (APR)	9
Curlew	348 (APR)	73 (APR)	448 (APR)	360 (APR)	466 (APR)	339
Common Sandpiper	0	(0)	0	2 (APR)	0	1

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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
Spotted Redshank	0	(1) (APR)	1 (APR)	0	0	0
Greenshank	18 (APR)	(16) (APR)	1 (APR)	1 (APR)	7 (APR)	9
Redshank	605 (APR)	(182) (APR)	766 (APR)	795 (APR)	553 (APR)	680
Turnstone	33 (APR)	11 (APR)	56 (APR)	28 (APR)	55 (APR)	37
Black-headed Gull	1556 (APR)	(831) (APR)	1298 (APR)	1047 (APR)	584 (APR)	1121
Common Gull	2 (APR)	(0)	3 (APR)	2 (APR)	1 (APR)	2
Lesser Black-backed Gull	10 (APR)	(5) (APR)	11 (APR)	22 (APR)	5 (APR)	12
Herring Gull	70 (APR)	(89) (APR)	63 (APR)	154 (APR)	56 (APR)	86
Great Black-backed Gull	17 (APR)	(3) (APR)	1 (APR)	2 (APR)	0	5
Black Tern	1 (APR)	(0)	N/C	0	0	0
Sandwich Tern	(0)	(3) (APR)	N/C	0	0	1
Common Tern	(3) (APR)	(16) (APR)	N/C	0	0	5
Kingfisher	1 (APR)	(0)	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	38%	49%	30%	44%	58%	35%	141	184	113
Bewick's Swan	0%	7%	0%	0%	3%	0%	0	6	0
Whooper Swan	0%	7%	0%	0%	2%	0%	0	4	0
European White-fronted Goose	3%	5%	0%	0%	0%	0%	2	3	0
Greylag Goose (re-established)	N/A	N/A	N/A	N/A	N/A	N/A	270	283	24
Bar-headed Goose	N/A	N/A	N/A	N/A	N/A	N/A	3	0	0
Canada Goose	N/A	N/A	N/A	N/A	N/A	N/A	330	185	52
Brent Goose	N/A	N/A	N/A	N/A	N/A	N/A	0	5	0
Dark-bellied Brent Goose	1%	159%	0%	0%	78%	0%	6	1557	2
Shelduck	20%	105%	58%	5%	27%	15%	159	819	457
Wigeon	11%	32%	0%	3%	9%	0%	466	1318	4
Gadwall	8%	9%	5%	2%	3%	1%	14	16	8
Teal	10%	26%	2%	4%	10%	1%	196	502	36
Mallard	4%	6%	3%	1%	1%	1%	129	222	118
Pintail	9%	71%	0%	4%	33%	0%	26	197	1
Shoveler	0%	3%	1%	0%	1%	0%	0	5	1
Pochard	0%	0%	0%	0%	0%	0%	1	1	1
Tufted Duck	2%	5%	4%	0%	0%	0%	15	42	34
Goldeneye	0%	9%	0%	0%	0%	0%	0	22	0
Red-breasted Merganser	0%	1%	0%	0%	0%	0%	0	1	0
Goosander	0%	1%	0%	0%	0%	0%	0	2	0
Great Northern Diver	*0%	*3%	*0%	0%	2%	0%	0	1	0
Little Grebe	44%	101%	6%	1%	2%	0%	34	79	5
Great Crested Grebe	3%	16%	8%	0%	1%	0%	4	25	12
Cormorant	34%	30%	10%	7%	6%	2%	79	70	24
Little Egret	N/A	N/A	N/A	2%	1%	1%	25	17	7
Grey Heron	N/A	N/A	N/A	1%	1%	1%	28	21	23
Water Rail	N/A	N/A	N/A	0%	0%	0%	1	2	1
Moorhen	0%	1%	0%	0%	0%	0%	27	46	26
Coot	4%	4%	2%	0%	0%	0%	70	65	27
Oystercatcher	5%	8%	6%	1%	2%	2%	146	243	196
Avocet	*377%	*797%	*51%	18%	38%	2%	132	279	18
Ringed Plover	34%	32%	1%	15%	14%	1%	112	105	4
Golden Plover	2%	59%	0%	1%	16%	0%	61	1476	8
Grey Plover	59%	117%	3%	12%	25%	1%	312	619	15
Lapwing	4%	17%	0%	4%	17%	0%	726	3306	24

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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
Knot	1%	6%	1%	0%	4%	0%	14	162	15
Dunlin	10%	61%	4%	4%	26%	2%	563	3393	214
Ruff	*14%	*0%	*14%	0%	0%	0%	1	0	1
Jack Snipe	N/A	N/A	N/A	N/A	N/A	N/A	1	2	0
Snipe	N/A	N/A	N/A	0%	0%	0%	12	42	3
Black-tailed Godwit	290%	252%	225%	93%	80%	72%	435	378	338
Bar-tailed Godwit	2%	5%	0%	1%	3%	0%	10	33	1
Whimbrel	N/A	N/A	N/A	0%	0%	0%	1	0	9
Curlew	49%	49%	23%	9%	9%	4%	737	738	339
Common Sandpiper	N/A	N/A	N/A	0%	0%	0%	9	1	1
Green Sandpiper	N/A	N/A	N/A	0%	0%	0%	2	0	0
Spotted Redshank	N/A	N/A	N/A	0%	0%	0%	1	3	0
Greenshank	*233%	*17%	*150%	1%	0%	0%	14	1	9
Redshank	167%	157%	57%	71%	67%	24%	1998	1881	680
Turnstone	16%	19%	7%	5%	6%	2%	79	97	37
Black-headed Gull	11%	11%	6%	10%	10%	6%	2013	2002	1121
Common Gull	0%	1%	0%	0%	0%	0%	6	46	2
Lesser Black-backed Gull	4%	9%	2%	0%	1%	0%	21	45	12
Herring Gull	2%	4%	2%	2%	3%	1%	98	159	86
Great Black-backed Gull	2%	2%	1%	0%	0%	0%	6	7	5
Sandwich Tern	N/A	N/A	N/A	0%	0%	0%	3	0	1
Common Tern	N/A	N/A	N/A	1%	0%	0%	12	0	5
Kingfisher	N/A	N/A	N/A	N/A	N/A	N/A	5	5	0

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Appendix 8

Five year summary for Deben Estuary - Sector 5

Table1: 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	1575 (DEC)	931	2237	515
03/04	845 (NOV)	685	1262	130
04/05	1145 (JAN)	186	1653	305
05/06	759 (FEB)	340	956	159
06/07	854 (MAR)	944	1417	66
MEAN		617	1505	235

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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
Mute Swan			20(3,2)	11(4,1)	9(5,.)	8(4,1)	7(5,.)	3(3,1)	4(5,.)	2(4,1)		
European White-fronted Goose			0(5,.)	0(5,.)	0(5,.)	2(4,1)	0(5,.)	0(4,.)	0(5,.)	0(5,.)		
Greylag Goose (re-established)			0(5,.)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(4,.)	0(5,.)	0(5,.)		
Canada Goose			0(3,2)	0(4,1)	2(5,.)	9(4,1)	0(5,.)	4(3,1)	1(5,.)	0(4,1)		
Dark-bellied Brent Goose			0(5,.)	0(4,1)	0(5,.)	22(4,1)	7(5,.)	0(3,1)	2(5,.)	0(4,1)		
Egyptian Goose			0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(5,.)	0(3,1)	0(5,.)	0(4,1)		
Shelduck			2(3,2)	1(4,1)	18(5,.)	34(4,1)	58(5,.)	52(3,1)	117(5,.)	30(4,1)		
Wigeon			0(3,2)	17(4,1)	56(5,.)	72(4,1)	56(5,.)	79(3,1)	73(5,.)	0(4,1)		
Teal			4(3,2)	18(4,1)	35(5,.)	67(4,1)	82(5,.)	32(3,1)	23(5,.)	0(4,1)		
Mallard			8(3,2)	10(4,1)	27(5,.)	33(4,1)	30(5,.)	24(3,1)	10(5,.)	7(4,1)		
Pintail			0(3,2)	2(4,1)	0(5,.)	0(4,1)	6(5,.)	0(3,1)	6(5,.)	0(4,1)		
Pochard			0(5,.)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(5,.)		
Tufted Duck			1(3,2)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(5,.)		
Goldeneye			0(5,.)	0(4,1)	0(5,.)	4(4,1)	3(5,.)	2(3,1)	2(5,.)	0(4,1)		
Goosander			0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(5,.)		
Red-throated Diver			0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(4,1)		
Little Grebe			18(3,2)	15(4,1)	28(5,.)	19(4,1)	11(5,.)	9(3,1)	7(5,.)	0(4,1)		
Great Crested Grebe			0(3,2)	0(4,1)	0(5,.)	1(4,1)	1(5,.)	0(3,1)	2(5,.)	0(4,1)		
Cormorant			10(3,2)	5(4,1)	2(5,.)	2(4,1)	1(5,.)	1(3,1)	1(5,.)	1(4,1)		
Little Egret			7(3,2)	2(4,1)	2(5,.)	1(4,1)	1(5,.)	1(3,1)	1(5,.)	1(4,1)		
Grey Heron			3(3,2)	2(4,1)	2(5,.)	1(4,1)	1(5,.)	0(3,1)	1(5,.)	0(4,1)		
Water Rail			0(5,.)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(4,1)		
Moorhen			2(3,2)	2(4,1)	3(5,.)	5(4,1)	5(5,.)	3(3,1)	2(5,.)	3(4,1)		
Coot			2(3,2)	0(4,1)	0(5,.)	1(4,1)	0(5,.)	0(3,1)	1(5,.)	0(4,1)		
Oystercatcher			1(3,2)	16(4,1)	0(5,.)	1(4,1)	1(5,.)	5(3,1)	11(5,.)	5(4,1)		
Avocet			0(5,.)	0(5,.)	0(5,.)	1(4,1)	1(5,.)	0(3,1)	0(5,.)	0(5,.)		
Ringed Plover			1(3,2)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(4,1)		
Grey Plover			0(3,2)	1(4,1)	1(5,.)	4(4,1)	2(5,.)	1(3,1)	2(5,.)	0(4,1)		
Lapwing			79(3,2)	57(4,1)	142(5,.)	106(4,1)	165(5,.)	168(3,1)	9(5,.)	1(4,1)		
Knot			0(5,.)	0(5,.)	0(5,.)	4(4,1)	0(5,.)	0(3,1)	0(5,.)	0(5,.)		
Dunlin			0(3,2)	4(4,1)	14(5,.)	8(4,1)	37(5,.)	20(3,1)	2(5,.)	0(4,1)		
Jack Snipe			0(3,2)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(5,.)		
Snipe			1(3,2)	1(4,1)	2(5,.)	2(4,1)	1(5,.)	4(3,1)	6(5,.)	0(4,1)		
Black-tailed Godwit			13(3,2)	5(4,1)	18(5,.)	22(4,1)	2(5,.)	106(3,1)	38(5,.)	24(4,1)		
Bar-tailed Godwit			0(5,.)	0(5,.)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	1(5,.)	0(4,1)		
Whimbrel			0(3,2)	0(4,1)	0(5,.)	0(5,.)	0(5,.)	0(3,1)	0(5,.)	0(4,1)		
Curlew			78(3,2)	88(4,1)	45(5,.)	30(4,1)	33(5,.)	32(3,1)	75(5,.)	30(4,1)		
Common Sandpiper			1(3,2)	0(4,1)	0(5,.)	0(5,.)	0(5,.)	0(4,.)	0(5,.)	0(4,1)		
Green Sandpiper			1(3,2)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(5,.)		
Spotted Redshank			0(5,.)	0(4,1)	1(5,.)	2(4,1)	1(5,.)	0(3,1)	0(5,.)	0(4,1)		
Greenshank			5(3,2)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(4,1)		
Redshank			144(3,2)	44(4,1)	155(5,.)	153(4,1)	144(5,.)	105(3,1)	115(5,.)	20(4,1)		
Turnstone			1(3,2)	1(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	2(5,.)	0(4,1)		

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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
Black-headed Gull			114(3,2)	111(4,1)	113(5,.)	160(4,1)	121(5,.)	90(3,1)	88(5,.)	134(4,1)		
Common Gull			2(3,2)	1(4,1)	0(5,.)	3(4,1)	2(5,.)	1(3,1)	4(5,.)	1(4,1)		
Lesser Black-backed Gull			1(3,2)	2(4,1)	0(5,.)	0(4,1)	0(5,.)	1(3,1)	5(5,.)	0(4,1)		
Herring Gull			6(3,2)	6(4,1)	6(5,.)	51(4,1)	12(5,.)	3(3,1)	9(5,.)	3(4,1)		
Great Black-backed Gull			0(3,2)	0(4,1)	0(5,.)	0(4,1)	0(5,.)	0(3,1)	0(5,.)	0(4,1)		
Common Tern			3(2,2)	0(2,.)	0(3,.)	0(3,.)	0(3,.)	0(2,.)	0(3,.)	2(3,1)		
Kingfisher			2(3,2)	2(4,1)	1(5,.)	1(4,1)	1(5,.)	1(3,1)	0(5,.)	0(4,1)		

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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
Mute Swan			31	21	19	18	11	5	6	3		
European White-fronted Goose			0	0	0	6	0	0	0	0		
Greylag Goose (re-established)			0	0	1	0	0	0	0	0		
Canada Goose			0	0	8	34	0	11	2	0		
Dark-bellied Brent Goose			0	0	0	85	34	0	10	0		
Egyptian Goose			0	0	0	0	0	0	1	0		
Shelduck			6	4	31	51	124	88	254	39		
Wigeon			0	42	130	108	72	122	102	0		
Teal			19	65	53	101	182	63	49	0		
Mallard			20	18	66	49	48	42	12	9		
Pintail			0	6	0	0	30	0	22	0		
Pochard			0	0	2	0	0	0	0	0		
Tufted Duck			3	0	0	0	0	0	0	0		
Goldeneye			0	0	0	10	12	3	6	0		
Goosander			0	0	0	0	2	0	0	0		
Red-throated Diver			0	0	0	1	0	0	1	0		
Little Grebe			23	18	41	39	17	14	9	1		
Great Crested Grebe			0	0	0	3	6	1	8	0		
Cormorant			20	17	4	3	4	2	6	3		
Little Egret			21	8	3	2	4	2	1	1		
Grey Heron			8	3	7	2	2	1	3	1		
Water Rail			0	0	1	1	0	0	2	0		
Moorhen			2	3	9	10	9	6	3	4		
Coot			3	1	0	1	1	0	4	1		
Oystercatcher			2	62	2	2	5	9	27	6		
Avocet			0	0	0	3	4	0	0	0		
Ringed Plover			2	0	0	0	0	0	0	0		
Grey Plover			0	3	5	14	6	4	9	0		
Lapwing			285	224	288	212	425	235	45	2		
Knot			0	0	0	16	1	0	0	0		
Dunlin			2	12	70	32	110	56	11	0		
Jack Snipe			0	0	0	1	2	0	0	0		
Snipe			1	2	10	7	2	7	29	1		
Black-tailed Godwit			45	20	88	58	6	225	117	65		
Bar-tailed Godwit			0	0	0	0	2	0	4	0		
Whimbrel			0	0	0	0	0	0	0	1		
Curlew			172	180	57	52	66	62	191	55		
Common Sandpiper			2	0	0	0	0	0	0	0		
Green Sandpiper			2	0	0	0	0	0	0	0		
Spotted Redshank			0	0	2	7	3	0	1	0		
Greenshank			11	0	0	0	0	0	0	1		
Redshank			295	130	212	306	230	161	196	41		
Turnstone			3	3	0	0	1	1	8	0		
Black-headed Gull			263	254	290	430	255	120	150	330		

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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
Common Gull			5	1	2	12	10	4	16	2		
Lesser Black-backed Gull			3	7	1	0	2	3	23	0		
Herring Gull			11	16	21	200	60	5	45	6		
Great Black-backed Gull			1	0	2	0	2	1	0	0		
Common Tern			5	0	0	0	0	0	0	4		
Kingfisher			6	5	4	2	3	2	1	1		

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Table4a: Five-year autumn 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
Mute Swan	31 (SEP)	(13) (SEP)	6 (SEP)	5 (OCT)	22 (SEP)	16
Shelduck	4 (OCT)	(6) (SEP)	0	(0)	1 (SEP)	3
Wigeon	42 (OCT)	(0)	21 (OCT)	4 (OCT)	0	17
Teal	3 (OCT)	(19) (SEP)	4 (OCT)	65 (OCT)	0	18
Mallard	14 (OCT)	(1) (OCT)	18 (OCT)	5 (OCT)	20 (SEP)	14
Pintail	6 (OCT)	(0)	0	(0)	0	2
Tufted Duck	3 (SEP)	(0)	0	(0)	0	1
Little Grebe	23 (SEP)	(21) (SEP)	16 (OCT)	(18) (SEP)	16 (SEP)	19
Cormorant	20 (SEP)	(10) (SEP)	3 (SEP)	(1) (SEP)	5 (SEP)	10
Little Egret	0	(1) (SEP)	1 (SEP)	(1) (SEP)	21 (SEP)	7
Grey Heron	8 (SEP)	(3) (SEP)	3 (OCT)	1 (OCT)	1 (SEP)	3
Moorhen	2 (SEP)	(2) (SEP)	3 (OCT)	2 (OCT)	1 (SEP)	2
Coot	3 (SEP)	(0)	2 (SEP)	(1) (SEP)	0	2
Oystercatcher	62 (OCT)	(2) (SEP)	0	(0)	0	21
Ringed Plover	0	(0)	0	(0)	2 (SEP)	1
Grey Plover	3 (OCT)	(0)	0	(0)	0	1
Lapwing	75 (SEP)	(285) (SEP)	4 (SEP)	(30) (SEP)	224 (OCT)	147
Dunlin	2 (OCT)	(0)	0	12 (OCT)	0	4
Snipe	2 (OCT)	(1) (SEP)	1 (SEP)	(0)	2 (OCT)	2
Black-tailed Godwit	3 (SEP)	(45) (SEP)	20 (OCT)	(0)	4 (SEP)	18
Curlew	172 (SEP)	(180) (OCT)	31 (OCT)	89 (OCT)	63 (OCT)	107
Common Sandpiper	2 (SEP)	(0)	0	(1) (SEP)	0	1
Green Sandpiper	2 (SEP)	(0)	0	(0)	0	1
Greenshank	11 (SEP)	(6) (SEP)	0	(0)	1 (SEP)	5
Redshank	137 (SEP)	(26) (SEP)	23 (OCT)	(23) (SEP)	295 (SEP)	152
Turnstone	3 (OCT)	(0)	0	(0)	3 (SEP)	2
Black-headed Gull	263 (SEP)	(46) (SEP)	25 (OCT)	78 (OCT)	254 (OCT)	155
Common Gull	2 (SEP)	(5) (SEP)	0	1 (OCT)	0	2
Lesser Black-backed Gull	7 (OCT)	(0)	0	(0)	0	2
Herring Gull	16 (OCT)	(6) (SEP)	4 (OCT)	2 (OCT)	8 (SEP)	8
Great Black-backed Gull	1 (SEP)	(0)	0	(0)	0	0
Common Tern	3 (SEP)	(5) (SEP)	N/C	(0)	1 (SEP)	3
Kingfisher	6 (SEP)	(2) (SEP)	1 (SEP)	1 (OCT)	0	2

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Table4b: Five-year winter peak counts, and month in which this was recorded, of each species. 7

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	17 (NOV)	8 (NOV)	3 (NOV)	9 (JAN)	19 (NOV)	11
European White-fronted Goose	6 (DEC)	0	0	0	0	1
Greylag Goose (re-established)	0	0	0	0	1 (NOV)	0
Canada Goose	34 (DEC)	0	2 (MAR)	(6) (FEB)	8 (NOV)	11
Dark-bellied Brent Goose	1 (DEC)	10 (MAR)	34 (JAN)	85 (DEC)	0	26
Egyptian Goose	0	0	1 (MAR)	0	0	0
Shelduck	140 (MAR)	139 (MAR)	57 (FEB)	(52) (FEB)	254 (MAR)	148
Wigeon	130 (NOV)	92 (MAR)	106 (FEB)	(122) (FEB)	(108) (DEC)	113
Teal	59 (DEC)	128 (JAN)	182 (JAN)	(63) (FEB)	45 (JAN)	104
Mallard	66 (NOV)	18 (NOV)	49 (DEC)	(42) (FEB)	26 (JAN)	40
Pintail	30 (JAN)	0	3 (MAR)	0	22 (MAR)	11
Pochard	2 (NOV)	0	0	0	0	0
Goldeneye	12 (JAN)	6 (DEC)	6 (MAR)	0	(1) (DEC)	6
Goosander	2 (JAN)	0	0	0	0	0
Red-throated Diver	1 (DEC)	0	0	0	0	0
Little Grebe	39 (DEC)	41 (NOV)	21 (NOV)	21 (NOV)	20 (NOV)	28
Great Crested Grebe	8 (MAR)	2 (DEC)	0	0	2 (MAR)	2
Cormorant	6 (MAR)	4 (NOV)	2 (NOV)	3 (DEC)	1 (MAR)	3
Little Egret	2 (JAN)	4 (JAN)	2 (FEB)	2 (NOV)	2 (NOV)	2
Grey Heron	7 (NOV)	2 (NOV)	1 (NOV)	1 (DEC)	1 (JAN)	2
Water Rail	2 (MAR)	0	0	0	0	0
Moorhen	6 (JAN)	9 (NOV)	9 (JAN)	10 (DEC)	6 (JAN)	8
Coot	4 (MAR)	1 (DEC)	1 (DEC)	0	0	1
Oystercatcher	27 (MAR)	7 (MAR)	7 (MAR)	6 (MAR)	8 (MAR)	11
Avocet	3 (DEC)	0	4 (JAN)	0	0	1
Grey Plover	14 (DEC)	5 (NOV)	2 (JAN)	0	0	4
Lapwing	210 (JAN)	122 (FEB)	288 (NOV)	212 (DEC)	425 (JAN)	251
Knot	16 (DEC)	0	0	0	0	3
Dunlin	77 (JAN)	3 (FEB)	110 (JAN)	0	0	38
Jack Snipe	2 (JAN)	0	0	0	0	0
Snipe	10 (NOV)	2 (FEB)	1 (NOV)	(7) (FEB)	29 (MAR)	11
Black-tailed Godwit	117 (MAR)	88 (NOV)	225 (FEB)	2 (JAN)	24 (MAR)	91
Bar-tailed Godwit	0	4 (MAR)	2 (JAN)	0	0	1
Curlew	191 (MAR)	36 (NOV)	62 (FEB)	66 (JAN)	77 (MAR)	86
Spotted Redshank	7 (DEC)	1 (NOV)	0	0	0	2
Redshank	306 (DEC)	230 (JAN)	210 (JAN)	146 (DEC)	196 (MAR)	218
Turnstone	8 (MAR)	0	1 (JAN)	(1) (FEB)	0	2
Black-headed Gull	430 (DEC)	290 (NOV)	255 (JAN)	(90) (FEB)	138 (JAN)	278
Common Gull	16 (MAR)	0	3 (MAR)	(1) (FEB)	0	5
Lesser Black-backed Gull	23 (MAR)	2 (JAN)	0	(3) (FEB)	2 (MAR)	7

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Table4b: Five-year winter peak counts, and month in which this was recorded, of each species. 8

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Species	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	Mean Peak
Herring Gull	200 (DEC)	6 (NOV)	3 (FEB)	(5) (FEB)	1 (MAR)	53
Great Black-backed Gull	2 (NOV)	0	0	(1) (FEB)	0	1
Kingfisher	4 (NOV)	2 (NOV)	1 (DEC)	0	(1) (DEC)	2

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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.

Table4c: Five-year spring 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
Mute Swan	2 (APR)	(2) (APR)	3 (APR)	1 (APR)	2 (APR)	2
Shelduck	19 (APR)	(34) (APR)	32 (APR)	39 (APR)	26 (APR)	30
Mallard	9 (APR)	(2) (APR)	9 (APR)	4 (APR)	7 (APR)	7
Little Grebe	0	(0)	0	0	1 (APR)	0
Cormorant	2 (APR)	(1) (APR)	3 (APR)	0	0	1
Little Egret	0	(0)	1 (APR)	1 (APR)	1 (APR)	1
Grey Heron	0	(1) (APR)	0	0	0	0
Moorhen	2 (APR)	(2) (APR)	0	4 (APR)	4 (APR)	3
Coot	0	(0)	1 (APR)	0	0	0
Oystercatcher	4 (APR)	(6) (APR)	6 (APR)	3 (APR)	5 (APR)	5
Lapwing	0	(0)	2 (APR)	0	0	1
Snipe	0	(0)	1 (APR)	0	0	0
Black-tailed Godwit	65 (APR)	(22) (APR)	10 (APR)	13 (APR)	8 (APR)	24
Whimbrel	0	(1) (APR)	0	0	0	0
Curlew	55 (APR)	(13) (APR)	34 (APR)	22 (APR)	10 (APR)	30
Greenshank	0	(0)	0	1 (APR)	0	0
Redshank	17 (APR)	(3) (APR)	22 (APR)	41 (APR)	0	20
Black-headed Gull	330 (APR)	(35) (APR)	180 (APR)	26 (APR)	0	134
Common Gull	0	(0)	1 (APR)	2 (APR)	0	1
Herring Gull	6 (APR)	(4) (APR)	0	2 (APR)	2 (APR)	3
Common Tern	3 (APR)	(4) (APR)	N/C	0	0	2
Kingfisher	1 (APR)	(0)	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	4%	3%	1%	5%	3%	1%	16	11	2
European White-fronted Goose	0%	2%	0%	0%	0%	0%	0	1	0
Canada Goose	N/A	N/A	N/A	N/A	N/A	N/A	0	11	0
Dark-bellied Brent Goose	0%	3%	0%	0%	1%	0%	0	26	0
Shelduck	0%	19%	4%	0%	5%	1%	3	148	30
Wigeon	0%	3%	0%	0%	1%	0%	17	113	0
Teal	1%	5%	0%	0%	2%	0%	18	104	0
Mallard	0%	1%	0%	0%	0%	0%	14	40	7
Pintail	1%	4%	0%	0%	2%	0%	2	11	0
Tufted Duck	0%	0%	0%	0%	0%	0%	1	0	0
Goldeneye	0%	2%	0%	0%	0%	0%	0	6	0
Little Grebe	24%	36%	0%	0%	1%	0%	19	28	0
Great Crested Grebe	0%	1%	0%	0%	0%	0%	0	2	0
Cormorant	4%	1%	0%	1%	0%	0%	10	3	1
Little Egret	N/A	N/A	N/A	1%	0%	0%	7	2	1
Grey Heron	N/A	N/A	N/A	0%	0%	0%	3	2	0
Moorhen	0%	0%	0%	0%	0%	0%	2	8	3
Coot	0%	0%	0%	0%	0%	0%	2	1	0
Oystercatcher	1%	0%	0%	0%	0%	0%	21	11	5
Avocet	*0%	*3%	*0%	0%	0%	0%	0	1	0
Ringed Plover	0%	0%	0%	0%	0%	0%	1	0	0
Grey Plover	0%	1%	0%	0%	0%	0%	1	4	0
Lapwing	1%	1%	0%	1%	1%	0%	147	251	1
Knot	0%	0%	0%	0%	0%	0%	0	3	0
Dunlin	0%	1%	0%	0%	0%	0%	4	38	0
Snipe	N/A	N/A	N/A	0%	0%	0%	2	11	0
Black-tailed Godwit	12%	61%	16%	4%	19%	5%	18	91	24
Bar-tailed Godwit	0%	0%	0%	0%	0%	0%	0	1	0
Curlew	7%	6%	2%	1%	1%	0%	107	86	30
Common Sandpiper	N/A	N/A	N/A	0%	0%	0%	1	0	0
Green Sandpiper	N/A	N/A	N/A	0%	0%	0%	1	0	0
Spotted Redshank	N/A	N/A	N/A	0%	0%	0%	0	2	0
Greenshank	*83%	*0%	*0%	0%	0%	0%	5	0	0
Redshank	13%	18%	2%	5%	8%	1%	152	218	20
Turnstone	0%	0%	0%	0%	0%	0%	2	2	0
Black-headed Gull	1%	1%	1%	1%	1%	1%	155	278	134

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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
Common Gull	0%	0%	0%	0%	0%	0%	2	5	1
Lesser Black-backed Gull	0%	1%	0%	0%	0%	0%	2	7	0
Herring Gull	0%	1%	0%	0%	1%	0%	8	53	3
Great Black-backed Gull	0%	0%	0%	0%	0%	0%	0	1	0
Common Tern	N/A	N/A	N/A	0%	0%	0%	3	0	2
Kingfisher	N/A	N/A	N/A	N/A	N/A	N/A	2	2	0

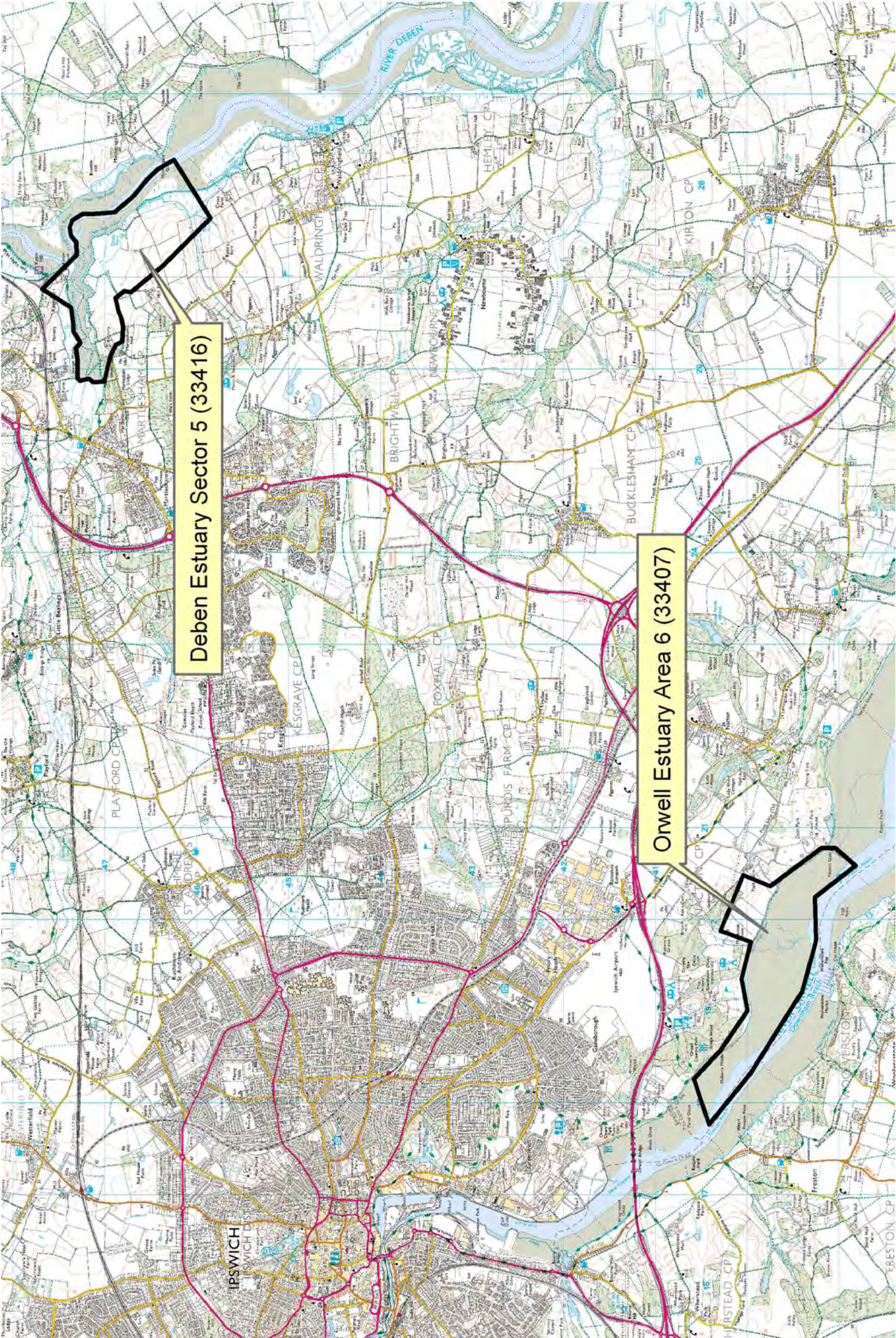
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Deben Estuary Sector 5 (33416)

Orwell Estuary Area 6 (33407)

Appendix 9

Nick Sibbett

From: Williams, Pat (NE) [Pat.Williams@naturalengland.org.uk]
Sent: 06 April 2011 12:27
To: Nick Sibbett
Cc: Jackson, John (NE)
Subject: Appropriate Assessment of Core Strategy SCDC

Dear Nick

Thank you for the Addendum to the AA for the SCDC Core Strategy and DM Policies which considers changes in housing numbers and the evidence in the South Sandlings Visitor Survey Report. We have the following comments to make:

- The new Addendum considers in full the details of the new South Sandlings report which, in our view, strengthens the need for all the previously agreed mitigation strategies in order to avoid adverse impact on all of the European sites within the Suffolk Coast & Heaths AONB, as it demonstrates that people do travel considerable distances from their homes for recreational purposes and therefore the new housing allocations are likely to result in increased recreational pressure on the Sandlings SPA, particularly the large housing allocation for East Ipswich area.
- Natural England agree that the mitigation strategies put forward in the AA of September 2009 followed by the Clarification Summary of January 2010 are still fully relevant following the Addendum and as the wording in the AA applies to all European sites within the SC&H AONB this will, of course, include the Sandlings.
- Our biggest concern is the deliverability of the mitigation, in particular the new Country Park, which is essential to reduce recreational pressures on the N2K sites. SCDC need to be completely confident that they, in conjunction with neighbouring LAs, are able to deliver this.

Regards
 Pat

Pat Williams
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www.naturalengland.org.uk

We are here to secure a healthy natural environment for people to enjoy, where wildlife is protected and England's traditional landscapes are safeguarded for future generations.

In an effort to reduce Natural England's carbon footprint, I will, wherever possible, avoid travelling to meetings and attend via audio, video or web conferencing.

From: Nick Sibbett [mailto:nick.sibbett@tlp.uk.com]
Sent: 28 March 2011 15:05
To: Collins, Alison (NE); Williams, Pat (NE)
Cc: Matt Deakin
Subject: Appropriate Assessment of Core Strategy SCDC

Dear Alison and Pat

Further to my email at the end of last week, I attach the Appropriate Assessment addendum for Suffolk Coastal's Core Strategy and Development Management Policies. I would be grateful for your statutory advice on the addendum. The addendum includes the points made in your email to me of 15th February 2011. As previously mentioned, Suffolk Coastal DC has asked me to complete this work by 30th March so your timely comments would be appreciated.

Best regards

05/05/2011

Nick

Nick Sibbett
Senior Ecologist

The Landscape Partnership

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05/05/2011

Appendix 10

14 October 2011

Our ref: 31702

Your ref: Reviewed Core Strategy



Hillary Hanslip
Principal Planning Officer (Policy)
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IP 12 1AU

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T 0300 060 3900

BY EMAIL ONLY

Dear Hillary,

**Suffolk Coastal District Council
Core Strategy and Development Management Policies**

Appropriate Assessment under the Conservation of Habitats and Species Regulations 2010 (August 2011).

Thank you for your consultation which we received on 25th August.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Suffolk Coastal District Council has carried out an Appropriate Assessment of its Core Strategy and Development Plan Policies under the Conservation of Habitats and Species Regulations (2010). The Appropriate Assessment concludes that it is not possible to ascertain that Policy SP2 (Housing numbers) has no adverse effect on the integrity of a number of Natura 2000 sites, without mitigation.

This is because greater numbers of people living in the area would be likely to lead to increased visitor pressure on these sites. Birds are sensitive to disturbance by visitors, and in particular to dogs running off leads. An increase in visitor pressure could therefore potentially lead to disturbance to birds protected in Special Protection Areas for Birds, resulting in an adverse effect on these Natura 2000 Sites.

In order to mitigate against this effect, the Appropriate Assessment proposes several elements of mitigation.

For allocations east of Ipswich:

- Allocations are located further than 1Km from Natura 2000 sites to discourage regular walks from home to the sites.
- Allocations should include suitable and attractive public open space to provide alternative recreational opportunities for routine use, including dog walking, and to attract people away from designated sites.
- Wardening and visitor management measures should be provided to manage and monitor recreational access and birds on designated sites.

For all allocations:

- The provision of a country park (or similar high quality provision), as an alternative attraction for recreational activities for residents of existing and proposed new dwellings.

Natural England agrees with the conclusion of the appropriate assessment, that with the mitigation as outlined above, the **Core Strategy is not likely to have an adverse effect on the integrity of any Natura 2000 Site**, alone and in-combination with other plans and projects.

We also emphasise the strategic nature of the Core Strategy. Developments presented at the area action plan or planning stage would need to be subject to additional appropriate assessment. This would need to demonstrate that the range of mitigatory measures identified at the strategic level had been implemented in a suitable way, and that there were no residual adverse effects on integrity of Natura 2000 Sites.

Sustainability Appraisal

Our comments are as follows;

p7 Paragraph 2. Suggest remove 'Natural England' from this paragraph. While Natural England has advised on the Appropriate Assessment, we have not provided advice in relation to the range of other considerations described here.

p9 Bullet 2. Suggest replace 'ensure no development is within 1Km of a designated area' with 'consider the impact of the distance of developments from designated sites. While ensuring development is more than 1Km from designated sites clearly reduces the risk of recreational disturbance, it does not necessarily follow that a development which is closer than this, would result in an unacceptable level of disturbance, particularly if adequate mitigation were provided.

P9 Bullet 4. Suggest add the sentence: Wardening and visitor management guided by a visitor management plan to manage and monitor recreational pressure and birds would be required as mitigation against the impacts of increased visitor pressure on Natura 2000 sites.

P72 Proposed indicators. No.17-Biodiversity. The performance indicator for this Objective should be revised to include any visitor management and monitoring put in place as mitigation for housing development.

The mitigation in the Sustainability Appraisal is the same as that provided in the Appropriate Assessment, and it is our view that this is sufficiently wide to avoid any impacts on non - Natura 2000 sites and features.

Yours sincerely

John Jackson
Land Use Operations