APPENDIX E2

Land to the south and east of Adastral Park
Shadow Habitats Regulations Assessment (sHRA)

By

Andrew Baker BSc (Hons) FCIEEM
Andrew McCloy BA (Hons) AIPROW

bakerconsultants

Project data

Client	CEG Land Promotions Ltd
Reference	Land to the south and east of Adastral Park
Report title	Shadow Habitats Regulations Assessment
File reference	636 sHRA Draft 004.docx
Team leader	Andrew Baker
Contact details	a.baker@bakerconsultants.co.uk

Revision tracking

	Name	Position	Date
Author	Andrew Baker	Managing Director	March 23nd2017
Reviewed	Andrew McCloy	Access and Recreation Consultant	March 23nd 2017
Revised			

Baker Consultants Ltd.
Cromford Station
Cromford Bridge
Matlock
Derbyshire DE4 5JJ
info@bakerconsultants.co.uk
http://www.bakerconsultants.co.uk
01629 593958
Company No. 6702156

Limitation

Baker Consultants has prepared this document for the sole use of the commissioning client in accordance with the agreed scope of works and Terms and Conditions under which our services were performed. No other warranty is made as to the professional advice included in this document or any other services provided by us. This document may not be relied upon by any third party without the prior and express written agreement of Baker Consultants.

Unless otherwise stated in this document, the assessments made assume that the site referred to will continue to be used for its current purpose without significant change. The assessment, recommendations and conclusions contained in this document may be based upon information provided by third parties and upon the assumption that the information is relevant, correct and complete. There has been no independent verification of information obtained from third parties, unless otherwise stated in the report.

Where field investigations have been carried out, these have been restricted to the agreed scope of works and carried out to a level of detail required to achieve the stated objectives of the services. Natural habitats and species distributions may change over time and further data should be sought following any significant delay from the publication of this document.

Contents

1. Executive summary

1. Carlyle Land Ltd has submitted a planning application for residential development of land to the south and east of Adastral Park. The proposal which includes building up to 2000 new homes has the potential to give rise to effects upon European sites that are protected under the Conservation of Habitats and Species Regulations 2010 (**"Habitats Regulations"**). The purpose of this document is to assist the Council in discharging this duties under the Habitats Regulations in carrying out its Habitat Regulations Assessment of the proposed development.

2. This assessment mirrors the legal process that the Local Planning Authority (LPA) must follow under Regulation 61 of the Habitats Regulations in completing a Habitats Regulations Assessment (HRA). This document is described as a shadow HRA (sHRA) as it does not replace the LPA's duties to complete such an assessment. However, if considered appropriate the LPA may formally adopt this assessment as its own in due course.

3. The assessment follows the relevant case law associated with the Habitats Directive and the domestic case law. The proposed development includes a range of mitigation measures that are specifically designed to mitigate impacts upon nearby European sites. The measures include the provision of 25.1 Ha of Suitable Accessible Natural Green Space (SANG) designed to divert potential increased recreation pressure away from the European sites.

4. The assessment is based upon the compressive ecological data that has been collected from the proposed development site that has been used to inform the ecological chapter of the Environmental Statement (ES) that accompanies the planning application (Chapter 8). Where necessary data has also been used from the other chapters of the ES, notably Flood Risk and Drainage (Chapter 9) and the Transport Assessment (Chapter 14).

5. The provision of new housing on land to the south and east of Adastral Park is set out in policy SP20 of the Suffolk Coastal District Local Plan Core Strategy. The policy also requires any proposal to mitigate recreational impacts upon European sites by the provision of a Country Park or similar high quality green space and that an HRA of the proposal should be carried out..

6. European sites within a 10km radius of the proposed development have been considered in the assessment. This radius was chosen as it represents the distance at which 75% of dog walking activity would be expected to be generated. The relevant European sites are the Deben Estuary SPA, Deben Estuary Ramsar site, Stour and Orwell Estuaries SPA, and Sandlings SPA.

7. The assessment for each site was made '*in view of the site's* [sic] *conservation objectives'* and against the interest features of each site.

8. A number of impact pathways were scoped out as having no effect upon the European sites in question. These included, noise impacts, direct land take from the European sites, cat predation, water quality and abstraction, loss of functionally linked land, and changes in air quality. In addition, impacts upon certain features of some of the European sites were also scoped out.

9. The assessment found that in the absence of mitigation there was the potential for increased recreation (notably from dog walking) to have a likely significant effect upon the European sites considered. These effects were considered to be more likely to be manifest on the Deben Estuary SPA/Ramsar sites which is located 1.4 km from the proposed development at its nearest point.

10. The proposed development includes a number of measures to mitigate recreational impacts. The provision of 25.12 of SANG within the development is considered to provide significant mitigation. SANG for the Site has been designed to be both attractive and convenient. The focal point of the proposed publicly accessible greenspace area will be the existing lake, surrounded by a landscaped area of open meadow and amenity grassland for informal/passive recreation. There will be some

mown grass and semi-surfaced paths and it will form a safe, attractive and accessible public area. With a mix of habitats, including meadow, heathland, woodland, water and scrub, plus a gently rolling topography, this large area of greenspace at the heart of the development site is designed to provide a high-quality recreation offer that will encourage residents from the new development to stay on the Site. The calculation of the area required for the SANG has been agreed with Natural England.

11. While the provision of a SANG is considered to mitigate the majority of increased recreational pressure assisting from the development, it is anticipated that there could be residual impacts from people who, nonetheless, decide to drive to more distant European sites such as the Sandlings SPA. These residual impacts will be addressed through a financial contribution to the emerging Recreational Avoidance and Mitigation Strategy (RAMS) for Babergh District Council, Ipswich Borough Council and Suffolk Coastal District Council. Funds raised through the RAMS will be used to manage recreation within the European sites, thereby effectively mitigating any residual impacts.

12. Taking into account the mitigation which will be incorporated into the Development, the sHRA has been able to conclude that any impacts will be fully mitigated and the proposal will not give rise to any effects upon European sites.

2. Introduction

13. Carlyle Land Ltd has submitted a planning application for residential development of Land to the south and east of Adastral Park at Martlesham (the "**Proposed Development"** at the **"Site"**).The outline application is for up to 2,000 homes, an employment area of c0.6ha (use class B1), primary local centre (comprising use classes A1, A2, A3, A4, A5, B1, C3, D1 and D2), secondary local centre (comprising possible use classes A1, A3, A5 and D2), a school, green infrastructure (including Suitable Accessible Natural Greenspace (SANG), outdoor play areas, sports ground and allotments / community orchards), public footpaths and cycleways, vehicle accesses and associated infrastructure. The Site is currently a sand and gravel quarry including areas that are currently being quarried, settlement lagoons, plant and machinery, restored grassland and areas that our now under arable cultivation. The Site also includes an area of mature woodland to the north and a large body of open water within its centre. A full description of the current landuse of the Site can be found in the Ecology chapter of the Environmental Statement ("**ES**") (Chapter 8).

14. The delivery of up to 2000 new homes is a key part of Suffolk Coastal District Council's ("**the Council**") housing supply (along with Ipswich Garden Suburb). The Council's Core Strategy[1](paragraph 4.14) identifies Land to the south and east of Adastral Park for the provision of 2000 new homes and specifically addresses the Site in Policy SP20.

3. Purpose of this report

15. The Core Strategy has identified that the development of Land to the south and east of Adastral Park has the potential to give rise to effects upon European sites that are protected under the Conservation of Habitats and Species Regulations 2010 (**"Habitats Regulations"**) as amended, which transpose the Wild Birds and the

[1]Suffolk Coastal District Local PlanCore Strategy & Development Management Policies Development Plan Document (July 2013).

Habitats Directives[2][3]into English law. Suffolk Coastal District Council **("Council")** is the 'competent authority' under the Habitats Regulations and must consider the protection afforded to the European sites when determining planning applications (see below). Some of the European sites in question are also Ramsar sites and, as a matter of national planning policy (see below), these must be treated by the competent authority in the same way as European sites. The aim of this document is to present to the Council the information it will require to assess the potential impacts of the proposed development upon designated European and Ramsar sites with the locality. This information will allow the Council to discharge its legal obligation to undertake a Habitats Regulations Assessment ('**HRA')** of the planning application under Part 6 of the Habitats Regulations.The term HRA refers to the entire process that must be followed as set out in the Habitats Regulations.

16. The Habitats Regulations apply to Special Protection Areas ("**SPAs**") and Special Areas of Conservation ("**SACs**"). In addition, under paragraph 118 of the National Planning Policy Framework (NPPF), sites listed under the 1971 Ramsar Convention (on the protection of wetlands) are also afforded the same level of protection as SPAs and SACs. In this document these sites are collectively known as "**European Sites**".

17. Under Part 6 of the Habitats Regulations (Regulation 61) a "competent authority" is under a duty to undertake an "appropriate assessment" (**"AA"**) of the impacts of a proposed plan or project on a European site if the project is first found to have a likely significant effect on a European site, either alone or in combination with other plans or projects. While this duty is on the "competent authority" (rather than the planning applicant), the information in this document has nevertheless been

[2]Council Directive (2009/147/EC) of 30 November 2009 on the conservation of wild birds (codified version)
[3] Council Directive (92/43/EEC) of 21 May 1992 on the conservation of natural habitats and of wild fauna and fauna.

provided to assist the Council in discharging this duty. It is for this reason that the term *shadow* HRA (**sHRA**) is used to describe this document.

4. The HRA procedure

18. Regulation 61 and accompanying guidance from the European Commission and domestic authorities sets out the HRA procedure i.e.a process to be followed when a competent authority is considering a plan or project which is not directly connected with or necessary to the management of any European site but which may have an effect on any European site either alone or in combination with any other plans or projects. The process is summarised in the flowchart in Figure 1 (at the end of this report) taken from Circular 06/2005:

19. The first step under the HRA procedure is what is commonly referred to as the screening test (also known as the Likely Significant Effect (**"LSE"**) test).This is set out under regulation 61(1) of the Habitats Regulations. Under this test the competent authority, before granting planning permission, must consider whether the project (in this case the Proposed Development at the Site, which is not directly connected with or necessary to the management of any European Site) is likely to have a significant effect on any European site, either alone or in combination with other plans or projects.

20. Where the Council decides that the proposed development at the Site is *not* likely to have a significant effect on any European site, either alone or in combination with other plans or projects, then the HRA procedure is complete and there is no further constraint to the granting of planning permission under these Regulations. Where the Council decides that a project *is* likely to have a significant effect on any European site, either alone or in combination with other plans or projects, then a further HRA procedure step must be addressed.

21. This is to conduct an AA of the implications of the Proposed Development on the relevant European site(s) in view of the European site's conservation objectives.

The competent authority may then agree to the Proposed Development only if it has ascertained that it will not adversely affect the integrity of any European sites. If it cannot ascertain this, then the project may only proceed if further derogation tests are met. These derogation tests are not discussed further here as they are not regarded as relevant in this case.

22. Caselaw has assisted in interpreting the meaning of the first step in the HRA procedure, i.e. the LSE test.

23. It was established in the Court of Justice of the European Union case C-127/02 known as *Waddenzee*(dated 7th September 2004) that a plan or project is likely to have a significant effect on a European site (i.e. the project fails the LSE test so that AA is required) where "*it cannot be excluded on the basis of objective information that the plan or project will have significant effects on the site concerned*" (paragraph 44).

24. In the Scottish case of Bagmoor Wind Limited v The Scottish Ministers Court of Session [2012] CSIH 93, this point was emphasised where it was stated that: "The requirement for objective information at the preliminary examination is not to be equated with a need for scientific knowledge..." (paragraph 45).

25. It has also been established that for a project to fail the LSE test and thereby trigger the need for an AA, there must be a real, rather than a hypothetical, risk of LSE, based on (as already set out above) objective evidence. This has been confirmed in the case of *Peter Charles Boggis, Easton Bavents Conservation v Natural England v Waveney District Council* [2009] EWCA Civ 1061 (paragraph 37).

26. Mitigation measures associated with a proposed project should be taken into account at the outset when applying the LSE screening test. This was established in the case of *R (on the application of Hart District Council) v The Secretary of State for Communities and Local Government* [2008] EWHC 1204 (Admin). In this case it was held that it is lawful for the competent authority to take mitigation measures into account at the LSE test stage. It was stated that: "*The competent authority is*

required to consider whether the project, as a whole, including such measures, if they are part of the project, is likely to have a significant effect on the SPA" (paragraph 76). It was also stated that *"as a matter of common sense, anything which encourages the proponents of plans and projects to incorporate mitigation measures at the earliest possible stage in the evolution of their plan or project is surely to be encouraged"*(paragraph 61). Mitigation measures can be characterised as avoidance, cancellation or reduction measures. In the Court of Justice of the European Union case of C-521/12 *T.C.Briels and Others* Judgment, 15th May 2014, the Court of Justice referred to mitigation measures as "*the protective measures forming part of that project aimed at avoiding or reducing any direct adverse effects for the site".* In the Court of Appeal case of *Smyth v Secretary of State for Communities and Local Government* [2015] EWCA Civ 174 which considered *Briels* and which also approved *Hart,* Sales LJ drew a clear distinction between "*preventive safeguarding measures*" (which *are* relevant to assessing the LSE test) and "*off-setting measures where the competent authority is asked to allow harm to a protected site to occur, on the basis that this harm will be counter-balanced and offset by other measures to enhance the environment elsewhere or in other ways*" (which are not relevant to assessing the LSE test). Sales LJ stated (at paragraph 75) "*Since it is clear from the relevant caselaw that preventive safeguarding measures are relevant matters to be taken into account under an "appropriate assessment" under the second limb (see discussion above), there is in my view a compelling logic to say that they are relevant and may properly be taken into account in an appropriate case under the first limb of Article 6(3)* [ie the LSE test] *as well*".

27. The LSE test requires an assessment of the project "alone and in combination with other plans or projects". Where, when taking into account the mitigation measures when applying the LSE test, a project alone is judged as having a neutral effect on a European site then there is no need for the effects of any other plans or projects to

be considered because there is no effect of the subject project with which effects of other plans or projects can combine.

28. In preparing this sHRA, early consultations have been held with Natural England and Suffolk Coastal District Council. Arising from these consultationsa series of parameters have been agreed the applicant, Natural England and the Council on which the sHRA would be based. The agreed parameters set out the anticipated occupancy rate for the Proposed Development and the level of on-Site mitigation that will be required. The agreed parameters are reflected in the exchange of letters between Natural England and the authors of this report, as set out in Appendix 1 (also see Section 11 below).

5. Planning Policy Background

29. Policy SP2 of theCore Strategy sets out there will be provision of “at least 7,900 new homes” across the district over the plan period 2010 to 2027. Paragraph 4.14 of the Core Strategy has identified the former sand and gravel quarry at Land to the south and east of Adastral Park as being suitable for the provision of up to 2000 new homes. The development at Land to the south and east of Adastral Park is considered further in Policy SP20 which presents a strategic approach for three areas, one of which is described as the area to be covered by Martlesham, Newbourne and Waldringfield Area Action Plan.

30. Policy SP20 (paragraph xii) highlights the need to address impacts upon European sites;

> *xii) the Council will require further proposals to be supported by an Appropriate Assessment to meet the requirements of the Habitats Regulations. If the results of the Appropriate Assessment show that part of the Strategy cannot be delivered without adverse impacts on designated European sites which cannot be mitigated, then the proposals will only make provision for the level and location of development for which it can be concluded that there will be no*

adverse effect on the integrity of a designated European nature conservation site.

31. Policy SP20 goes on to refer to the AA[4]dated 2011 of the Core Strategy which identified the need for mitigation measures (Section 7.2 and Table 10 of the AA) to ensure that new housing does not give rise to any adverse effect upon the integrity of any European site. The mitigation set out in the Core Strategy AA dated 2011 is concerned with two aims: (i) to prevent a damaging increased in visitor numbers to all European sites; and (ii) to prevent a damaging increase in visitor numbers to specific parts of European sites likely to be particularly affected. Increases in recreation pressures from new housing was the only impact pathway identified in the AA of the Core Strategy that was considered to need mitigation measures. Table 10 of the Core Strategy AA is reproduced below.

[4]Appropriate AssessmentforSuffolk Coastal District CouncilCore Strategy and Development Management Policies dated November 2011. This was later supplemented by an addendum, being the Appropriate Assessment for Modifications to Suffolk Coastal District Council Core Strategy and Development Management Policies dated June 2013.

Table 10. Summary of mitigation

Impact	Mitigation	Strategic allocation east of Ipswich	Strategic allocation at Felixstowe	all proposed housing in Suffolk Coastal and Inswich
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	✓	✓	✓

32. The Suffolk Coastal District Council Site Allocations and Area Specific Policies Development Plan Document (Proposed Submission April 2016) (para 1.35) states '*One further important piece of work is the 'Recreational Avoidance and Mitigation Strategy for Babergh District Council, Ipswich Borough Council and Suffolk Coastal*

District Council' which is due to complete by March 2017. This will help identify specific projects to mitigate the impact of new development, and particularly any associated increase in disturbance from walkers and dog walkers on the Special Protection Areas and Special Areas of Conservation (European Sites) within the three local authority areas e.g. visitor management measures, above and beyond any necessary site specific requirements. Other plans and strategies to which this plan has note include the estuary and shoreline management plans".

33. The *'Recreational Avoidance and Mitigation Strategy'* (RAMS) is currently being prepared (although no draft is publicly available) and it will detail the management measures required to mitigate increases in recreation that is anticipated by the increase in housing numbers. It is anticipated that the RAMS will set out mechanisms whereby funds gained through a levy on new house building will be spent on measures to mitigate recreational impacts.

34. Protection of European sites from increased recreation pressure is also addressed by policy SSP32 of the Site Allocations and Area Specific Policies DPD.

35. The Proposed Development at Land to the south and east of Adastral Park is part of the "strategic allocation east of Ipswich" noted in the third column of Table 10 of the Core Strategy AA. The mitigation envisaged to apply can therefore be seen at Table 10.

36. The AA of the Core Strategy concluded that, with mitigation, Policy SP20 will have no adverse effect upon the integrity of any European site either alone or in combination with other plans or projects. There is however still the need to assess the impacts of a planning application at the project level.

37. Policy DM27 of the Core Strategy also address the protection of European sites. In the relevant section of this policy it is stated, *Development proposals that would cause a direct or indirect adverse effect (alone or combined with other plans or projects) to the integrity of internationally and nationally designated environmental sites or other designated areas, priority habitats or protected/priority species will not*

be permitted unless: (i) prevention, mitigation and, where appropriate, compensation measures are provided such that net impacts are reduced to a level below which the impacts no longer outweigh the benefits of the development; or (ii) with regard to internationally designated sites that the exceptional requirements of Reg. 62 of the Conservation of Habitats and Species Regulations 2010 (as amended) relating to the absence of alternative solutions and Imperative Reasons of Overriding Public Interest have been met. Improved site management and increased public access to sites will be encouraged where appropriate*.

6. Description of the European / Ramsar Sites

38. In this section of the shadow HRA, the European Sites that may be affected by the Proposed Development at the Site are considered. Consideration of which European Sites could be affected by the Proposed Development draws upon not only the data that has been collated for the ES, but also theAA of the Core Strategy and HRAs that have been produced for other housing development within the area that have been accepted by Natural England (eg Land off Duke's Park, Woodbridge). The AA of the Core Strategy, when considering the impacts of new housing, identified the increase in recreational pressure upon European sites as being the most likely impact pathway. The AA also identified that this impact path can generate increased recreation pressure over some distance. Data reproduced in the AA of the Core Strategy identified that 75% of dog walkers lived within 10km of the surveyed access point. For this reason this assessment considers all those European Sites that are within 10km of Land to the south and east of Adastral Park at the nearest points. These are Deben Estuary SPA, Deben Estuary Ramsar site, Stour and Orwell Estuaries SPA, and Sandlings SPA. The data sheets for each of these European Sites can be found in Appendix 2. The boundaries for each of these European Sites are set out in Appendix 3. The interest features of these sites are summarised below.

39. The Alde-Ore Estuary European site is located a small distance outside the 10 Km radius and also cannot be accessed from Adastral Park without travelling for a distance of over 20km. The Alde-Ore Estuary is therefore not assessed further in this sHRA.

Deben Estuary SPA (European Marine Site)

40. Located 1.4 km from the Land to the south and east of Adastral Park site (at the nearest point) the Deben Estuary SPA covers an area of 978.93 ha. The Estuary extends for c12km from Woodbridge to its mouth near Felixstowe. The SPA comprises intertidal mud flats, with salt marsh, and various swamp communities that are dominated by common reed. The SPA meets the criteria for listing as an SPA for supporting populations of overwintering Dark Bellied Brent Geese *Brantaberniclabernicla* and Avocet *Recurvirostraavosetta.*

41. Like most European sites the Deben Estuary SPA is underpinned by designations as Sites of Special Scientific Interest (SSSI). In this case the SSSI bears the same name. Natural England carries out regular 'condition assessments' of SSSI which give an indication of their current state of health. The condition assessments of each of the SSSIs relevant to this report are shown in Appendix 4. The latest condition assessment of the Deben Estuary SSSI recorded that 23.16% of the SSSI is considered to be in "favourable condition" while the rest of the site is "unfavourable – declining". The reason for the decline of the SSSI is down to the process of "coastal squeeze". This is when coastal habitats are constrained between the sea and a fixed landward boundary such as a sea wall or food embankment. The fixed boundary prevents the proper function of coastal processes that would otherwise allow habitats such as salt marsh or mudflat to adjust to sea level rise and/or increased storm intensity and/or frequency. Instead habitats such as mudflats and saltmarsh become eroded subject to other adverse changes. Recreation pressures are not cited as a reason for the site being in unfavourable condition.

Deben Estuary Ramsar Site

42. The Deben Estuary Ramsar site covers the same boundary at the Deben Estuary SSSI. It qualifies for inclusion under the Ramsar Convention under Criterion 2a for the presence of the endangered Mollusc narrow mouthed whorl snail *Vertigo augustior,* a land snail that is associated with damp open grasslands. The Ramsar site also qualifies under Criterion 3c by regularly supporting internationally important numbers of wintering Dark-bellied brent geese.

Sandlings SPA

43. Sandlings SPA covers an area of 3405.72ha and is classified for the breeding populations of nightjar *Caprimulguseuropeaus* and woodlark *Lullulaarborea.* This large SPA includes areas of Rendlesham Forest and Tunstall Forest (the latter is beyond the 10km radius being considered within this shadow HRA). Although located approximately 4km to the north east of Proposed Development 'as the crow flies', the Deben Estuary lies between Sandlings SPA and the Site at Land to the south and east of Adastral Park and therefore access to Sandlings SPA from the Site requires a round trip of over 20km by road.

44. Sandlings SPA is underpinned by six SSSIs, Blaxhall Heath, Leiston – Aldeburgh, Sandlings Forest, Snape Warren, Sutton and Hollesley Heaths and Tunstall Common SSSIs. The majority in number and in area of the SSSIs are considered to be in 'unfavourable – recovering' condition due to previous inappropriate management that did not favour lowland heath habitats (commercial non-native forestry, scrub encroachment and domination by bracken). In the condition assessment for Sandlings SSSI, which forms almost 2500ha of the SPA and which is designated for the same two species as the SPA (woodlark and nightjar), it is stated that '*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.'Recreational pressures are not cited as a reason for the SSSI being in unfavourable condition.

Stour and Orwell Estuaries SPA (European Marine Site)

45. The Stour and Orwell Estuaries straddle the Essex and Suffolk border and are located 5.6km from the Proposed Development at the Site. The SPA comprises extensive intertidal mudflats, with salt marsh and vegetated shingle and is classified for the internationally important ornithological interested it supports.

46. The Estuaries are listed as an SPA for the following species: breeding avocet and over wintering Common shelduck, Dunlin, Common goldeneye, Great cormorant, Eurasian wigeon, Lapwing, Gadwall, Grey plover, Mute swan, Red knot, Dark-bellied brent goose, European golden plover, Eurasian curlew, Ruddy turnstone, Great crested grebe, Greater scaup, Northern pintail, Ringed plover, Black-tailed godwit Common redshank, Ringed plover. The SPA also qualifies for the assemblage of non-breeding waterfowl it supports.

47. This Stour Estuary part of this SPA is underpinned by the Stour Estuary SSSI. All units of the SSSI are considered to be in favourable condition apart from on unit of 44 ha (1.99% of the site) of Littoral Sediment thatis “unfavourable – declining” due to coastal squeeze causing erosion of salt marsh.

Stour and Orwell Estuaries Ramsar

48. The Stour and Orwell Estuaries also qualify as a Ramsar (having the same boundary as the SPA), site under Criterion 2, 5 and 6. Under criterion 2 the site qualifies for nationally scarce plants and Red Data Book invertebrates. While two plants are named under this criterion (*Zosterianoltei and Spartinamaritima*) no invertebrates are listed.

49. The site qualifies under Criterion 5 for supporting assemblages of international importance of wintering waterfowl.

50. Under Criterion 6 the site qualifies for the international important populations of wintering and passage birds it supports namely, Black-tailed godwit, Dark bellied brent geese, Dunlin, Grey Plover and Red knot.

Table 1 European Sites features of interest

Site Name	Distance from the Proposed Development (direct at nearest point)	Distance from the Proposed Development (by road)	Interest features of the site
Deben Estuary SPA	1.4 Km	3.0 Km	Overwintering Dark Bellied Brent Geese *Brantaberniclaberniclaand* Avocet *Recurvirostraavosetta*
Deben Estuary Ramsar	1.4 Km	3.0 Km	Criterion 2a, endangered Mollusc narrow mouthed whorl snail *Vertigo augustior* Criterion 3c, regularly supporting internationally important numbers of wintering Dark-bellied brent geese *Brantaberniclabernicla.*
Stour and Orwell SPA	5.6 Km	C 8.8 Km	Breeding Avocet *Recurvirostraavosetta* Overwintering Common shelduck, Dunlin, Common goldeneye, Great cormorant, Eurasian wigeon, Lapwing, Gadwall, Grey plover, Mute swan, Red knot, Dark-bellied brent goose, European golden plover, Eurasian curlew, Ruddy turnstone, Great crested grebe, Greater scaup, Northern pintail, Ringed plover, Black-tailed godwit Common redshank, Ringed plover. Assemblage of none-breeding waterfowl.
Stour and Orwell Ramsar	5.6 Km	c. 8.8 Km	Criterion 2 Nationally scarce plants (Zosterianoltei and Spartinamaritima)and unnamed Red Data Book invertebrates. Criterion 5, Assemblages of international importance of wintering waterfowl. Criterion 6, International important populations of wintering and passage birds namely, Black-tailed godwit, Dark bellied brent geese, Dunlin, Grey Plover and Red knot.
Sandlings SPA	4.8 km	10.4 Km	Breeding nightjar *Caprimulguseuropeaus*and woodlark *Lullulaarborea*

7. European Site Conservation Objectives

51. It is a requirement of Regulation 61 that, when carrying out an HRA, an Appropriate Assessment must be carried out '*in view of that site's conservation objectives'*. The conservation objectives for each of the SPAs considered in this report are reproduced in Appendix 4. The conservation objectives for each of the three sites refer to 'supplementary advice' which should be read in conjunction with the conservation objectives. However these are not available for any of the three SPAs in question.

52. The published conservation objectives for each of the SPAs are generic but refer to the specific qualifying features of the SPA. For each of the 3 SPAs considered in this report, the conservation objectives are:

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

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

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

53. Ramsar sites are designated under a different legal process to SPAs and do not have conservation objectives.

8. Impact pathways and features scoped out

54. The AA of the Core Strategy considered the impact pathways that new housing in the area may have upon European sites. The key impact pathway identified in the Core Strategy HRA were the impacts associated with increased recreational pressure.

55. This shadow HRA, at the project level, must now assess the potential impacts of the Proposed Development and how it may affect the European Sites.

56. An assessment of whether the Proposed Development of the Site alone, without mitigation measures, is “likely to have a significant effect” on any of the European Sites is presented.

57. Then, the relevant mitigation measures offered as part of the Proposed Development to address any “likely significant effects” of the Proposed Development alone are also explained.

58. Taking into account any relevant mitigation measures, the assessment then considers whether the Proposed Development at the Site will, alone, have any likely significant effect upon each of the European Sites.

59. Following that, where necessary, any “in combination” effects with other plans or projects are considered.

60. Conclusions are then reached as to whether the proposed development at the Site is likely to have a significant effect on any of the four European sites either alone or in combination with any other plans or projects.

61. However, prior to commencing this assessment, certain pathways and features can reasonably be scoped out of the assessment at the outset.

Impact Pathways Scoped Out

62. There are a number of potential impact pathways that can be scoped out of the assessment at the outset, as follows:

Noise

63. The proposed development is located 1.4km from the nearest European Site, the Deben Estuary SPA / Ramsar site, and the predicted levels of noise that would be created by the development (see Section 12.6 Chapter 12 of the ES on Noise) will not be sufficient, either during the construction or operational phases, to cause any disturbance to the birds that are the interest features of the European site. The distance involved means that the Proposed Development is not considered to have any impact on the Deben Estuary / Ramsar site from this impact pathway.

Direct land take

64. The Proposed Development at the Site does not result in direct loss of any European Site nor will it result in the loss of any habitat that could be considered functional land for birds that are the interest features of the European Sites considered (see loss of functionally linked land below). Impacts from direct land take are therefore ruled out and will have no effect upon any European Site.

Cat predation

65. Cat predation has been considered a potential impact pathway for SPAs such as Thames Basin Heaths because of the potential for cats to kill ground nesting birds. There is no scientific evidence that cat predation in the UK (where cats are part of the endemic fauna) affects birds at the population level. However, Natural England has advised that cat predation may be a significant impact for developments that are located within 400 metres of SPAs and this advice has been widely accepted as a basis for policies designed to protect SPAs (e.g. Thames Basin Heaths SPA – Technical Background Document to the Core Strategy DPD, June 2007). Given that the nearest SPA to the development (Deben Estuary) is 1.4km from the Proposed

Development, impacts associated with cat predation can be ruled out as having no impact upon any European Site.

Water quality/abstraction

66. None of the European sites being considered in this assessment are dependent on a ground water levels and are therefore would not affected by activities such as water abstraction. The water company (Anglian Water) has confirmed that there is sufficient capacity to supply the proposed development with potable water (Service Supply Statement[5]) under existing consents.

67. Treatment of foul water will be through a new connection to existing sewer system with foul water being treated at the Woodbridge Creek Water Recycling Centre (WRC)[6]. Anglian Water has confirmed that the additional load from the Development can be accommodated within existing consents.

68. Impacts to surface water quality have also been assessed within the ES (Chapter 9 Flood Risk and Drainage) and it has been concluded that, taking into account mitigation the development will result in a negligible impact.

Loss of functionally linked land

69. Functionally linked land is land outside the boundary of a European site that provides habitat that is critical to supporting the mobile interest feature or features for which the site is listed. For example, Dark bellied brent geese feed upon habitats within the SPA such as mudflats and salt marsh. However, the birds will also feed on high quality grassland and/or arable crops outside the SPA particularly during harsh winters when food supplies within the SPA may become limited. Land can only be considered functionally linked to the SPA if it provides a significant resource which if removed would risk a significant adverse effect upon the mobile interest feature for which the European site is classified. So, for example, an area of

[5]Land south and east of AdastralService Supply Statement Park Carlyle Land Ltd and Commercial Estates Group

[6] Anglian Water Drainage Impact Assessment, Martlesham, Adastral Park 10 Feb 2017.

grassland that that regularly supports large flocks of Dark bellied brent geese may be considered functionally linked land.

70. The only species recorded on the site that are common to the European sites related to the Stour and Orwell SPA are Shelduck, Lapwing and wintering waterflow.

71. 'Wintering' Shelduck is included in the Stour and Orwell SPA citation, however this species was not recorded within the proposed development site during the winter, but rather the individuals recorded were breeding pairs. No Shelduck were recorded within the Site during the winter months. Given that the Stour and Orwell Estuaries SPA is located over 5 km from the proposed development site and the Shelduck recorded within the site were breeding rather than overwintering, it is considered unlikely that the Shelduck recorded on the site are associated with the Stour and Orwell SPA.

72. Overwintering lapwing are also included on the Stour and Orwell citation. Only two individuals were recorded on the Site during winter surveys which compares to the peak count of 6242 birds[7]. The two records of lapwing on the Site represents 0.03% of the SPA population, which is considered to be insignificant. Furthermore this species is not regularly present on the Site.

73. The Stour and Orwell Estuaries SPA is also listed for the assemblage of wintering waterfowl it supports. The peak counts of the assemblage is a population of 63,017 birds[5] . The winter bird surveys of the Site recorded a peak count of 40 waterfowl mainly associated with the central lake (ES Chapter 9 Appendix E1). This represents 0.06% of the Stour and Orwell estuaries population and is considered to be insignificant. Furthermore the central lake will be retained within the development and is likely to continue to be used by waterfowl.

74. The proposed development site cannot therefore be considered functionally linked land for any of the European sites.

[7] Natura 2000 Standard Data Form Dec 2015.

Impacts from changes in air quality

75. The ES, which has accompanied the planning application, examined the potential for the development to increase air pollution within the vicinity of the development (ES Chapter 6. Habitats such as lowland heaths are sensitive to air pollution, in particular increases in oxides of Nitrogen (NOx) and acid deposition. Heathlands are low nutrient environments and these pollutants increase available nitrogen and cause undesirable changes to plant communities.

76. The ES has considered the potential for the proposed development at the Site to affect nearby European sites through changes in air quality. The assessment considered both the operation and construction phases of the development and the different pathways which may result in changes in air quality.

77. The key potential impact pathway is from changes to air quality arising from traffic generated from the proposed development during the operational phase. Chapter 14 of the ES references the appropriate guidance, how the changes in traffic movements may affect air quality in the vicinity of the nearby European sites.

78. The traffic assessment assessed a 'worst case scenario' and examined how traffic flows from the Site might increase on roads adjacent to the European sites.

79. The Design Manual for Road and Bridges (DMRB) sets out the criteria which should be used for air quality assessments, in relation to designated sites, where the sources of emissions of concern (nitrogen in the form of NOx) are any additional vehicle / road traffic movements predicted to occur from the proposed development on existing roads. The DMRB confirms that its assessment procedure has been prepared in collaboration with the Joint Nature Conservation Committee and Natural England.

80. According to paragraph 3.13 of DMRB HA 207/07, "*only properties and Designated Sites within 200m of roads affected by the project need be considered*" in an assessment. In other words any impacts should be scoped out if properties /

designated sites are beyond 200m from any road; or if any road within 200m from the designated site is not ‘affected by the project’.

81. A road that is ‘affected by the project’ is one where the road alignment will change by 5m or more; ordaily traffic flows will change by 1,000 AADT or more; or Heavy Duty Vehicle (HDV) flows will change by 200 AADT or more; or daily average speed will change by 10 km/hr or more; orpeak hour speed will change by 20 km/hr or more. As none of these criteria are triggered, the air quality assessment has concluded in relation to designated sites, in accordance with DMRB, that the impact of the project is neutral in terms of local air quality and as such no further assessment work is required.

82. The traffic assessment has confirmed that there are no affected roads within 200m of European sites.

83. Regarding potential impacts during the construction phase from dust, this impact pathway could also be ruled out as the Site is located more than 50m from any of the European sites, the distance at which the relevant guidance (IAQM 2014) considers that potential impacts from dust can be excluded.

84. It can therefore be concluded that the development at the Site will not give rise to any effectsupon European sites through changes in air quality.

9. Features of Relevant European/ Ramsar sites scoped out

85. The botanical interest features of the Stour and Orwell Ramsar site (*Zosterianoltei* and *Spartinamaritima)* is found on intertidal mudflats and therefore will not be affected by the proposed development as these habitats are highly unlikely to be the subject of increases in visitor pressure as they are not accessible. The rare invertebrates for which the site qualifies under Criterion 2 are not listed and cannot therefore be assessed.

86. The narrow mouthed whorl snail *Vertigo augustior,* which is listed in the Deben Estuary Ramsar citation is found with wet grassland associated with the estuary. The proposed development will not result in the loss or deterioration of such habitat and therefore any impact upon this species within the Ramsar can be ruled out.

10. Assessment of likely significant effects alone without mitigation

87. The only impact pathway that is considered likely to give rise to significant effects upon European sites is the potential for increased pressure from visitors, which may result in impacts upon the interested features of the sites in question. The potential for recreational impacts to affect the European sites are set out in more detail below.

88. Taking into account the size and layout of the proposed development Site and its distance and relationship with the European / Ramsar sites described above, including their qualifying features, there are a number of recreational pathways from the Site with the potential to give rise to impacts on the European / Ramsar sites. The recreational pathways identified from the Site in this assessment with potential to impact on European sites are as follows:

89. Dog walking: It is inevitable that some new residents at the Site will own dogs. Dog walking tends to be a high frequency activity, typically occurring once or twice daily, every day (English Nature Research Report No 649, Dogs, Access and Nature Conservation, 2005). Research literature suggests that the length of the average dog walk is around 2.5km (e.g. English Nature Research Report No 682, Visitor Access Patterns on the Thames Basin Heaths, 2005), with some dog walks inevitably much longer. This has the potential to bring the Deben Estuary SPA / Ramsar site within walking range on foot of the Site. Dog walking is perceived as having a potential impact upon certain European / Ramsar sites because of the potential to disturb birds. This potential impact is considered in detail below. In addition, there is a potential impact from dog owners who drive to other European /

Ramsar sites within 10km of the Site in order to exercise their dogs, namely the Sandlings SPA and the Stour and Orwell Estuaries SPA / Ramsar site. The potential impact from both is considered in detail below.

90. Walking (without dogs): There is a reasonably well-developed public rights of way network in the wider area around the Site, with waymarked trails like the Sandlings Walk already promoted, so it is reasonable to assume that new residents at the Site will make recreational journeys on foot locally which could potentially lead to walkers accessing the Deben Estuary SPA / Ramsar site. Although some waterside paths in the Deben Estuary SPA / Ramsar site are impassable because of breaches to the sea wall, walkers could nevertheless potentially disturb birds and again this potential impact must be assessed in detail. In addition walkers from the Site might drive to walk in other European / Ramsar sites within 10km of the Site, namely the Sandlings SPA and the Stour and Orwell Estuaries SPA / Ramsar site. The potential impact from both is considered in detail below.

91. Mountain biking: There are only a few public bridleways in the vicinity of the Site and the rights of way along the edge of the Deben Estuary are all public footpaths, so cyclists are not legally allowed to use them. However, a number of signposted National Cycle Network routes do pass through the wider area on metalled roads and some local routes are promoted as 'Quiet Lanes' for use by cyclists, amongst others, so that cyclists and mountain bikers could potentially cycle long distances from the Site. In addition, they could put their bicycles on their cars and travel significant distances to visit other European / Ramsar sites in order to go for a ride. Because of this the impacts of cyclists on European / Ramsar sites cannot be ruled out and this potential impact is considered in detail below.

92. Watercraft / watersports: New residents at the Site may wish to undertake water sports in the estuaries within European / Ramsar sites. Increased boating activity at, say, the Deben Estuary SPA / Ramsar site could potentially cause a disturbance to birds. Moorings in the Deben Estuary are controlled by five Fairways Committees,

locally run organisations that lease areas of the river from the Crown Estate (which owns the river bed and foreshore) for the principal purpose of administering moorings. Altogether there are approximately 1,000 “swinging” and “drying” moorings on the River Deben and over the last 25 years the number of moorings has remained largely static. Furthermore the number of moorings is likely to remain static in the future: “It is not anticipated that mooring numbers or positions will alter significantly in the near future. The Crown Estate and other members of the Association do not actively promote the laying of moorings or the creation of additional access points to the river” (Association of River Deben Fairway Committees Position Statement, June 2014[8]). Waldringfield Fairway Committee WFC) does not allow unlicensed moorings and it currently operates a waiting list for new moorings. The boatyard at Waldringfield is already at full capacity (Tony Lyon, Waldringfield Harbourmaster, Pers. Comm., January 2017).In addition, the Core Strategy does not promote or encourage the construction of any new water sports / boating facilities (which would need planning permission) and the saved policy AP252 (Woodbridge: New Yacht Harbours and Marinas) ensures that any yacht harbour development is subject to a number of conditions which include protection of the SPA / Ramsar site.

93. The CS HRA 2011 (paragraph 5.1.24) also refers to surveys of other estuaries in Suffolk that show that disturbance from watersports is relatively minor and less important than disturbance impacts from land-based recreation, such as walking with or without dogs. In particular, this was the conclusion of a key study of birds on the Stour and Orwell estuaries ("Disturbance to waterbirds wintering in the Stour-Orwell estuaries SPA", Ravenscroft et al, 2007) which found that, aside from powerboats, most disruption to the birds from watercraft in fact came from the wash from ships and container vessels hitting the mudflats, rather than the passing of the

[8]http://www.debenestuarypartnership.co.uk/downloads/supportingdocs/Crown%20Estates-Association-of-Fairway%20Committees-Position%20Statement-2014.pdf

vessel itself: "Otherwise, slow moving and quiet objects, such as sailing boats on the water... caused very little disturbance" (page 19). In addition, watersports and associated activities also tends to be a seasonal activity that is generally not carried out during the winter months, as confirmed by a study of the Deben Estuary in 2014 ("The Deben Estuary and its hinterland: Evaluation of key areas for birds, recreational disturbance issues and opportunities for mitigation and enhancement", SWT Trading Ltd, 2014) which stated that "boating is mainly restricted to spring, summer and early autumn" (page 25). This is confirmed by Waldringfield Sailing Club's sailing programme for 2017 which begins in mid March and is scheduled to end at the beginning of November. In addition, Waldringfield Boatyard's website states that the "laying up" time for vessels is from the end of September onwards. As a result, it is concluded that this potential impact pathway from the proposed development at the Site on European / Ramsar sites can be scoped out.

94. Wildfowling / shooting: New residents at the Site may wish to undertake wildfowling activities. Wildfowling within any SPA is regulated by Natural England, including an assessment of the number of birds shot and the number of people shooting, to ensure there is no adverse impact on the site. A review by the British Trust for Ornithology on the impact of wildfowling on the Stour Estuary ("A Review of Wildfowling on the Stour Estuary", BTO Research Report No. 248, A. Musgrove et al, 2001[9]) found that wildfowling was generally at a lower level (in terms of events) than many other potentially disturbing activities and that there was no evidence that the favourable conservation status of any species was being affected at present levels of wildfowling. Since wildfowling continues to be carefully regulated and is not commonly undertaken, it is considered that this potential impact pathway from the proposed development at the Site on European / Ramsar sites can be scoped out.

95. Bait digging: New residents at the Site may wish to undertake bait digging activities. A report by Suffolk Wildlife Trust for English Nature ("Bait digging in the Stour and

[9]https://www.bto.org/sites/default/files/shared_documents/publications/research-reports/2001/rr248.pdf

Orwell Estuaries", 1998) found that, in general, the estuaries were not dug heavily and that bait digging was an unlikely cause of bird disturbance. This was confirmed by a subsequent study of the Stour and Orwell Estuaries SPA (Ravenscroft et al, 2007) which concluded that while bait digging was potentially disruptive it was a relatively scarce activity. A voluntary code of conduct and a public awareness campaign was subsequently introduced by the Stour and Orwell Estuaries Management Group to address this issue further ("Looking after our estuaries: A voluntary code of conduct for users of the mudflats on the Stour and Orwell Estuaries" - leaflet, 2010[10]). The code includes the voluntary closure of specific areas of mudflats for bait digging between 1st November and 30th April each year. Bait digging is not considered a concern in the Deben Estuary SPA / Ramsar site since the mudflats of the Deben Estuary are more difficult to access than the Stour and Orwell (Tony Lyon, Waldringfield Harbourmaster, Pers. Comm., January 2017). In addition, Waldringfield Fairway Committee, which supervises the Waldringfield stretch of the River Deben between Methersgate Quay and Early Creek/Shottisham Creek, specifically prohibits bait digging: “No bait digging is permitted on the foreshore, or anywhere within the land and seabed controlled by WFC” (WFC Rules and Regulations[11]). As a result it is considered that this potential impact from the proposed development at the Site on European / Ramsar sites can be scoped out.

96. Quite apart from the types of recreational activity that might be carried out, any assessment of potential recreational impacts from the proposed development at the Site requires an accurate prediction of the number of new visits likely to be generated. This must be based on the anticipated number of new residents, of course, but their likely recreational behaviour should also be informed by visitor surveys and studies that take into account national and local trends.

[10]http://www.suffolkcoastandheaths.org/assets/Projects--Partnerships/Stour--Orwell/Code-of-conduct-Stour-and-Orwell.pdf
[11]http://waldringfieldsc.com/rescue/WFCrules.pdf

97. The proposed development at the Site is for the provision of up to 2,000 new residential properties which is likely to result in up to 3,140 new occupants. This calculation is based on 1.57 new persons per new dwelling, an occupancy ratio established in Suffolk Coastal District's LDF evidence base, which itself used data from the Office for National Statistics (ONS) data and projections tailored to the local situation (CS HRA 2011, paragraph 5.3.8). Depending on the relevant studies (discussed below) which assist in assessing potential recreational impacts, the assessment of potential recreational impacts on European sites presented in this report is based either on the figure of 3,140 new occupants or instead on the number of new dwellings (2000).

98. There are a number of sources of visitor information as follows that have informed this present assessment;

- "South Sandlings Living Landscape Project: Visitor Survey Report" (Footprint Ecology/Suffolk Wildlife Trust 2011[12]);
- "The Deben Estuary and its hinterland: Evaluation of key areas for birds, recreational disturbance issues and opportunities for mitigation and enhancement" (SWT Trading Ltd 2014[13]);
- "Disturbance to waterbirds wintering in the Stour-Orwell estuaries SPA", (Ravenscroft et al 2007[14]);
- "The Deben Estuary Survey Report" (No Adastral New Town (NANT) 2011[15]),

99. Overall the local evidence base for assessing the number and impact of visitors to the European sites is rather limited in terms of the amount and scope of information, as well as the dates during which some studies were carried out. As the CS HRA

[12]https://www.footprint-ecology.co.uk/reports/Cruickshanks%20et%20al.%20-%202010%20-%20Suffolk%20Sandlings%20Visitor%20Survey%20Report.pdf
[13]http://www.suffolkcoastandheaths.org/assets/Projects--Partnerships/DEP/Deben-Bird-Report-Web.pdf
[14]http://www.suffolkcoastandheaths.org/assets/Projects--Partnerships/Stour--Orwell/Recreation-Disturbance-Report-Final-low-quality.pdf
[15] http://www.eastsuffolk.gov.uk/assets/Planning/Suffolk-Coastal-Local-Plan/Document-Library/Infrastructure/Deben-Estuary-Visitor-Survey.pdf

2011 recognises, there is little information available regarding the destinations of Suffolk Coastal and Ipswich residents for their recreation and that is still largely the case today. The CS HRA 2011 relied on two principal sources: (i) a Visitor Survey carried out by the East of England Tourist Board for the Suffolk Coast and Heaths AONB in 2004, which although providing some useful context and background information is now of limited relevance because it merely provides a snapshot of visitors (including holidaymakers) from 13 years ago across the whole of the AONB (which extends northwards almost as far as Lowestoft); and (ii) the South Sandlings study (2011) which offers more recent and comprehensive data with a particular focus on visits to a designated European site. In particular, it provides evidence of distances visitors travelled to the South Sandlings SPA when walking on foot and driving by car.

100. Other sources of evidence include SWT Trading Ltd's 2014 study and the survey by Ravenscroft et al on the Stour and Orwell Estuaries SPA, both of which present detailed observations on the nature and levels of existing recreational disturbance, rather than any attempt to quantify visitor numbers or predict future trends. However, since they both have useful site-specific information about recreational behaviour, they are worth consideration. The Deben Estuary Survey Report by NANT, which although localised and narrow in its scope, also provides some additional background data.

DEBEN ESTUARY SPA/RAMSAR

Vulnerability

101. Located 1.4km from the proposed development site the Deben Estuary SPA has the greatest potential to be affected by recreational impacts. The two interest features of the site, Dark bellied brent geese and avocet, are present in the winter when they use the habitats within the estuary for feeding. The risk is that people accessing the footpaths that run next to the site may disturb the birds causing them to take flight.

The flight response has two effects, firstly it causes the birds to stop feeding and secondly the birds will expend additional energy fleeing the area. If such disturbance were to be sustained it is hypothesised that there is a risk that the condition of the birds may be affected and there could be an impact upon the overall population. In the case of the Deben Estuary the SPA is classified for ***wintering*** populations of Dark bellied brent geese and avocet, so it is therefore only during this period that increased recreational pressure may have an effect upon the interest features of the site.

Recreational Impacts (walking from the site on foot with/without dogs)

102. The public rights of way network in the wider area around the Site is reasonably well developed, with direct connections south to Newbourne, north and west to Martlesham, and south east to Waldringfield. There are also connecting paths to Martlesham Creek and Hemley on the Deben Estuary north and south of Waldringfield respectively.

103. There will be new walking journeys (on foot) made by residents of the proposed development at the Site, including people with dogs, which in the absence of mitigation may have a significant effect on the Deben Estuary SPA / Ramsar site.

104. The latest data from the Pet Food Manufacturers' Association (PFMA) for 2016 suggests that 24% of households have one or more dogs, while the People Dispensary for Sick Animals (PDSA) Animal Welfare PAW report (2015) gives a national figure of 26%. However, unlike the PDSA report, the PMA's survey is broken down by region and shows wide variations in dog ownership across the UK. The East of England figure of 14% is much lower than the national average of 24% and equates to 1.2 dogs per household.[16] Based on this regional figure, it would be expected that the 2,000 new homes at the Site would result in 280 households owning dogs; and using the calculation of 1.2 dogs per household that figure

[16]http://www.pfma.org.uk/regional-pet-population-2016

equates to a total of 336 dogs. (Using the PMA's national figure of 24% as a basis, there would be a likely total of 576 dogs from the new households.) However, these totals are likely to be an over-estimation, since the data does not allow a calculation of dogs per new person per new dwelling - in other words, it does not account for people moving on to the Site from a location nearby who already own a dog (i.e. they are not 'new' dogs).

105. Dog-owners tend to walk their dogs on a very regular basis and for convenience many inevitably look for routes and open spaces in the immediate vicinity of their home that they can access on foot. The PDSA PAW report (2015)[17] asked dog owners how often their dog walked or ran outside the home or garden on and off a lead for 10 minutes or more:

More than once a day	46% on lead (45% off lead)
Once a day	29% on lead (21% off lead)
Once a week	12% on lead (12% off lead)
Less often	4% on lead (5% off lead)
Has free range	3% on lead (2% off lead)
Never	5% on lead (13% off lead)

When asked for how long they walked, the responses were as follows:

Over an hour	20%
31 minutes to one hour	43%
11-30 minutes	34%
Up to 10 minutes	3%

106. As an approximate calculation, using the figure of 336 dogs from the new development at the Site, a total of 154 dogs (46%) might be expected to be exercised more than once a day; and of that figure 30 dogs (20%) might be expected to be walked for over an hour. (Or, if using the higher figure of 576, that equates to 264 dogs exercised more than once a day and 115 for over an hour.) In the absence of suitable routes or open space on the development Site, it is possible that new residents will walk their dogs on nearby footpaths and publicly accessible

[17] file:///C:/Users/Owner/Downloads/PDSA%20PAW%20Report%202015.pdf

land. Walking for 30 minutes from the Site (to complete a one-hour return trip) at an average of 5km/h (3.1mph) would mean that it would be possible to access the footpaths of the Deben Estuary SPA / Ramsar site on foot from the Site. Therefore, using the above calculations, the conclusion is that this would result in 30 new dog-walks per day (or up to 115 dog-walks using the higher figure) to the Deben Estuary SPA / Ramsar site from the development Site more than once a day.

107. It is also reasonable to assume that new residents at the Site would also include non-dog owners who would choose to take walks from their front door into the countryside close to their homes. Data from the Department for Transport (Local Area Walking and Cycling Statistics: England 2014/15[18]) states that 54% of people make a recreational journey on foot (as opposed to a walk for utility purposes) at least once a month, with 17% of adults walking for recreational purposes at least five times a week, so it is likely that some will take longer walks that may include the Deben Estuary SPA / Ramsar site.

108. Based on the findings of the South Sandlings study, CS HRA 2011 concludes that housing development is likely to result in people living in that new housing walking to any European site within 1km. The South Sandlings study was the visitor survey component of the wider South Sandlings Living Landscapes project, designed to understand current recreational use of the Sandlings SPA in light of future pressures, including new housing. The survey involved monitoring 17 sites in both winter and spring/summer, using face to face interviews through which home postcodes allowed the calculation of distance between that and the interview location. It found that half of all visitors arriving on foot lived within 0.42km and 75% of visitors walked 500m or less to reach the access point.

[18]https://www.gov.uk/government/statistics/local-area-walking-and-cycling-in-england-2014-to-2015

109. At its nearest point, the development Site is approximately 1.4km from the Deben Estuary SPA / Ramsar site. Although this is more than the 1km identified in CS HRA 2011 it is sufficiently close not to be able to rule out people from the Site walking on foot to the Deben Estuary. Studies in Dorset (English Nature Research Report No 682, Visitor Access Patterns on the Thames Basin Heaths, 2005) concluded that the average distance walked on heaths by walkers with or without dogs was 2.2km.

110. Based on the calculation of 3,140 new occupants of the Site, the findings of both the South Sandlings study and the Dorset studies in respect of length of walk, and using the Department of Transport's figure in terms of numbers of people who regularly walk for recreation, it is feasible that a total of 1,695 new residents from the Site might make a walking journey on foot with or without a dog to the Deben Estuary every month (or 423 per week).

111. However the prediction above of the numbers of dog walkers / walkers without dogs accessing the Deben Estuary SPA / Ramsar site on foot from the development Site is likely to be a significant overestimate for the following reasons:

112. The actual numbers of walkers with dogs accessing the Deben Estuary SPA / Ramsar site on foot from the development Site in the winter months is likely to be far fewer. In its general observations on disturbance in the Deben Estuary, SWT Trading Ltd's 2014 report states: "The current situation is quite seasonal with several WeBS sections having little disturbance for most of the winter" (page 25).

113. These numbers do not take into account the availability of other more convenient walking routes. These include public rights of way around and through the Site, as well as a series of connecting footpaths that provide attractive linear and circular walks directly from the Site (see Figure 2). These include:

- public footpaths southwards to Newbourne, Brightwell and Bucklesham, creating a series of circular walking routes;

- a bridleway connection west to Kesgrave, which will be enhanced with a new pedestrian/cycle crossing as part of the new A12 road junction proposed as part of the Development; and
- a footpath link north from the Site to Martlesham and Martlesham Heath, including a connection to the Sandlings Walk recreational walking route and Walk Farm Wood.

114. Based on the PDSA PAW report (2015), which found that most dog owners who walk their dogs at least once a day do so for between 31 minutes to one hour each time (see paragraph 29 above), the network of public footpaths described here, particularly south from the Site to Newbourne and north to Martlesham Heath and Walk Farm Wood, provide circular routes of potentially ideal length for routine dog walks.

115. Another significant factor that is likely to discourage walkers with dogs using the Estuary-side public footpaths, particularly in search of circular routes from the development Site, is that the waterside rights of way between Martlesham Creek and Waldringfield, and between Waldringfield and Hemley, are both currently no through routes, with breaches in the sea wall caused by natural flooding and erosion rendering them impassable (see Figure 2). There are official signs on the paths informing users that these are no through routes and users will have to return the same way. Additionally, the sea wall path between Martlesham Creek and Waldringfield is also extremely difficult to walk in places because of thick gorse that now grows along the top of the embankment, almost certainly as a result of its declining use as a public footpath. Suffolk County Council's East Area Rights of Way Manager has confirmed that there are no plans to reinstate either route and efforts to find diversions inland have foundered due to issues with local landowners (Annette Robinson Pers. Comm., November 2016). In addition, the Deben Estuary Partnership has established that it is "uneconomic" to maintain the sea defences at specific locations north and south of Waldringfield, following a cost benefit analysis using Environment Agency Flood and Coastal Erosion Management guidance (page

31 of The Deben Estuary Plan, 2015[19]). It is understood that the latest breaches occurred with a tidal surge in 2013. The Deben Estuary Plan describe these two route sections beside the estuary as "Low use path" (see map "Rights of Way and their general level of use", page 72).

116. In conclusion, given the various factors described above, and without any further mitigation measures put in place, it is still reasonable to assume that there will be new visits by people walking or without dogs from the Site to the Deben Estuary SPA / Ramsar site, probably in the region of 50-100 new visits every week, and that this could potentially impact on the Deben Estuary SPA / Ramsar site in terms of disturbance to birds.

Recreational impacts (access from people driving from the site)

117. The South Sandlings study used home postcodes to measure the distance between the interviewee's home and the location where interviewed. The survey involved monitoring 17 sites in both winter and spring/summer, and found that most visits to the Sandlings SPA made by non-holiday makers were by car (80%), and half of all visitors arriving by car lived more than 8km away. Taking into account an increase in holiday makers in the summer, the figures were broadly consistent with an earlier study in Dorset (English Nature Research Report No 683, Visitor Access Patterns on the Dorset Heathlands, 2006) which found that 59% of visitors arrived by car, and half of those lived an estimated 3.7km or more away and 10% of those driving to the site lived at least 8.8km away. This led CS HRA 2011 to conclude that housing development is likely to result in people living in that new housing driving to any European site within 8km.

118. The Deben Estuary SPA / Ramsar site is approximately 2.3km by road from the Site, so it is likely that new residents will drive there.

[19]http://www.debenestuarypartnership.co.uk/index.html

119. Within a range of 8km from the Site there are car parks for use by the public near the Deben Estuary at Woodbridge, Martlesham Church and Waldringfield (see Figure 3). It is therefore necessary to assess whether these car parks are likely to see increased use by visitors from the Site seeking to access the Deben Estuary SPA / Ramsar site.

120. In relation to Woodbridge, there are three public pay and display car parks at this location close to the Deben Estuary: Lime Kiln Quay, Station Road and The Avenue. However this is a densely populated area where outdoor recreation is already well established. For instance, a free leaflet supported by Natural England and the Suffolk Coast & Heaths AONB entitled "Woodbridge and the Deben Estuary" promotes three walks from the town centre, two of them along the side of the Estuary. The same waterside route southwards from the town centre to Kyson Hill is also promoted as a walking trail by the National Trust[20] and AA[21]. As a result, and given the town's broader tourist appeal, the car parks are frequently busy or at capacity, so it is considered that there will be no significant additional impact on the Deben Estuary SPA Ramsar site from new visitors at this point (this is also the conclusion of CS HRA 2011, paragraph 6.2.33).

121. In relation to Martlesham, there is an informal car park at Martlesham Church (free but voluntary contributions encouraged via an honesty box), at a distance of approximately 4km from the Site by road. A survey by NANT (Deben Estuary Visitor Survey Report, 2011) provided some limited data on visitor use, but it was collected in the months of April and May and does not provide an accurate indication of winter use. Instead, CS HRA 2011 (paragraph 6.2.34) used the results of the South Sandlings study to predict an increase in visitor numbers for this car park by calculating the number of existing visitors multiplied by the proportionate increase in proposed dwellings within set distance bands (for Martlesham Church it used 2-

[20]https://www.nationaltrust.org.uk/sutton-hoo/trails/kyson-hill-and-kyson-point-walk
[21]http://www.theaa.com/walks/down-by-the-river-at-woodbridge-421019

2.5km). The number of visits to this car park equated to 2 visitors per 100 dwelling within 2.5km of the car park. The proposed development of 2,000 homes at the Site would therefore on that basis be expected to generate 40 additional visits. However, this does not take into account the following factors, so that the estimate of 40 additional visits is likely to be a considerable over estimate:

- the relative inaccessibility of the location along a narrow single track road;
- the fact that the car park is not signposted or promoted in any way (it is not depicted on the Ordnance Survey map, for instance, unlike the other car parks described in this assessment);
- its limited size, in an undefined corner of an arable field;
- the fact it is on private land and public parking is with the permission of the landowner which can be withdrawn at any time;
- the fact it is likely that there will be considerably fewer visits to the car park during the winter, given the seasonal weather conditions and the fact that the car park is unsurfaced;
- that a key walking route leading from this car park along the sea wall from Martlesham Creek to Waldringfield has been rendered a no through route (paragraph 115) so that one could now expect a reduced number of visitors attracted to this car park. The CS HRA 2011 was produced before this latest breach in the sea wall; and
- there are other locations within 8km of the Site that are likely to provide visitors with alternative recreational destinations which would draw them away from the Deben Estuary SPA / Ramsar site. To the immediate west of the Site there is Open Access Land at Martlesham Heath and Rushmere Common, as well as extensive access on foot at Foxhall Heath. There is also a promoted and waymarked walk between villages in the Fynn Valley west of Woodbridge (see Figure 4).

122. At Waldringfield there is a public (paying) car park, a designated car parking area for customers of the Maybush Inn and a third car park for sailing club members only. The public car park is approximately 2.5km from the Site by road. The NANT report

provided some limited data on visitor use, but it was collected in the months of April and May and does not provide an accurate indication of winter use. Instead, CS HRA 2011 (paragraph 6.2.35) used the results of the South Sandlings study to predict an increase in visitor numbers for this car park by calculating the number of existing visitors multiplied by the proportionate increase in proposed dwellings within set distance bands (for Waldringfield public car park it used 2.5-3km). The number of visits to this public car park equated to 1.4 visitors per 100 dwellings within 2.5km of the car park. The proposed development of 2,000 new homes at the Site would therefore on that basis be expected to generate 28 extra visits. However, again, this is likely to be an over estimate given the following:

- the pub car park is restricted to customers, with a time limit of three hours, while the sailing club car park is controlled by a metal barrier;
- the public car park is pay and display, with daily charges year-round, which is likely to act a disincentive to make regular visits by car;
- since there is no nearby roadside parking, the fixed capacity of the car park at this location will itself restrict the number of visitors who park there;
- it is likely that there will be considerably fewer visits to the car park during the winter, given the seasonal weather conditions and lack of watersports activity;
- the estimate of 1.4 visitors per 100 dwellings within 2.5km of the public car park was made prior to the tidal surge of 2013, which compounded the problems of sea wall erosion and made the estuary-side public footpaths from Waldringfield north to Martlesham and south to Hemley becoming no through walking routes (see paragraph 115). This is likely to discourage many people on foot (with or without dogs) from venturing far along the edge of the Deben Estuary SPA / Ramsar site;
- there are other locations within 8km of the Site that are likely to provide visitors with alternative recreational destinations which would draw them away from the Deben Estuary SPA / Ramsar site. As mentioned above, to the immediate west of the Site there is Open Access Land at Martlesham Heath and Rushmere Common, as well as extensive access on foot at

Foxhall Heath. There is also a promoted and waymarked walk between villages in the Fynn Valley west of Woodbridge (see Figure 3).

123. In addition, potential impacts on the Deben Estuary SPA / Ramsar site from future car parking provision can be discounted. This is because emerging Policy SSP32: Visitor Management – European Sites (in Suffolk Coastal District Council's Site Allocations and Area Specific Policies DPD) states that "...any applications for new car parking provision (defined as car parking spaces whether publicly or privately owned which are available for wider public use) located within 1km of the boundary of an internationally designated nature conservation site will only be permitted where it can be demonstrated that they will not result in an increase in activity likely to have a significant effect upon a European site either on their own, or in combination with other uses." Similarly, any proposed improvements to existing access points or the provision of new access points direct into the Estuary will also need to demonstrate that they will not result in any increase in activity likely to have a significant effect upon a European site either on their own or in combination with other uses.

124. In conclusion, given the various factors described above and without any further mitigation measures put in place, it is still reasonable to assume that there will be new visits by people driving (with or without dogs) from the Site to the Deben Estuary SPA / Ramsar site, probably in the region of 25-30 new visits every week, and that this could potentially impact on the SPA / Ramsar site in terms of disturbance to birds.

Impacts from those using mountain bikes from the Site

125. It is possible that new residents from the Site may cycle to the Deben Estuary SPA / Ramsar site or put their mountain bikes on their cars and drive to the Deben Estuary SPA / Ramsar site in order to ride there.

126. There are only a few public bridleways in the vicinity of the Site and the rights of way along the edge of the Deben Estuary are all public footpaths, so cyclists are not legally allowed to use them. Local public rights of way are generally well waymarked and there are signs and notices making it clear that cycling is prohibited on public footpaths.

127. Three signposted National Cycle Network routes pass through the wider area (Route Numbers 1, 41 and 51[22]) and some local routes are promoted as 'Quiet Lanes'[23] for use by cyclists, amongst others, so that cyclists and mountain bikers could potentially cycle considerable distances from the Site. However, both the National Cycle Network routes and the Quiet Lanes network are wholly on existing metalled roads and do not lead riders directly to the Deben Estuary SPA / Ramsar site. Similarly, the 'Woodbrige and Waldringfield Cycle Explorer Guide' published by the Suffolk Coast and Heaths AONB unit is a promoted 24km cycle route that "mainly follows minor roads" via Martlesham and Newbourne and is described as "a ride through lovely countryside with great views of the River Deben"[24].

128. Mountain bikers seeking more adventurous or challenging rides are likely to look instead to dedicated cycle trails, such as those at the Forestry Commission's Rendlesham Forest[25] which have been designed specifically for off-road mountain bikes. There are two well-established and popular family cycling trails at Tangham, plus a bike park/skills area for more advanced riders, all of which will ensure that mountain biking remains a sustainable and well managed activity at this location and will help ensure that it does not impact on the Deben Estuary SPA / Ramsar site instead.

[22]http://www.discoversuffolk.org.uk/cycling-and-horse-riding/national-cycle-routes/
[23]http://www.suffolkcoastandheaths.org/projects-and-partnerships/quiet-lanes-suffolk/
[24]http://www.discoversuffolk.org.uk/assets/Cycling/Images/Leaflets/Adnams-19-Woodbridge.pdf
[25]http://www.discoversuffolk.org.uk/assets/Cycling/Images/Leaflets/Rendlesham-forest-Trails.pdf

129. As a result, even in the absence of any mitigation measures, there is predicted to be no likely significant effect from new visits by mountain bikes on the Deben Estuary SPA / Ramsar site and so this pathway can be scoped out.

THE SANDLINGS SP/ SPA

Vulnerability

130. Sandlings SPA is classified as such for breeding nightjar and woodlark. Both of these species are ground nesting birds that are considered to be vulnerable to impacts from disturbance. There is therefore a risk that an increase in recreation activity within the Sandlings SPA may result in increased disturbance to these species during the breeding season resulting in reduced breeding success. The perception is that activities such as dog walking pose a high risk of disturbance especially when dogs are allowed to roam off the lead.

Impacts from those walking on foot (with / without dogs) from the Site

131. As the crow flies (directly across the Deben Estuary), the nearest access point to the Sandlings SPA from the Site is approximately 4km, but the shortest route on foot around the head of the estuary via Woodbridge is approximately 9.5km.

132. On the basis of the evidence provided above in relation to people's walking behaviour, including a study of heathland visits which showed that the average distance walked with or without dogs was 2.2km (English Nature Research Report No 682, Visitor Access Patterns on the Thames Basin Heaths, 2005), it is not considered that there will be any impact on the Sandlings SPA from visits on foot from the Site. This can therefore be scoped out of the assessment.

Impacts from those driving (with / without dogs) from the Site

133. In order to assess the impact of the Core Strategy on the Sandlings SPA, CS HRA 2011 used visitor research from Suffolk Coast and Heaths AONB (East of England

Tourist Board, 2004) that predicted that visitors to the AONB from eastern Ipswich area (including the Site) would rise by an estimated 0.7%.

134. However, for a more up to date study the CS HRA 2011 also used the 2011 South Sandlings study. The study was the visitor survey component of the wider South Sandlings Living Landscapes project, designed to understand current recreational use of the Sandlings SPA in light of future pressures, including new housing. The survey involved monitoring 17 sites in both winter and spring/summer, and found that most visits to the Sandlings made by non-holiday makers were by car (80%) and half of all visitors arriving by car lived more than 8km away. The survey points for the South Sandlings study included 15 car parks (eight formal and seven informal) at locations around the SPA, although in fact three car parks accounted for 53% of visitors.

135. Using the data from the South Sandlings study, which predicted a greater visitor increase to European sites than the AONB results, CS HRA 2011 modelled an increase in visitor numbers to the Sandlings SPA by calculating the number of existing visitors multiplied by the proportionate increase in dwellings (proposed/existing) within a series of distance bands from access points to the SPA (Table 8, paragraph 5.5.10). The proposed development Site falls within the 4.5-5km band, which would result in a predicted increase of 33.7 visitors to the SPA from the Site.

136. Although, elsewhere, the CS HRA 2011 concludes that housing development is likely to result in people living in that new housing driving to any European site within 8km, visits to the Sandlings SPA by car from the Site (approximately 9.5km away from the Site by road) cannot be ruled out. However, the figure of 33.7 extra visits by car an over-estimation because of:

- the distance from the Site to the Sandlings SPA, the actual route via the busy roads of Woodbridge, and possibly the cost of petrol, all of which may act as a deterrent for some new residents of the Site; and

- the existence of other more convenient locations within 8km of the Site which are likely to be equally or more attractive than the Sandlings SPA to new residents driving from the Site, including the Open Access Land at Martlesham Heath and Rushmere Common, extensive access on foot at Foxhall Heath; and the footpath network of the Fynn Valley west of Woodbridge.

137. In addition any impact on the SPA of additional visits by car generated by the Site is likely to be minimised due to the proliferation of car parks around the Sandlings SPA, including three accessible car parks on the western edge of the SPA around Sutton Heath (i.e. closest to those arriving at the Sandlings from the Site), which is likely to have the effect of dispersingany new visitors across the extent of the SPA.

138. For these reasons , and even in the absence of any mitigation measures, the recreational impacts of any increase in visits by car from the Site to the Sandlings SPA is considered to be *de minimis.*

Impacts from those using mountain bikes from the Site

139. It is possible that new residents from the Site may put their mountain bikes on their cars and drive to the Sandlings SPA sites in order to go for a ride or even ride to the Sandlings SPA from the Site.

140. However, the distance from the Site to the Sandlings (9.5km) and the opportunity to explore lanes and bridleways nearer to home may discourage some cyclists from making this journey. In addition, those mountain bikers that do visit the Sandlings SPA will either be restricted to: (i) a small network of bridleways and local lanes, since the 'Open Access' dedicated land that covers much of the Sandlings SPA allows freedom to roam on foot only; and (ii) the Forestry Commission's Rendlesham Forest Cycle Trails[26], two well-established and popular family cycling trails at Tangham, plus a bike park/skills area for more advanced riders, all of which

[26]http://www.discoversuffolk.org.uk/assets/Cycling/Images/Leaflets/Rendlesham-forest-Trails.pdf

will ensure that mountain biking remains well managed and any new visits by bike will not impact negatively on the SPA.

141. As a result, even in the absence of any mitigation measures, there is predicted to be no likely significant effect from new visits by mountain bikes on the Sandlings SPA and so this pathway can be scoped out.

STOUR AND ORWELL ESTUARIES SPA/RAMSAR

142. The Stour and Orwell SPA and Ramsar is classified for breeding avocet and a suite of named over-wintering species as well and an assemblage of wintering wildfowl. The site therefore supports ornithological interest that is present on the estuary for much of the year. As with the Deben Estuary, the ornithological interest of the site is considered to be vulnerable to increased disturbance from recreational pressure as described above.

143. The Ramsar citation also includes unnamed invertebrates and the intertidal plant species dwarf eelgrass *Zosterianoltei* and small chord grass *Spartinamaritima.* Both dwarf eelgrass and chord grass are associated with intertidal and sublittoral muds and are therefore considered to be vulnerable to recreational pressures, as visitors to the SPA are highly unlikely to gain access to these habitats.

144. The invertebrate interest cited in the Ramsar cannot be assessed as the species are not named in the citation.

Impacts from those walking on foot (with / without dogs) from the Site

145. At its nearest point to the Site (the northern shore of the Orwell estuary near Nacton), the Stour and Orwell Estuaries SPA / Ramsar site is approximately 8km away on foot. Because of this, and taking into account evidence cited above which shows that the average distance walked with or without dogs is 2.2km (English Nature Research Report No 682, Visitor Access Patterns on the Thames Basin Heaths, 2005), it is not considered that there will be any impact on this SPA from visits on foot arising from the development at the Site. This impact can therefore be scoped out of the assessment

Impacts from those driving (with / without dogs) from the Site

146. At its nearest point to the Site (the northern shore of the Orwell estuary near Nacton), the Stour and Orwell Estuaries SPA / Ramsar site is 8.5km away by road. Because of the topography of the two estuaries, the southern shore of the Orwell Estuary and the whole of the Stour Estuary is considered inaccessible by road in terms of distance from the Site for the purposes of this assessment.

147. The CS HRA 2011 concludes that housing development is likely to result in people living in that new housing driving to any European site within 8km, so at its nearest point (8.5km) the Stour and Orwell Estuaries SPA / Ramsar site is just over the threshold. However, given the relatively direct driving route from the Site to the SPA / Ramsar site it is not possible to rule out new journeys by car made from the Site to the SPA / Ramsar site.

148. Despite this, the numbers of new visits by car from the Site and any potential impacts on the northern shore of the Orwell Estuary (part of the Stour and Orwell Estuaries SPA /Ramsar site) is likely to be minimised because:

i. public access to the northern shore of the Orwell SPA / Ramsar site by car is very limited and there is a general lack of car parking opportunities close to the water, which will discourage regular recreational visits. The Stour and Orwell Estuaries Scheme of Management 2010[27] states: "Vehicular access to the estuaries is difficult (because much of the land around the estuaries is privately owned and limited to sites such as car parks, picnic sites, towns and villages" (page 17). It adds: "Motorised vehicles have been banned from all foreshores around the estuaries under powers pursuant to the Highways Act 1980". A research project into the disturbance of wintering waterbirds on the Stour and Orwell estuaries for the Suffolk Coast and Heaths Unit (Ravenscroft et al, 2007) concluded that, among the factors that determined levels of recreational activity and hence likely disturbance, "ease of access was the key aspect" (page 19);

ii. where public access does take place it is generally well managed, such as at Trimley Marshes nature reserve (near the mouth of the Estuary towards

[27]http://data.wildlifetrusts.org/sites/default/files/Stour-and-Orwell-Estuary-Management-Scheme.pdf

Felixstowe) where access is already "well managed to successfully reduce any visitor impact to acceptable levels" (CS HRA 2011, paragraph 6.2.38); and

iii. a well-established visitor management regime is already in place at Orwell Country Park, with promoted public car parks at Pipers Vale and Bridge Wood. A wide range of visitor activities and associated facilities are provided here in a sustainable location next to the Estuary and it is therefore reasonable to assume that this will attract a significant proportion of any new visits from the Site that do take place.

149. This combination of distance from the Site, difficult access to much of the shoreline for car drivers, plus signposting to established and sustainable visitor locations, means that, even in the absence of any mitigation measures, the impact of any additional visits from the Site will be *de minimis.*

Impacts from those using mountain bikes from the Site

150. It is possible that new residents from the Site may put their mountain bikes on their cars and drive to the Stour and Orwell Estuaries SPA / Ramsar sites in order to go for a ride or even ride to the Stour and Orwell Estuaries SPA from the Site.

151. However, as noted above public access to the shoreline of the SPA / Ramsar site by car is very limited and there is a general lack of car parking opportunities close to the water, which will discourage regular recreational visits by bikers transporting their bikes by car. In addition, and most significantly, there is no legal right to cycle along the vast majority of the shoreline, since the rights of way that do exist beside the water are mostly public footpaths and therefore useable by walkers only.

152. As a result, there is predicted to be no likely significant effect from new visits by mountain bikes on the Stour and Orwell Estuaries SPA / Ramsar sites and so this pathway can be scoped out.

11. Mitigation to address Likely Significant Effects

153. Policy SP20 of the Core Strategy envisaged the following mitigation measures to address the recreational impacts of development on Land to the south and east of Adastral Park. This was based on the Core Strategy HRA prepared in 2011 and 2013:

i. creation of alternative recreational opportunities as an alternative to European sites;
ii. improved visitor infrastructure at relevant European sites, including wardening;
iii. monitoring to quantify reductions in visitor harm achieved by mitigation projects at the relevant European / Ramsar sites; and
iv. increased access to open space off-site (as well as on-site).

154. This mitigation has been borne in mind when designing the mitigation for the development at the Site.

On site recreation mitigation

155. The provision of additional high quality and accessible greenspace in or around new developments is recognised as an effective way of mitigating the impact of increased pressure on European sites from recreational activity arising from the additional population associated with the Development.

156. The concept of Suitable Alternative (or Accessible) Natural Greenspace (SANG) and a framework for its delivery was first developed in relation to the Thames Basin Heaths SPA, a fragmented habitat of lowland heath covering parts of Surrey, Berkshire and Hampshire (see "Thames Basin Heaths Special Protection Area Delivery Framework", 2009[28]). As part of this process, Natural England produced a set of SANG guidelines for its use as a mitigation tool (see Appendix C of "Thames Basin Heaths Special Protection Area Supplementary Planning Document Part 1, Royal Borough of Windsor and Maidenhead Local Development Framework, 2010[29]).

[28]http://www.bracknell-forest.gov.uk/thames-basin-heaths-spa-delivery-framework.pdf
[29]http://www.rbwm.gov.uk/public/pp_spa_spd_july10_document.pdf

157. A SANG could be a new and alternative area of high quality open space, or it could take the form of improved access to an existing semi-natural green space. A SANG might be provided by a local authority with developer contributions, or it might be provided by a developer in respect of an individual development. The creation of SANGs was part of a wider approach that also included strategic access and habitat management measures.

158. Since the Thames Basin Heaths initiative, the approach of providing alternative recreational land to draw new residents away from protected sites has become more widely adopted, especially in other lowland heath areas of southern England such as Dorset (see The Dorset Heathland Planning Framework SPD, 2015[30]) and the Ashdown Forest SPA of the Weald in Kent[31].

159. However, as a mitigation tool it has also started to be applied in non-heathland habitats, including in South Devon in relation to protected European sites at Dawlish Warren and the Exe Estuary SPA; at Chichester and Langstone Harbours SPA on The Solent; and in Braintree, Essex, in respect of the Blackwater and Colne Estuary SPAs. At the latter, the Council proposed eight local open spaces suitable as potential SANGs which were close to existing towns but would be capable of absorbing extra visitors. Enhancement of recreational facilities and coordinated access management measures were also part of the recommendations, all of which Natural England endorsed. Clearly the concept of providing alternative greenspace for recreation to offset development and relieve potential pressure on protected nature sites is one that can be extended to habitats beyond lowland heaths, even though it may not be possible to replicate precisely the same habitat (such as in the case of an estuary). As with the other examples mentioned, Braintree District

[30]https://www.dorsetforyou.gov.uk/article/387392/Dorset-Heathlands-Planning-Framework
[31]http://www.wealden.gov.uk/Wealden/Residents/Planning_and_Building_Control/Planning_Development_Management/Agents_and_Parish_Council_Information/Planning_Agents_Ashdown_Forest.aspx

Council was informed by Natural England's SANG guidelines and, to the extent relevant, they have informed the design of the SANG proposed here.

SANG Calculation

160. The parameters upon which the SANG requirement has been calculated have been agreed with Natural England (Appendix 1). These parameters are,

Parameter 1
8 ha of SANG to be provided per 1000 head of population (Thames Basin Heaths SPA Delivery Framework, 2009).

Parameter 2
The occupation rate is assumed to be 1.57 people per household (SCDC's HRA dated November 2011 and used by BT in its 2012 shadow HRA).

Parameter 3
Land to the south and east of Adastral Park to provide up to 2000 new residential units

161. Parameter 1 is derived from the Thames Basin Heaths SPA Delivery Framework, 2009. Natural England in a response to an Access to Information Request (Appendix1) has confirmed that the figure of 8ha /1000 population was the figure agreed as a result of the 2007 Examination of in Public of the South East Plan. Natural England in the same letter also advise that '*the setting up of strategic mitigation in other areas of the country is based on local evidence to inform local standards'.* Such a standard has yet to be established in the Suffolk Coastal area, however the adoption of the same standard of 8ha/1000 head of population is considered to be precautionary for the following reason. The 8ha/1000 was designed to mitigate recreational impacts upon lowland heath which are habitats that, by their nature are highly accessible and are often criss-crossed by informal access paths. Indeed many lowland heath sites are designated as Open Access land under the Countryside and Rights of Way Act 2000. In the case of this proposal the recreational pressures are likely to occur on the Site that is closest to the Deben Estuary, which by contrast are inaccessible being intertidal and comprising large areas of mudflats. Any recreation pressure is therefore likely to be concentrated on the periphery of the SPA on established footpaths rather than extending in to the

centre of the SPA. The provision of 8ha per 1000 population is therefore considered to be a precautionary approach.

162. Parameter 2 sets out the additional population per household that will be generated by the proposed development. This figure does not represent the number of people in each household, but rather additional population the development is considered to generate. Some of the new residents in the proposed development are expected to move from existing multi occupancy dwellings in the District and would therefore not represent 'new' people in the District. The figure of 1.57 people per household was used at the basis for the HRA of the Suffolk Coastal Core Strategy (paras 5.3.8 to 5.3.13)[32].

163. Parameters 1 and 2 are multiplied by the number of dwellings to give the overall SANG requirement ((8ha/1000) x 1.57 x 2000 = 25.12 Ha).

SANG Design

164. The 25.12ha of high quality SANG will be created within the application Site, comprising a core block of 18.1ha and 7ha of linking paths that will include existing public rights of way. These rights of way will be enhanced, where appropriate, by planting and landscaping in order to create a more attractive walking, cycling and horse riding experience. The figure of 25.12ha will also include 3.3ha of informal outdoor play space designed to fit in with the semi-naturalistic environment. See Figure 5.

165. The SANG for the Site has been designed to be both attractive and convenient. The focal point of the proposed publicly accessible greenspace area will be the existing lake, surrounded by a landscaped area of open meadow and amenity grassland for informal/passive recreation. There will be some mown grass and semi-surfaced paths and it will form a safe, attractive and accessible public area. With a mix of

[32]Appropriate Assessment for Suffolk Coastal District CouncilCore Strategy and Development ManagementPoliciesNovember 2011

habitats, including meadow, heath, woodland, water and scrub, plus a gently rolling topography, this large 18.1ha area of greenspace at the heart of the development site is designed to provide a high quality recreation offer that will encourage residents from the new development to stay on the Site.

166. The 3.3ha of informal outdoor play space within the newly-created greenspace will be of a design and nature that is suitable within the character of a SANG, such as timber trim trail equipment and landscaped areas for play. This will be complemented by separate formal recreation play areas and sports pitches across the Site.

167. There will also be a low disturbance zone within the SANG managed for wildlife, focused on the semi-aquatic wetland edge of the lake and surrounding vegetation where new tree planting will take place. Habitats in this zone will be specifically developed for species such as sand martin and nightingale.

168. In addition, a significant area of lowland heath will be created within the SANG, stretching northwards from the lake and linking with an existing mature woodland block, Spratt's Plantation, which will be retained and improved.

169. In this way and unlike the Thames Basins Heath SPA SANG approach, instead of attempting to provide any sort of comparable habitat to the Deben Estuary SPA (which would not be feasible) the SANG has been designed to offer a variety of high quality habitats over a large area, most notably featuring water and heathland which are both fundamental landscape characteristics of the Suffolk Coast and Heaths AONB which abuts the Site.

170. The on-site SANG offer has been carefully designed to meet the needs of existing and future dog-owners. There will be a circular walking route of 2.5km around and through the core greenspace area, which meets an essential criteria of Natural England's SANG guidelines and the requirements of the majority of routine dog walkers who exercise their dogs for between 31 minutes and one hour every day (see paragraph 29). In addition, there will be a continuous route around the entire

perimeter of the site (mostly on existing public rights of way) which measures approximately 6km. This, together with an intersecting network of green footpath links within the Site, will provide a choice of longer dog-walking routes contained entirely within the development Site. In additionto the public footpath and bridleway corridors, the creation of safe, attractive and open recreational space within the core greenspace areawill allow plenty of opportunities for the off-lead exercise of dogs and this activity will be positively promoted in defined areas.

171. The creation of an attractive and well designed dog-walking area on the Site to meet the needs of new (and existing) dog walkers, in order to discourage visits to the Deben Estuary SPA / Ramsar site, will satisfy a key recommendation of the Deben Estuary bird disturbance report (SWT Trading Ltd, 2014), which raised concerns about the potential of more visits to the Estuary with dogs: "It is imperative that the development should have a recreational area that will prevent this increase" (page 34).

172. The design and provision of a variety of long, on-site circular dog-walking routes which will be attractive in their own right for dogs and their owners, plus clearly designated areas for the off-lead exercise of dogs, will also meet two of the key criteria in the publication "Planning for Dog Ownership in New Developments" (Jenkinson et al, 2013[33]). All the other criteria will be met as part of the proposed development:

i. provide access to a variety of greenspace opportunities, with open and enclosed landscapes, naturalistic path surfaces, seating and separation from roads and other dangers;
ii. provision of convenient dog waste bins and regular emptying;
iii. clear information about off-lead access and desired behaviours; and
iv. supply welcome packs for new home owners with dogs.

[33]http://documents.hants.gov.uk/ccbs/countryside/planningfordogownership.pdf

173. In addition to the creation and management of the SANG, a programme of monitoring will be put in place to measure the effectiveness of the on-site measures as they relate to dog-walking. In this way, adjustments can be made, if necessary (for instance, modifying a promoted route or providing additional dog waste bins) to ensure they are effective.

174. Via standard public footpath and bridleway signposts and waymarks, the SANG will be clearly identified on the ground, as well as promoted to the new homes via leaflets and other information.

175. The creation of the accessible greenspace at the heart of the Site will precede or coincide with the first phase of housing development, although the lake and the public rights of way are already in place and public access will not be affected. Indeed, because there is already a well developed public right of way network around and through the Site, walking habits (and especially dog-walking habits) will be able to be established immediately.

176. Although the public rights of way across and around the application Site are all open and in use, the open space that will comprise the main block of the proposed SANG is currently not publicly accessible and so is not currently in use by the public. This will therefore provide a new recreational facility for the new residents at the Site and also for other existing residents living locally.

177. Car parking has not been provided as part of the proposed SANG, since the site is intended for local use and is within easy walking distance of the new dwellings and neighbouring dwellings surrounding it.

Relationship of the "on-site recreational mitigation with offsite recreational mitigation

178. In order to complement the on-site recreational offer from the new development and discourage new residents from accessing European sites for recreational purposes, the public rights of way that both cross and encircle the Site will be retained and enhanced. New planting will improve the setting of some sections and in particular

the north-south public footpath through the Site will benefit from an undeveloped green corridor for much of the way, as well as fringing the newly created area of heathland.

179. This north-south thoroughfare is a key recreational route, since it provides access from the Site to Newbourne, Brightwell and Bucklesham to the south, and to Martlesham to the north (see Figure 2. Subject to advice from Suffolk County Council Rights of Way officers, it is proposed that this public footpath is upgraded to bridleway status to allow access for cyclists and horse riders, as well as walkers, and encourage sustainable off-road journeys to Martlesham and beyond for new (and existing) local residents that will take them away from the Deben Estuary SPA / Ramsar site.

180. The public bridleway west from the Site towards Kesgrave, currently effectively truncated by the A12 dual carriageway, will become a through route once more by the introduction of a nearby crossing point at the road junction proposed as part of this Development. It is proposed to create a new section of bridleway through the Site to allow easier access to this point. In this way, new (and existing) recreational journeys on foot and by bike and horse will be encouraged away from the Deben Estuary SPA / Ramsar site.

181. These routes will form part of a series of suggested walking and cycling trails that will be promoted to new residents via leaflets and via on site information boards.

182. Given that these routes are in excess of the average dog-walking distance of 2.5km, and most considerably so, then they are likely to appeal to dog-walkers who might choose to explore much longer routes off site; and on that basis they will be promoted accordingly via the targeted information for new dog-owners (see above).

Site / design / phasing of the proposed mitigation

183. The size, design and phasing of the proposed SANG is based on the SANG requirements initially established in the Thames Basin Heaths SPA Delivery

Framework 2009 of "at least 8ha per 1000 population" (paragraph 5.9). English Nature's earlier general mitigation guidance from 2006 of 16ha per 1000 is out of date.

184. The Thames Basin Heaths SPA Delivery Framework guidance also states that "the average occupancy rate should be assumed to be 2.4 persons per dwelling unless robust local evidence demonstrates otherwise" (paragraph 5.9) [emphasis added]. In this instance, robust local data was provided via the Local Development Framework evidence base (2010), using data from the ONS and projections tailored to the local situation (CS HRA 2011, paragraph 5.3.8). It calculated a figure of 1.57 new persons per new dwelling for Suffolk Coastal District. This was subsequently used for the CS HRA 2011, as well as by BT plc in its sHRA (2012), and it is used here.

185. The proposed approach is also in accordance with the Haven Gateway Green Infrastructure Strategy 2008, referred to in Policy SP17 CS on "Green space" which states that communities will have well-managed access to green space. The SANG offered as part of the on-Site provision fulfils the Strategy's Accessible Natural Greenspace (ANG) standards on a Neighbourhood Level by offering 2 ha or more ANG within 300m of home and on a District Level by offering 20 ha of ANG within 1.2 km of home. In addition, it fulfils the other key ANG criteria by being freely, easily and publicly accessible; managed positively for public access; and having a natural or semi-natural land covering.

Beneficial effects of the on-site mitigation

186. The provision of the high quality SANG and enhancement to on-site rights of way and other off-site recreational routes will have the effect of encouraging new residents to stay on the Site or to use other local recreational routes instead of making routine visits to the Deben Estuary SPA / Ramsar site.

187. At the same time, the high quality SANG will attract others living nearby to the new SANG, thereby also diverting them from visiting the Deben Estuary SPA / Ramsar site.

Financial Contribution

188. As mentioned above the RAMS will set out the management that will be required to mitigate recreational impacts arising from the increased population associated with new housing. The strategy will include costings of each measure required and proposed a mechanism for the levi of a tarrif to fund the migiation measures. The proposed development will contribute to this levi thereby ensuring that any residual imapcts not mitigated by on site measures will be fully mitigated.

189. Policy SP20 requires that:

"Infrastructure needs to be accorded priority include:

i. Provision of and increased access to open space both on- and off-site to meet the mitigation measures outlined in the November 2011 Appropriate Assessment. This includes enhanced wardening and monitoring of visitor impacts upon designated European nature conservation sites"... [emphasis added]

ii. Improvements to the public rights of way network, including pedestrian and cycle links;"

Improved visitor infrastructure at relevant European sites, including wardening / monitoring

190. As mentioned above, Policy SP 20 envisages:

i. improved visitor infrastructure at relevant European sites, including wardening,
ii. monitoring to quantify reductions in visitor harm achieved by mitigation projects at the relevant European / Ramsar sites; and
iii. The developer will offer a financial contribution, to be secured through a planning obligation, towards improved visitor infrastructure at the Deben Estuary SPA / Ramsar site to include wardening and monitoring. The extent of that contribution will be discussed with the Council.

12. Conclusion

191. The mitigation set out above aims to ensure that any impact from the proposed development will be avoided or fully mitigated. The proposed avoidance measures are comprehensive, providing high quality open space within the heart of the proposed development that is specifically designed to discourage new residents from traveling to the European sites considered in this sHRA.

192. The avoidance measure (provision of on-site open space) is considered to be sufficient to avoid any significant adverse effects upon the Deben Estuary SPA and Ramsar site when considered alone. Indeed, given the greater distances involved, that same is also true for other European sites, Stour and Orwell Estuaries SPA and Ramsar site and Sandlings SPA.

193. As set out above, there is the potential that even taking into account the on-site avoidance measures, there could be residual impacts (namely generation of increased visitors from people traveling by car to the European sites) that could combine with other plans or projects to give rise to likely significant effects. These in combination effects are explored in the following section.

13. In combination impacts

194. A cautious approach has been adopted in this assessment, in that it has been assumed that the on-site avoidance measures may not be 100% successful in discouraging new residents from accessing the European sites within the area. In line with the HRA of the Core Strategy, it has been assumed that ‘day tripper’ visitors to the European traveling some distance by car may increase as a result of the proposed development.

195. These residual impacts are, however, anticipated in the HRA of the Core Strategy and mitigation measures proposed. The Core Strategy was adopted, following Main Modification 4, based on “at least 7900” new housing units between 2010 - 2027 including both allocated and windfall development. The Core Strategy revised HRA

dated June 2013 concluded (para 3.3.3) that the 2011 HRA proposed mitigation was sufficiently robust to mitigate this amount of new housing units.

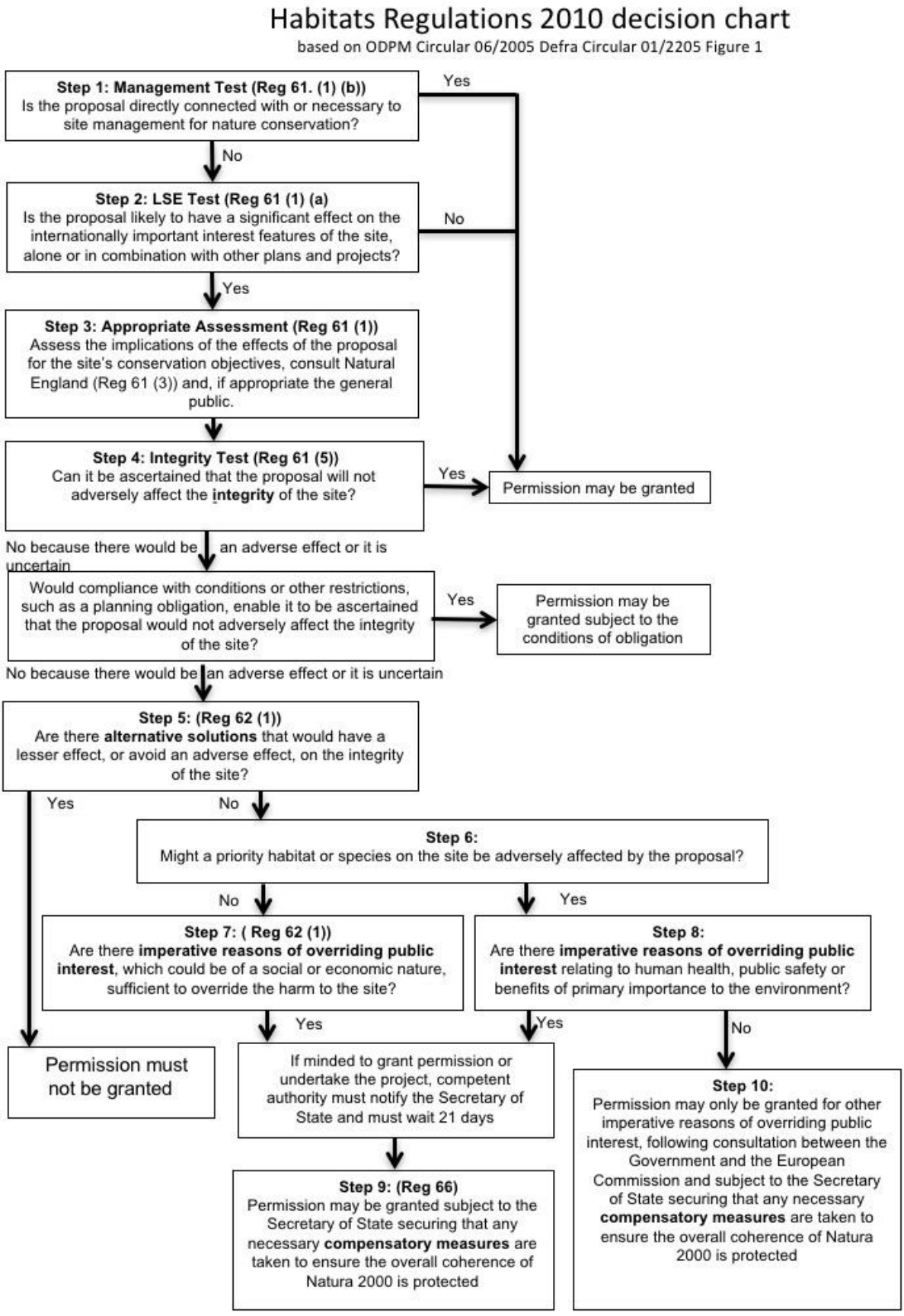
196. Mitigation of these residual impacts were considered further in the HRA dated February / March 2016 for the Site Allocations and Area Specific Policies DPD Proposed Submission Document dated April 2016 (now adopted).At Paragraph 1.35 it is stated that '*One further important piece of work is the 'Recreational Avoidance and Mitigation Strategy* [RAMS] *for Babergh District Council, Ipswich Borough Council and Suffolk Coastal District Council' which is due to complete by March 2017. This will help identify specific projects to mitigate the impact of new development, and particularly any associated increase in disturbance from walkers and dog walkers on the Special Protection Areas and Special Areas of Conservation (European Sites) within the three local authority areas e.g. visitor management measures, above and beyond any necessary site specific requirements. Other plans and strategies to which this plan has note include the estuary and shoreline management plans'.* As mention above the RAMS is now close to completion and it is understood that this document will set out how funds raised through a levy on new housing will be spent to mitigate impacts of new housing upon European sites.

197. It is proposed that the Development will make an appropriate contribution to the RAMS, adding further assurance that impacts upon European sites will be fully mitigated.

198. It is therefore safe to conclude the that proposed development, taking into account avoidance and mitigation measures (both on and off site) will not give rise to any likely significant effects upon European sites either alone or in combination with other plans or projects.

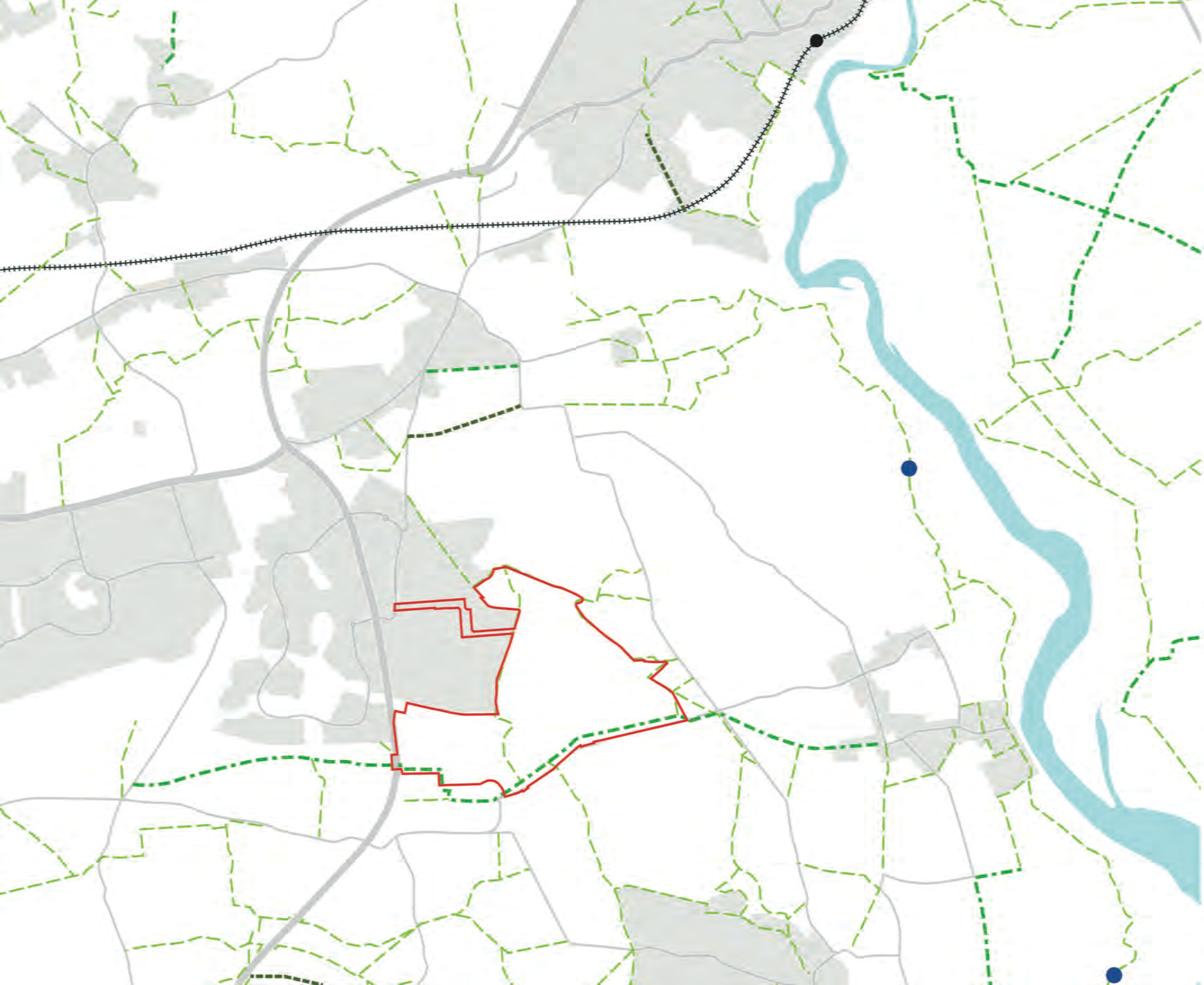
199. The proposed development therefore passes the legal tests that protect European sites at Step 2 set out in Figure 1.

Figure 1


Habitats Regulations 2010 decision chart
based on ODPM Circular 06/2005 Defra Circular 01/2205 Figure 1
Step 1: Management Test (Reg 61. (1) (b))
Is the proposal directly connected with or necessary to site management for nature conservation?
Yes
No
Step 2: LSE Test (Reg 61 (1) (a)
Is the proposal likely to have a significant effect on the internationally important interest features of the site, alone or in combination with other plans and projects?
No
Yes
Step 3: Appropriate Assessment (Reg 61 (1))
Assess the implications of the effects of the proposal for the site's conservation objectives, consult Natural England (Reg 61 (3)) and, if appropriate the general public.
Step 4: Integrity Test (Reg 61 (5))
Can it be ascertained that the proposal will not adversely affect the integrity of the site?
Yes
Permission may be granted
No because there would be an adverse effect or it is uncertain
Would compliance with conditions or other restrictions, such as a planning obligation, enable it to be ascertained that the proposal would not adversely affect the integrity of the site?
Yes
Permission may be granted subject to the conditions of obligation
No because there would be an adverse effect or it is uncertain
Step 5: (Reg 62 (1))
Are there alternative solutions that would have a lesser effect, or avoid an adverse effect, on the integrity of the site?
Yes
No
Step 6:
Might a priority habitat or species on the site be adversely affected by the proposal?
No
Yes
Step 7: (Reg 62 (1))
Are there imperative reasons of overriding public interest, which could be of a social or economic nature, sufficient to override the harm to the site?
Step 8:
Are there imperative reasons of overriding public interest relating to human health, public safety or benefits of primary importance to the environment?
Yes
Yes
No
Permission must not be granted
If minded to grant permission or undertake the project, competent authority must notify the Secretary of State and must wait 21 days
Step 10:
Permission may only be granted for other imperative reasons of overriding public interest, following consultation between the Government and the European Commission and subject to the Secretary of State securing that any necessary compensatory measures are taken to ensure the overall coherence of Natura 2000 is protected
Step 9: (Reg 66)
Permission may be granted subject to the Secretary of State securing that any necessary compensatory measures are taken to ensure the overall coherence of Natura 2000 is protected

Contractors are not to scale dimensions from this drawing

Figure 2



KEY:

- Boundary
- Public Bridleway
- Public Footpath
- Restricted Byway
- Sea Wall Breached - No through access

Revision	Date	Description
-		-

BroadwayMalyan[BM]

Architecture Urbanism Design

3 Weybridge Business Park
Addlestone Road
Weybridge, Surrey
KT15 2BW

T: +44 (0)1932 845 599
F: +44 (0)1932 856 206
E: Wey@BroadwayMalyan.com

www.BroadwayMalyan.com

Client
CLL / CEG

Project
Land south and east of Adastral Park

Description
Public Rights of Way

Status
Draft

Scale	Drawn By	Date
1:10,000@A1	BM	13.03.17

Job Number	Drawing Number	Revision
31677	Fig.1	

Contractors are not to scale dimensions from this drawing

Figure 3

KEY:

Boundary

Public Car Park

Revision	Date	Description
–	170404-00	–

BroadwayMalyan[BM]

Architecture Urbanism Design

3 Weybridge Business Park
Addlestone Road
Weybridge, Surrey
KT15 2BW

T: +44 (0)1932 845 599
F: +44 (0)1932 856 206
E: Wey@BroadwayMalyan.com

www.BroadwayMalyan.com

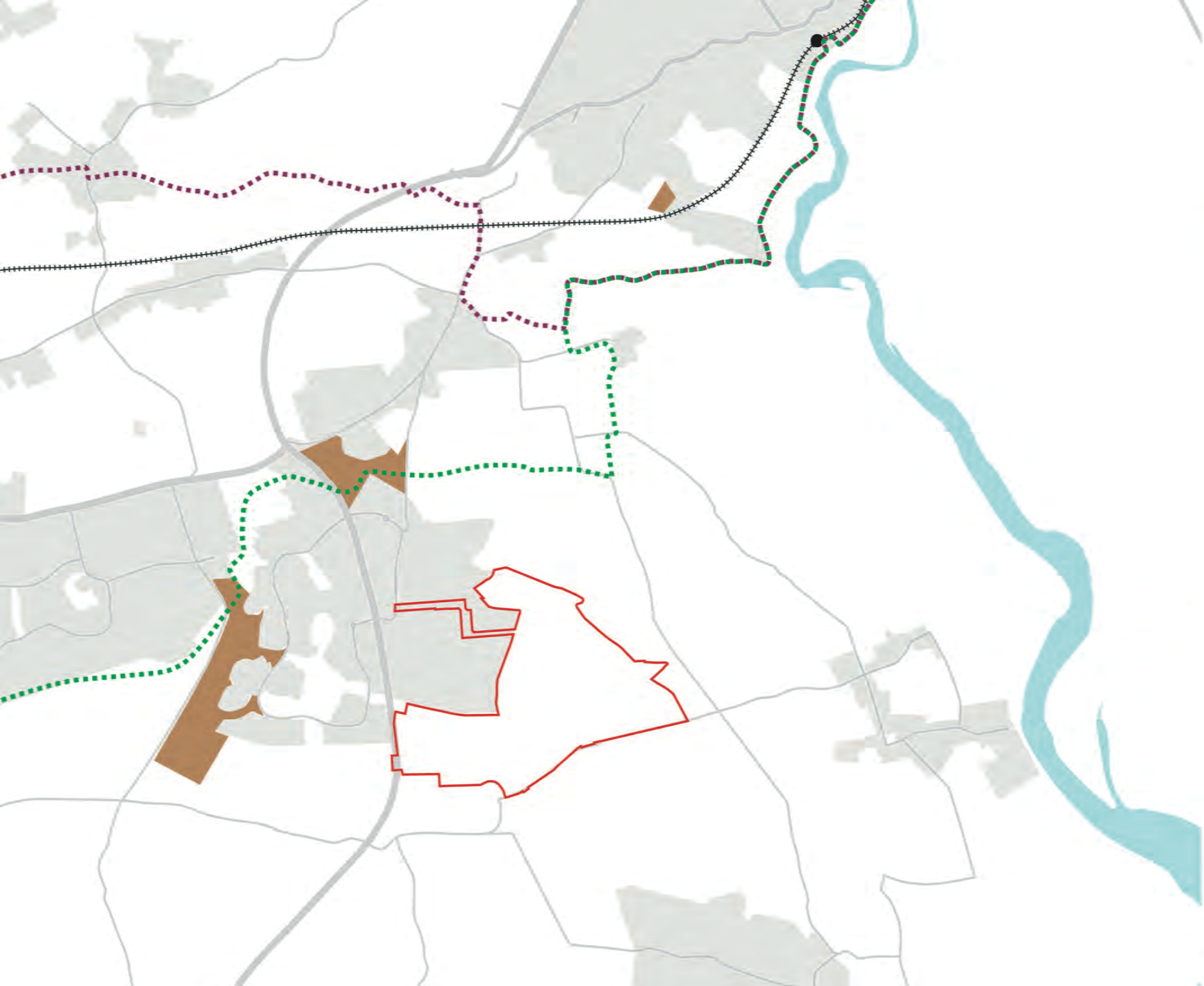
Client
CLL / CEG

Project
Land south and east of Adastral Park

Description
Public Car Parks
near the Deben Estuary

Status
Draft

Scale	Drawn By	Date
1:10,000@A1	BM	13.03.17
Job Number	Drawing Number	Revision
31677	Fig.2	



Contractors are not to scale dimensions from this drawing

Figure 4

KEY:

- Boundary
- Fynn Valley Walk
- Sandlings Walk
- Access Land

Revision	Date	Description
–	170404-00	–

BroadwayMalyan[BM]

Architecture Urbanism Design

3 Weybridge Business Park
Addlestone Road
Weybridge, Surrey
KT15 2BW

T: +44 (0)1932 845 599
F: +44 (0)1932 856 206
E: Wey@BroadwayMalyan.com

www.BroadwayMalyan.com

Client
CLL / CEG

Project
Land south and east of Adastral Park

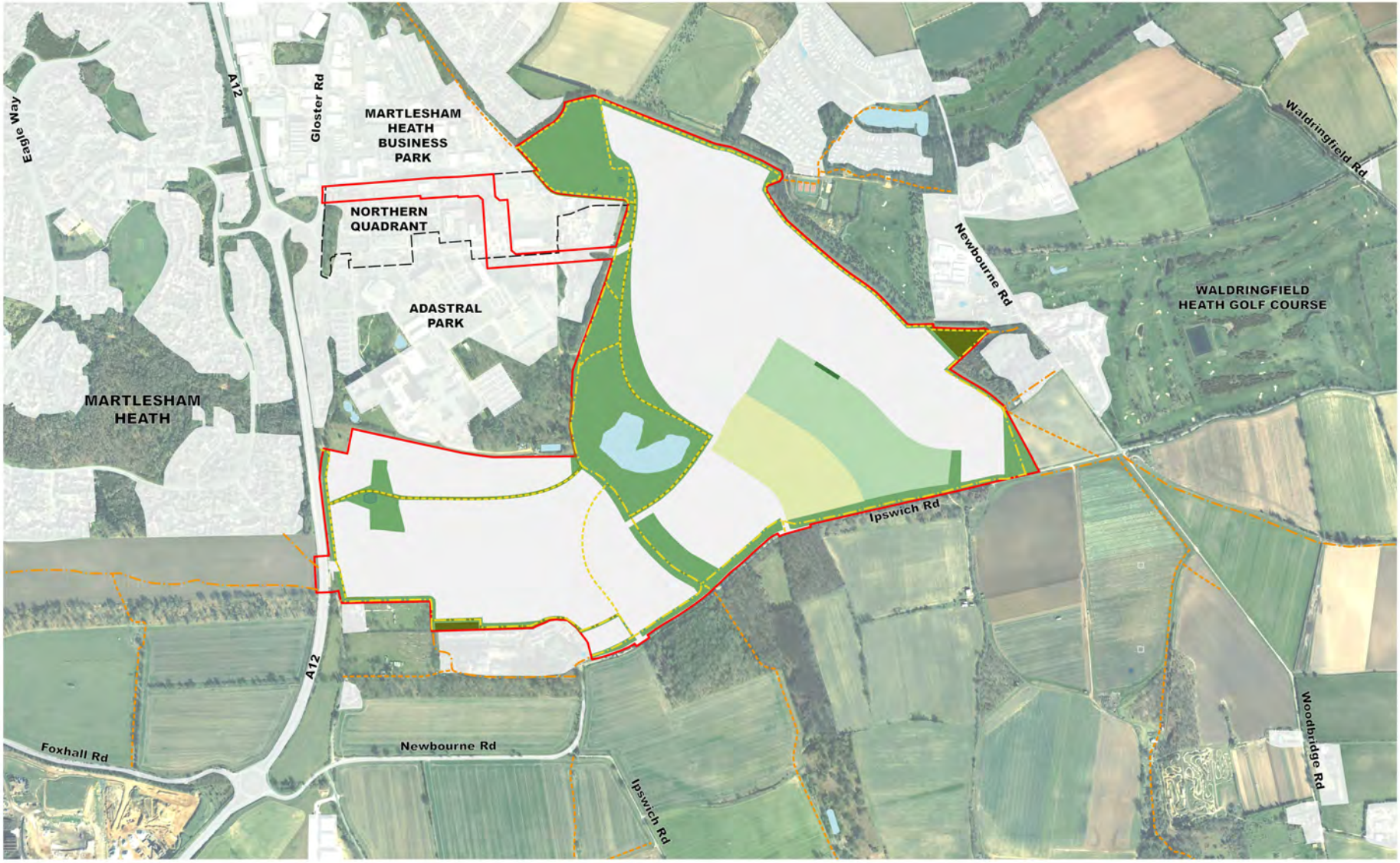
Description
Waymarked walking trails
& Access Land

Status
Draft

Scale	Drawn By	Date
1:10,000@A1	BM	13.03.17
Job Number	Drawing Number	Revision
31677	Fig.3	

Contractors are not to scale dimensions from this drawing

Figure 5



Key

- Extent of Application Area
- Northern Quadrant

Green Infrastructure

- Suitable Accessible Natural Green Space (SANGS)
- Formal Recreation
- Allotments / Community Orchards
- Education
- Open water
- Indicative Pedestrian Route Within Site
- Indicative Bridleway Route Within Site
- Existing Pedestrian Route
- Existing Bridleway
- Scheduled Monument (SM)
- SSSI

Revision	Date	Description
–	YY-MM-DD	–

BroadwayMalyan BM

Architecture Urbanism Design

3 Weybridge Business Park
Addlestone Road
Weybridge, Surrey
KT15 2BW

T: +44 (0)1932 845 599
F: +44 (0)1932 856 206
E: Wey@BroadwayMalyan.com

www.BroadwayMalyan.com

Client
CLL / CEG

Project
Land south and east of Adastral Park

Description
Green Infrastructure

Status
Draft

Scale	Drawn By	Date
1:5,000@A1	BM	07.03.17

Job Number	Drawing Number	Revision
31677	09	B

Appendix 1 Agreed parameters for the sHRA

baker consultants
ECOLOGY DESIGN INNOVATION

Mr J Jackson
Lead Adviser
Sustainable Development and Field Unit
Norfolk & Suffolk Area Team 09
Natural England
Dragonfly House
2 Gilders Way
Norwich
NR3 1UB

December 6th 2016

Dear John,

Land south and east of Adastral Park

Many thanks for meeting me and the rest of the team. We all found the meeting very helpful indeed and we hope you did too. You will recall that one of the actions to come out of the meeting was for all parties (CEG, Suffolk Coastal Council and Natural England) to agree the parameters which we are to use to calculate the area of Suitable Alternative Natural Greenspace (SANG) that will be provided within the development. I have therefore set out below these parameters including the reference source for the figures.

Parameter 1

8 ha of SANG to be provided per 1000 head of population (Thames Basin Heaths SPA Delivery Framework, 2009).

Parameter 2

The occupation rate is assumed to be 1.57 people per household (SCDC's HRA dated November 2011 and used by BT in its 2012 shadow HRA).

Parameter 3

Land south and east of Adastral Park to provide 2000 new residential units (SCDC Local Plan – Core Strategy & Development Management Policies, July 2013 as tested by the HRA dated November 2011).

Cromford Station, Cromford, Bridge, Matlock Derbyshire DE4 5JJ
01629 593 958 info@bakerconsultants.co.uk
Company No 6702156

Parameter 4

Given parameters 1 to 3 above SANG provision will be **25.12 ha** (8 ha x 2000 units x 1.57 occupancy rate). The 25.12 ha will include the existing open water of the fishing lake, new and enhanced existing footpaths/bridleways[1], new habitats, structural planting, retained woodland and scrub, buffers to Scheduled Ancient Monuments and informal play areas (see parameter 5).

Parameter 5

SANG to include 3.3ha of play areas[2] on the basis that the design of these areas and the equipment used will be compatible with the 'natural' character of the SANG. The quantum of play space is a requirement of SPG15 (3.3 ha of play area and 7.9 ha of sports ground based on housing mix[3]). The 7.9 ha of sports grounds will be provided in addition to the 25.12 ha of SANG.

Parameter 5

The SANG will only mitigate for the proposed development of up to 2000 new residential dwellings within the red line planning application boundary for land south and east of Adastral Park and no other residential development sites.

Parameter 6

Given parameter 5 no SANG carpark will be provided.

Parameter 7

In addition to the recreational use of the SANG the 25.12 ha will also be used for:

- Creation of heathland.
- Retention of existing nightingale nesting habitat;
- Recreation of invertebrate habitat (bare sandy soils);
- Translocation of reptiles and recreation of habitat from area adjacent to A12 on western boundary of site;
- Inclusion of low disturbance zone/s.
- Other ecological mitigation

I hope the above parameters can be agreed as being common ground which can be confirmed by all parties. We look forward to your formal written response to agreeing these parameters so that we can safely adopt these as the basis of the shadow Habitats Regulations Assessment which will be drafted in the near future.

[1] There will be appropriate on-site signage and information regarding the available routes

[2] Outdoor equipped playgrounds and casual or informal playing space

[3] The planning application will seek outline planning approval – the mix is based on Persimmon Homes Kesgrave planning application which is considered to be appropriate for the current market.

Regarding the Geological SSSI within the area that will be the subject of the planning application we would welcome the opportunity of having a site visit with your conservation geologist to discuss the protection and management of the site. As we explained during the meeting it is our intention to retain the exposure at its current location if we can do so within the masterplan, however, it would also be beneficial to understand the implications/restrictions that would be imposed should consideration of the relocation of the site of the Geological SSSI be needed.

Thanks again for finding the time to meet with us, we look forward to yours and Suffolk Coastal Council's written responses in due course.

Yours

Andrew Baker FCIEEM
a.baker@bakerconsultants.co.uk
07590 122969

CC Ben Woolnough, Suffolk Coastal Council

Date: 5 January 2017
Our ref: 205035
Your ref: Adastral

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

Andrew Baker
Baker Consultants
Cromford Station,
Cromford, Bridge,
Matlock Derbyshire DE4 5JJ

BY EMAIL ONLY

Dear Andrew,

Planning consultation: Land South and East of Adastral Park, Suffolk

Further to our conversation yesterday, I can confirm that Natural England agrees with the parameters for Suitable Accessible Natural Greenspace (SANGs) set out in your letter of 6 December 2016, and that these provide a firm basis for the development of the Habitat Regulations Assessment (HRA) of the proposal, which is discussed in further detail in our letter of 16 December 2016.

Yours sincerely,

John Jackson
Lead Adviser
Sustainable Development
Norfolk & Suffolk Team

Appendix 2 European sites Standard Data Forms

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:

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

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

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 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*, Iceland/W Europe	307 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , *Tringa nebularia*, Europe/W Africa	22 individuals, representing an average of 3.6% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Bean goose , *Anser fabalis fabalis*, NW Europe - wintering	5 individuals, representing an average of 1.2% of the GB population (Source period not collated)
Common shelduck , *Tadorna tadorna*, NW Europe	832 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Pied avocet , *Recurvirostra avosetta*, Europe/Northwest Africa	167 individuals, representing an average of 4.9% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , *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)
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

Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)

Beardall, CH, Dryden, RC & Holzer, TJ (1988) *The Suffolk estuaries: a report…on the wildlife and conservation of the Suffolk estuaries*. Suffolk Wildlife Trust, Saxmundham [accompanied by separate volume, *Suffolk estuaries bibliography*]

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

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

Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes.* Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)

Carter, I (1994) *Departmental Brief: the Deben Estuary proposed Special Protection Area and Ramsar site (926A)*. English Nature (Ornithology Section), Peterborough

Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)

Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge

Davidson, NC, Laffoley, D d'A, Doody, JP, Way, LS, Gordon, J, Key, R, Pienkowski, MW, Mitchell, R & Duff, KL (1991) *Nature conservation and estuaries in Great Britain*. Nature Conservancy Council, Peterborough

Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough

Hill, TO, Emblow, CS & Northen, KO (1996) *Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)

McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough. www.jncc.gov.uk/SACselection

Musgrove, AJ, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)

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

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

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

Special Protection Areas under the EC Birds Directive.

Each Natura 2000 site in the United Kingdom has its own Standard Data Form containing site-specific information. The data form for this site has been generated from the Natura 2000 Database submitted to the European Commission on the following date:

22/12/2015

The information provided here, follows the officially agreed site information format for Natura 2000 sites, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

The Standard Data Forms are generated automatically for all of the UK's Natura 2000 sites using the European Environment Agency's Natura 2000 software. The structure and format of these forms is exactly as produced by the EEA's Natura 2000 software (except for the addition of this coversheet and the end notes). The content matches exactly the data submitted to the European Commission.

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

Further technical documentation may be found here
http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal

As part of the December 2015 submission, several sections of the UK's previously published Standard Data Forms have been updated. For details of the approach taken by the UK in this submission please refer to the following document:
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

More general information on Special Protection Areas (SPAs) in the United Kingdom is available from the SPA home page on the JNCC website. This webpage also provides links to Standard Data Forms for all SPAs in the UK.

Date form generated by the Joint Nature Conservation Committee
25 January 2016.

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE **UK9009261**

SITENAME **Deben Estuary**

TABLE OF CONTENTS

1. SITE IDENTIFICATION

Back to top

1.1 Type	1.2 Site code
A	UK9009261

1.3 Site name

Deben Estuary

1.4 First Compilation date	1.5 Update date
1996-03	2015-12

1.6 Respondent:

Name/Organisation:	Joint Nature Conservation Committee
Address:	Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:	

1.7 Site indication and designation / classification dates

Date site classified as SPA:	1996-03
National legal reference of SPA designation	Regulations 12A and 13-15 of the Conservation Habitats and Species Regulations 2010, (http://www.legislation.gov.uk/uksi/2010/490/contents/made) as amended by The Conservation of Habitats and Species (Amendment) Regulations 2011 (http://www.legislation.gov.uk/uksi/2011/625/contents/made).

2. SITE LOCATION

Back to top

2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
1.345555556	52.04194444

2.2 Area [ha]:

981.08

2.3 Marine area [%]

78.4

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKH1	East Anglia

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

Back to top

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A675	Branta bernicla bernicla			w	2516	2516	i		G	B		C	
B	A132	Recurvirostra avosetta			w	95	95	i		G	B		B	

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

Back to top

4.1 General site character

Habitat class	% Cover
N02	80.0
N03	18.0
N07	1.0
N05	1.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: mud,sedimentary 2 Terrestrial: Geomorphology and landscape: lowland,coastal,valley 4 Marine: Geomorphology: intertidal sediments (including sandflat/mudflat),estuary

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 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	G01		I
H	M01		B
H	M02		B
H	H02		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	A06		I
H	A02		I

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification, T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): http://publications.naturalengland.org.uk/category/3212324
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

http://publications.naturalengland.org.uk/category/6490068894089216

5. SITE PROTECTION STATUS (optional)

Back to top

5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0				

6. SITE MANAGEMENT

Back to top

6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [ ] Yes
- [ ] No, but in preparation
- [X] No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE NATURA 2000 STANDARD DATA FORMS

The codes in the table below are also explained in the official European Union guidelines for the Standard Data Form. The relevant page is shown in the table below.

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	Designated Special Protection Area	53
B	SAC (includes candidates Special Areas of Conservation, Sites of Community Importance and designated SAC)	53
C	SAC area the same as SPA. Note in the UK Natura 2000 submission this is only used for Gibraltar	53

3.1 Habitat representativity

CODE	DESCRIPTION	PAGE NO
A	Excellent	57
B	Good	57
C	Significant	57
D	Non-significant presence	57

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha□ rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	15%-100%	58
B	2%-15%	58
C	< 2%	58

3.1 Conservation status habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global grade habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	15%-100%	62
B	2%-15%	62
C	< 2%	62
D	Non-significant population	62

3.2 Conservation status species (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' Or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Assemblages types

CODE	DESCRIPTION	PAGE NO
WATR	Non breeding waterfowl assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code
BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK02	Marine Nature Reserve	67
UK04	Site of Special Scientific Interest (UK)	67

NATURA 2000 – STANDARD DATA FORM

Special Protection Areas under the EC Birds Directive.

Each Natura 2000 site in the United Kingdom has its own Standard Data Form containing site-specific information. The data form for this site has been generated from the Natura 2000 Database submitted to the European Commission on the following date:

22/12/2015

The information provided here, follows the officially agreed site information format for Natura 2000 sites, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

The Standard Data Forms are generated automatically for all of the UK's Natura 2000 sites using the European Environment Agency's Natura 2000 software. The structure and format of these forms is exactly as produced by the EEA's Natura 2000 software (except for the addition of this coversheet and the end notes). The content matches exactly the data submitted to the European Commission.

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

Further technical documentation may be found here
http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal

As part of the December 2015 submission, several sections of the UK's previously published Standard Data Forms have been updated. For details of the approach taken by the UK in this submission please refer to the following document:
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

More general information on Special Protection Areas (SPAs) in the United Kingdom is available from the SPA home page on the JNCC website. This webpage also provides links to Standard Data Forms for all SPAs in the UK.

Date form generated by the Joint Nature Conservation Committee
25 January 2016.

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE	**UK9020286**
SITENAME	**Sandlings**

TABLE OF CONTENTS

1. SITE IDENTIFICATION

Back to top

1.1 Type	1.2 Site code
A	UK9020286

1.3 Site name

Sandlings

1.4 First Compilation date	1.5 Update date
2001-08	2015-12

1.6 Respondent:

Name/Organisation:	Joint Nature Conservation Committee
Address:	Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:	

1.7 Site indication and designation / classification dates

Date site classified as SPA:	2001-08
National legal reference of SPA designation	Regulations 12A and 13-15 of the Conservation Habitats and Species Regulations 2010, (http://www.legislation.gov.uk/uksi/2010/490/contents/made) as amended by The Conservation of Habitats and Species (Amendment) Regulations 2011 (http://www.legislation.gov.uk/uksi/2011/625/contents/made).

2. SITE LOCATION

Back to top

2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
1.4425	52.07888889

2.2 Area [ha]:

3405.72

2.3 Marine area [%]

0.0

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKH1	East Anglia

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

Back to top

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A224	Caprimulgus europaeus			r	109	109	p		G	B		C	
B	A246	Lullula arborea			r	154	154	p		G	B		C	

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

Back to top

4.1 General site character

Habitat class	% Cover
N09	11.5
N07	0.9
N06	1.5
N17	57.6
N23	1.8
N16	10.6
N14	0.1
N08	14.6
N19	1.4
Total Habitat Cover	100.00000000000001

4.2 Quality and importance

ARTICLE 4.1 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: Caprimulgus europaeus 3.2% of the GB breeding population Count as at 1992 Lullula arborea 10.3% of the GB breeding population Count as at 1997

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	I02		B
H	H04		B
H	G01		I
H	M02		B
H	K02		I

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	B02		I
H	A02		I
H	A04		I
H	D05		I

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,
T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): http://publications.naturalengland.org.uk/category/6490068894089216

http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

http://publications.naturalengland.org.uk/category/3212324

5. SITE PROTECTION STATUS (optional)

Back to top

5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0				

6. SITE MANAGEMENT

Back to top

6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [ ] Yes
- [ ] No, but in preparation
- [X] No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE NATURA 2000 STANDARD DATA FORMS

The codes in the table below are also explained in the official European Union guidelines for the Standard Data Form. The relevant page is shown in the table below.

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	Designated Special Protection Area	53
B	SAC (includes candidates Special Areas of Conservation, Sites of Community Importance and designated SAC)	53
C	SAC area the same as SPA. Note in the UK Natura 2000 submission this is only used for Gibraltar	53

3.1 Habitat representativity

CODE	DESCRIPTION	PAGE NO
A	Excellent	57
B	Good	57
C	Significant	57
D	Non-significant presence	57

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha□ rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	15%-100%	58
B	2%-15%	58
C	< 2%	58

3.1 Conservation status habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global grade habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	15%-100%	62
B	2%-15%	62
C	< 2%	62
D	Non-significant population	62

3.2 Conservation status species (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' Or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Assemblages types

CODE	DESCRIPTION	PAGE NO
WATR	Non breeding waterfowl assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code
BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK02	Marine Nature Reserve	67
UK04	Site of Special Scientific Interest (UK)	67

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:

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

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

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 , *Tringa totanus totanus*,	2588 individuals, representing an average of 2% of the population (5-year peak mean 1995/96-1999/2000)

Species with peak counts in winter:

Dark-bellied brent goose, *Branta bernicla bernicla*,	2627 individuals, representing an average of 1.2% of the population (5-year peak mean 1995/96-1999/2000)
Northern pintail , *Anas acuta*, NW Europe	741 individuals, representing an average of 1.2% of the population (5-year peak mean 1995/96-1999/2000)
Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa -wintering	3261 individuals, representing an average of 1.3% of the population (5-year peak mean 1995/96-1999/2000)
Red knot , *Calidris canutus islandica*, W & Southern Africa (wintering)	5970 individuals, representing an average of 1.3% of the population (5-year peak mean 1995/96-1999/2000)
Dunlin , *Calidris alpina alpina*, W Siberia/W Europe	19114 individuals, representing an average of 1.4% of the population (5-year peak mean 1995/96-1999/2000)
Black-tailed godwit , *Limosa limosa islandica*, Iceland/W Europe	2559 individuals, representing an average of 7.3% of the population (5-year peak mean 1995/96-1999/2000)
Common redshank , *Tringa totanus totanus*,	3687 individuals, representing an average of 2.8% of the population (5-year peak mean 1995/96-1999/2000)

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

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

Armitage, MJS, Burton, NHK, Atkinson, PW, Austin, GE, Clark, NA, Mellan, HJ & Rehfisch, MM (2002) *Reviewing the impact of Agency permissions and activities on bird populations in Special Protection Areas: Level 1 interpretation*. British Trust for Ornithology, Thetford (BTO Research Report, No. 296)

Ashelby, CW, Worsfold, TM & Fransen, CHJM (2004) First records of the oriental prawn *Palaemon macrodactylus* (Decapoda: Caridea), an alien species in European waters, with a revised key to British Palaemonidae. *Journal of the Marine Biological Association*, **84**(5), 1041-1050

Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 7 South-east England: Lowestoft to Dungeness*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)

Beardall, CH, Dryden, RC & Holzer, TJ (1988) *The Suffolk estuaries: a report on the wildlife and conservation of the Suffolk estuaries*. Suffolk Wildlife Trust, Saxmundham [accompanied by separate volume, *Suffolk estuaries bibliography*]

Beardall, CH, Gooch, SM & Pilcher, R (1990) The intertidal invertebrate fauna of the Orwell estuary. *Transactions of the Suffolk Naturalists' Society*, **26**, 33-45

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

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

Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes*. Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)

Cadbury, CJ & Olney, PJS (1978) Avocet population dynamics in England. *British Birds*, **71**, 102-121

Cayford, JT & Waters, RJ (1996) Population estimates for waders Charadrii wintering in Great Britain, 1987/88 – 1991/92. *Biological Conservation*, **77**, 7-17

Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)

Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge

Crewe, MD (1993) *Suffolk birds 1992 Volume 42*. Suffolk Naturalists' Society, Ipswich

Crewe, MD (1994) *Suffolk birds 1993 Volume 43*. Suffolk Naturalists' Society, Ipswich

Crewe, MD (1996) *Suffolk birds 1995 Volume 45*. Suffolk Naturalists' Society, Ipswich

Crewe, MD (1997) *Suffolk birds 1996 Volume 46*. Suffolk Naturalists' Society, Ipswich

Davidson, NC, Laffoley, D d'A, Doody, JP, Way, LS, Gordon, J, Key, R, Pienkowski, MW, Mitchell, R & Duff, KL (1991) *Nature conservation and estuaries in Great Britain*. Nature Conservancy Council, Peterborough

Delany, S & Scott, D (2002) *Waterbird population estimates*. 3rd edn. Wetlands International, Wageningen (Global Series, No. 12) www.wetlands.org/pubs&/WPE.htm

Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough

Dyer, MF (2000) *Stour and Orwell benthic survey 1997*. (Contractor: Unicomarine, Letchworth) Unpublished eport to Harwich Haven Authority, Harwich (StrOrw97)

French, JR, Watson, CJ, Moller, I, Spencer, T, Dixon, M & Allen, R (2001) Beneficial use of cohesive dredgings for foreshore recharge. In: *Proceedings of 35th MAFF Conference of River and Coastal Engineers, 5–7July 2000, Keele*, 11.10, 1-4. www.geog.ucl.ac.uk/ceru/projects_FR.stm

Gibbons, DW, Reid, JB & Chapman, RA (1993) *The new atlas of breeding birds in Britain and Ireland: 1988–1991*. Poyser, London

Hagemeijer, EJM & Blair, MJ (eds.) (1997) *The EBCC atlas of European breeding birds: their distribution and abundance*. Poyser, London

Hill, TO, Emblow, CS & Northen, KO (1996) *Marine Nature Conservation Review Sector 6. Inlets in eastern England: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)

Hoyo, J del, Elliot, A & Sargatal, J (eds.) (1996) *Handbook of the birds of the world. Volume 3: Hoatzin to auks*. Lynx Edicions, Barcelona

Joint Nature Conservation Committee (1999) *The Birds Directive – selection guidelines for Special Protection Areas*. Joint Nature Conservation Committee, Peterborough

Lack, P (1986) *The atlas of wintering birds in Britain and Ireland*. Poyser, Calton

Lowe, G (1998) *Suffolk birds 1997 Volume 47*. Suffolk Naturalists' Society, Ipswich

Lowe, G (1999) *Suffolk birds 1998 Volume 48*. Suffolk Naturalists' Society, Ipswich

Lowe, G (2000) *Suffolk birds 1999 Volume 49*. Suffolk Naturalists' Society, Ipswich

Lowe, G (2002) *Suffolk birds 2000 Volume 50*. Suffolk Naturalists' Society, Ipswich

Moser, M (1988) Limits to the numbers of grey plovers *Pluvialis squatarola* wintering on British estuaries: an analysis of long-term population trends. *Journal of Applied Ecology*, **25**, 473-485

Musgrove, AJ, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)

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

Ogilvie, MA & the Rare Breeding Birds Panel (1996) Rare breeding birds in the United Kingdom in 1993. *British Birds*, **89**, 61-91

Owen, M, Atkinson-Willes, GL & Salmon, DG (1986) *Wildfowl in Great Britain*. 2nd edn. Cambridge University Press Cambridge

Piersma, T (1994) *Close to the edge: energetic bottlenecks and the evolution of migratory pathways in knots*. Unpublished PhD thesis, Rijksuniversiteit Groningen, Netherlands

Prater, AJ (1981) *Estuary birds of Britain and Ireland*. Poyser, London

Rafe, RW (1995) *Suffolk birds 1994 Volume 44*. Suffolk Naturalists' Society, Ipswich

Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)

Ridgill, SC & Fox, AD (1990) *Cold weather movements of waterfowl in western Europe* . International Waterfowl and Wetlands Research Bureau, Slimbridge (Special Publication, No 13)

Rose, PM & Scott, DA (1997) *Waterfowl population estimates*. 2nd edn. Wetlands International, Wageningen (Wetlands International Publication, No. 44) www.wetlands.org/IWC/wpe2/WPE2-toc.htm

Scott, DA & Rose, DA (1996) *Atlas of Anatidae populations in Africa and western Eurasia*. Wetlands International, Wageningen (Publication, No. 41)

Shirt, DB (ed.) (1987) *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough

Sneddon, P & Randall, RE (1994) *Coastal vegetated shingle structures of Great Britain: Appendix 3. Shingle sites in England*. Joint Nature Conservation Committee, Peterborough

Snow, DW & Perrins, CM (1998) *The birds of the western Palearctic. Volume 1: Non-passerines*. Concise edn. Oxford University Press, Oxford

Stone, BH, Sears, J, Cranswick, PA, Gregory, RD, Gibbons, DW, Rehfisch, MM, Aebischer, NJ & Reid, JB (1997) Population estimates of birds in Britain and in the United Kingdom. *British Birds*, **90**(1), 1-22

Stour and Orwell Estuaries Group (1996) *Stour and Orwell Estuaries management plan*. Suffolk Coast and Heaths Project, Woodbridge

Stour and Orwell Estuaries Management Group (2004) *Stour and Orwell Estuaries management plan* Stour and Orwell Estuaries Management Group, Woodbridge

Stour and Orwell Estuaries Management Group (2004) *Stour and Orwell Estuaries website* Stour and Orwell Estuaries Management Group, Woodbridge. www.stourandorwell.org

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

Tubbs, CR (1991) The population history of grey plovers *Pluvialis squatarola* in the Solent, southern England. *Wader Study Group Bulletin*, **61**, 15-21

Worsfold, TM (2002) *Combined intertidal and subtidal biotope report and maps for the Stour and Orwell estuaries*. (Contractor: Unicomarine, Letchworth) Unpublished report to Harwich Haven Authority, Harwich (HHAComBiotope02)

Wright, M (2000) Orwell estuary: systematic review of waterbirds incorporating a report on the effects of the Felixstowe Dock expansion on key wading species at Fagbury. *English Nature Research Reports*, No. **381**

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

Special Protection Areas under the EC Birds Directive.

Each Natura 2000 site in the United Kingdom has its own Standard Data Form containing site-specific information. The data form for this site has been generated from the Natura 2000 Database submitted to the European Commission on the following date:

22/12/2015

The information provided here, follows the officially agreed site information format for Natura 2000 sites, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

The Standard Data Forms are generated automatically for all of the UK's Natura 2000 sites using the European Environment Agency's Natura 2000 software. The structure and format of these forms is exactly as produced by the EEA's Natura 2000 software (except for the addition of this coversheet and the end notes). The content matches exactly the data submitted to the European Commission.

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

Further technical documentation may be found here
http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal

As part of the December 2015 submission, several sections of the UK's previously published Standard Data Forms have been updated. For details of the approach taken by the UK in this submission please refer to the following document:
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

More general information on Special Protection Areas (SPAs) in the United Kingdom is available from the SPA home page on the JNCC website. This webpage also provides links to Standard Data Forms for all SPAs in the UK.

Date form generated by the Joint Nature Conservation Committee
25 January 2016.

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE	**UK9009121**
SITENAME	**Stour and Orwell Estuaries**

TABLE OF CONTENTS

1. SITE IDENTIFICATION

Back to top

1.1 Type	1.2 Site code
A	UK9009121

1.3 Site name

Stour and Orwell Estuaries

1.4 First Compilation date	1.5 Update date
1994-07	2015-12

1.6 Respondent:

Name/Organisation:	Joint Nature Conservation Committee
Address:	Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:	

1.7 Site indication and designation / classification dates

Date site classified as SPA:	1994-07
National legal reference of SPA designation	Regulations 12A and 13-15 of the Conservation Habitats and Species Regulations 2010, (http://www.legislation.gov.uk/uksi/2010/490/contents/made) as amended by The Conservation of Habitats and Species (Amendment) Regulations 2011 (http://www.legislation.gov.uk/uksi/2011/625/contents/made).

2. SITE LOCATION

Back to top

2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
1.160555556	51.95444444

2.2 Area [ha]:

3667.37

2.3 Marine area [%]

85.6

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKH3	Essex
UKH1	East Anglia

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

Back to top

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo
B	A054	Anas acuta			w	741	741	i		G	B		C	
B	A050	Anas penelope			w	3979	3979	i		G	C		C	
B	A051	Anas strepera			w	97	97	i		G	C		C	
B	A169	Arenaria interpres			w	690	690	i		G	C		C	
B	A062	Aythya marila			w	28	28	i		G	C		C	
B	A675	Branta bernicla bernicla			w	2627	2627	i		G	B		C	
B	A067	Bucephala clangula			w	213	213	i		G	C		C	
B	A672	Calidris alpina alpina			w	19114	19114	i		G	B		C	
B	A143	Calidris canutus			w	5970	5970	i		G	C		C	

B	A137	Charadrius hiaticula			w	372	372	i		G	B		C	
B	A137	Charadrius hiaticula			c	638	638	i		G	B		C	
B	A036	Cygnus olor			w	239	239	i		G	C		C	
B	A616	Limosa limosa islandica			w	2559	2559	i		G	A		C	
B	A160	Numenius arquata			w	2153	2153	i		G	C		C	
B	A017	Phalacrocorax carbo			w	232	232	i		G	C		C	
B	A140	Pluvialis apricaria			w	773	773	i		G	C		C	
B	A141	Pluvialis squatarola			w	3261	3261	i		G	B		C	
B	A005	Podiceps cristatus			w	245	245	i		G	C		C	
B	A132	Recurvirostra avosetta			r	21	21	p		G	B		C	
B	A048	Tadorna tadorna			w	2955	2955	i		G	B		C	
B	A162	Tringa totanus			c	2588	2588	i		G	B		C	
B	A162	Tringa totanus			w	3687	3687	i		G	B		C	
B	A142	Vanellus vanellus			w	6242	6242	i		G	C		C	

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

3.3 Other important species of flora and fauna (optional)

Species					Population in the site				Motivation					
Group	CODE	Scientific Name	S	NP	Size		Unit	Cat.	Species Annex		Other categories			
					Min	Max		C|R|V|P	IV	V	A	B	C	D
B	WATR	Waterfowl assemblage			63017	63017	i						X	

- **Group:** A = Amphibians, B = Birds, F = Fish, Fu = Fungi, I = Invertebrates, L = Lichens, M = Mammals, P = Plants, R = Reptiles
- **CODE:** for Birds, Annex IV and V species the code as provided in the reference portal should be used in addition to the scientific name
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Unit:** i = individuals, p = pairs or other units according to the standard list of population units and codes in accordance with Article 12 and 17 reporting, (see reference portal)
- **Cat.:** Abundance categories: C = common, R = rare, V = very rare, P = present
- **Motivation categories: IV, V:** Annex Species (Habitats Directive), **A:** National Red List data; **B:** Endemics; **C:** International Conventions; **D:** other reasons

4. SITE DESCRIPTION

Back to top

4.1 General site character

Habitat class	% Cover
N16	0.2
N06	0.8
N05	0.5
N03	5.0
N07	5.5
N02	88.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: sand,shingle,clay,alluvium,neutral,mud 2 Terrestrial: Geomorphology and landscape: coastal,lowland 3 Marine: Geology: mud,clay,shingle,sand 4 Marine: Geomorphology: intertidal sediments (including sandflat/mudflat),estuary,lagoon,subtidal sediments (including sandbank/mudbank) Ramsar Wetland Types: Marine and coastal wetlands

4.2 Quality and importance

ARTICLE 4.1 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: Recurvirostra avosetta (Western Europe/Western Mediterranean - breeding) 3.6% of the population in Great Britain 5-year peak mean 1996-2000 ARTICLE 4.2 QUALIFICATION (79/409/EEC) Over winter the area regularly supports: Anas acuta (North-western Europe) 1.2% of the population 5-year peak mean 1995/96-1999/2000 Branta bernicla bernicla (Western Siberia/Western Europe) 1.2% of the population 5-year peak mean 1995/96-1999/2000 Calidris alpina alpina (Northern Siberia/Europe/Western Africa) 1.4% of the population 5-year peak mean 1995/96-1999/2000 Calidris canutus (North-eastern Canada/Greenland/Iceland/North-western Europe) 1.3% of the population 5-year peak mean 1995/96-1999/2000 Limosa limosa islandica (Iceland - breeding) 7.3% of the population 5-year peak mean 1995/96-1999/2000 Pluvialis squatarola (Eastern Atlantic - wintering) 1.3% of the population 5-year peak mean 1995/96-1999/2000 Tringa totanus (Eastern Atlantic - wintering) 2.8% of the population 5-year peak mean 1995/96-1999/2000 On passage the area regularly supports: Tringa totanus (Eastern Atlantic - wintering) 2% of the population 5-year peak mean 1995/96-1999/2000 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 1991/92-1995/96) 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 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts	Positive Impacts

Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	M02		B
H	G01		I
H	M01		B
H	E06		B
H	F02		I

Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	B02		I
H	A02		I
H	G03		I
H	A04		I
H	D05		I

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification, T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): http://publications.naturalengland.org.uk/category/6490068894089216

http://publications.naturalengland.org.uk/category/3212324
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

Back to top

5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	90.4				

6. SITE MANAGEMENT

Back to top

6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [ ] Yes
- [ ] No, but in preparation
- [X] No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE NATURA 2000 STANDARD DATA FORMS

The codes in the table below are also explained in the official European Union guidelines for the Standard Data Form. The relevant page is shown in the table below.

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	Designated Special Protection Area	53
B	SAC (includes candidates Special Areas of Conservation, Sites of Community Importance and designated SAC)	53
C	SAC area the same as SPA. Note in the UK Natura 2000 submission this is only used for Gibraltar	53

3.1 Habitat representativity

CODE	DESCRIPTION	PAGE NO
A	Excellent	57
B	Good	57
C	Significant	57
D	Non-significant presence	57

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha□ rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	15%-100%	58
B	2%-15%	58
C	< 2%	58

3.1 Conservation status habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global grade habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	15%-100%	62
B	2%-15%	62
C	< 2%	62
D	Non-significant population	62

3.2 Conservation status species (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' Or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Assemblages types

CODE	DESCRIPTION	PAGE NO
WATR	Non breeding waterfowl assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code
BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

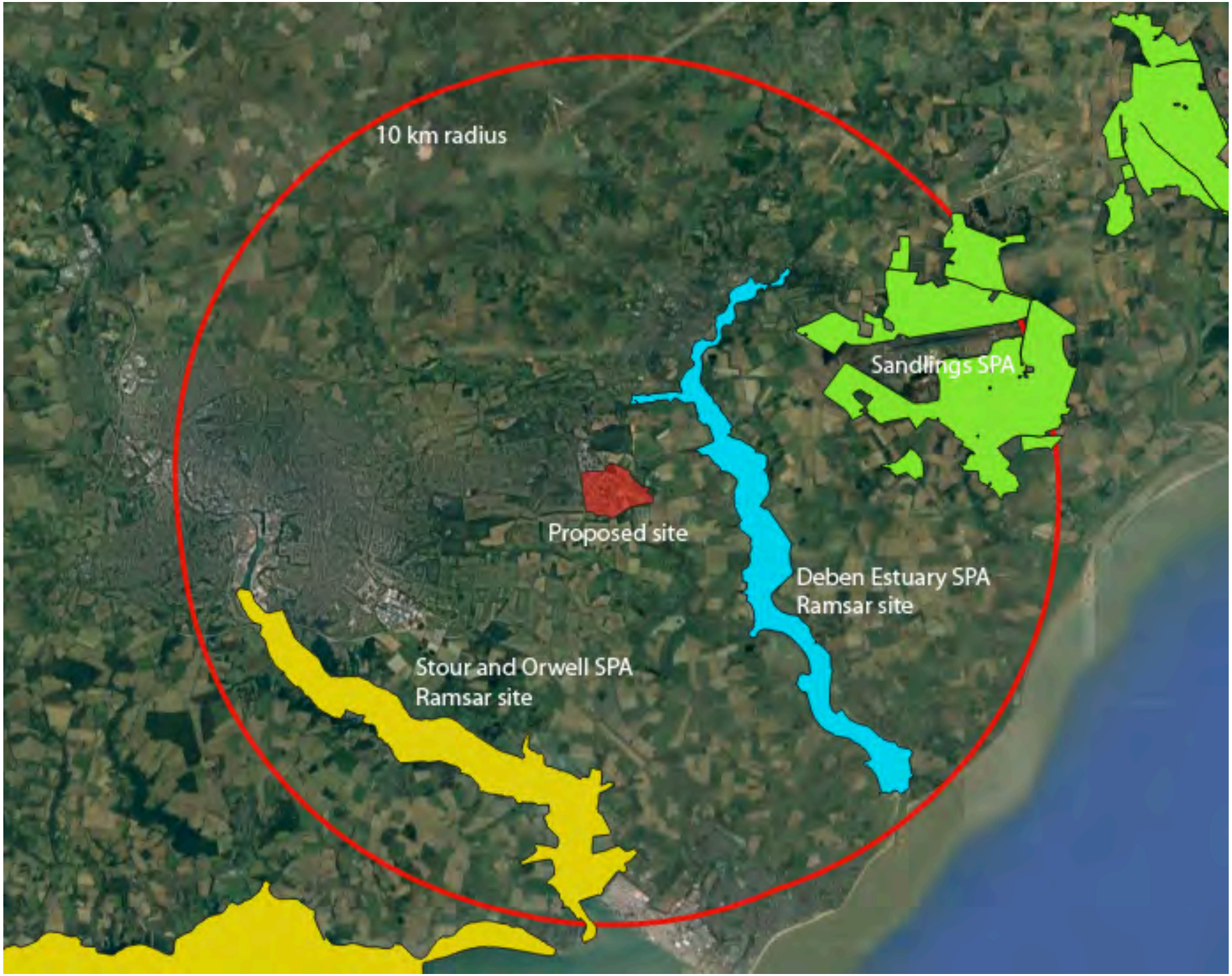
CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK02	Marine Nature Reserve	67
UK04	Site of Special Scientific Interest (UK)	67

Appendix 3 Plan of European Sites


10 km radius
Sandlings SPA
Proposed site
Deben Estuary SPA
Ramsar site
Stour and Orwell SPA
Ramsar site

Appendix 4 Condition assessment of Component SSSIs

Report generated on: 13 Feb 2017

Main Habitat	Responsible Officer	Unit Number	Unit Id	Area (ha)	NNR Overlap Area (ha)	Latest Assessment Date	Assessment Description	Comment	Adverse Condition Reasons
Deben Estuary SSSI - SUFFOLK (SUFFOLK COASTAL)									
FEN, MARSH AND SWAMP - Lowland	EMMA HAY	001	1009465	9.0838	0.00	04/05/2010	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.	
LITTORAL SEDIMENT	EMMA HAY	002	1009467	33.5417	0.00	13/11/2009	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.Asssessed as declining in condition due to	OTHER - OTHER - SPECIFY IN COMMENTS,

								loss of high tide roost within the unit. Tidal scour resulting from increased sea wall breaches has resulted in loss of salt marsh habitats.	
LITTORAL SEDIMENT	EMMA HAY	003	1009468	18.1517	0.00	13/11/2009	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 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.	COASTAL - COASTAL SQUEEZE,
LITTORAL SEDIMENT	EMMA HAY	004	1009469	24.9807	0.00	13/11/2009	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.	
LITTORAL SEDIMENT	EMMA HAY	005	1009470	78.754	0.00	18/11/2009	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	COASTAL - COASTAL SQUEEZE,

								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.	
LITTORAL SEDIMENT	EMMA HAY	006	1009471	20.3466	0.00	03/11/2009	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 - COASTAL SQUEEZE,
FEN, MARSH AND SWAMP - Lowland	EMMA HAY	007	1009466	1.3422	0.00	04/05/2010	Favourable	This unit comprises reedbed fronted by a narrow fringe of saltmarsh with sea purslane and common saltmarsh grass grwing 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 angustio (RDB mollusc).	
LITTORAL SEDIMENT	EMMA HAY	008	1009472	29.7304	0.00	03/11/2009	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, 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	COASTAL - COASTAL SQUEEZE,

								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.	
LITTORAL SEDIMENT	EMMA HAY	009	1009473	74.3342	0.00	11/11/2009	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 - COASTAL SQUEEZE,
LITTORAL SEDIMENT	EMMA HAY	010	1009474	91.7807	0.00	18/11/2009	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.	
LITTORAL SEDIMENT	EMMA HAY	011	1009475	47.2365	0.00	10/08/2011	Unfavourable - Declining	Waldringfield Sailing Club downstream to north of Early Creek to the south of the unit, partly backed by a small seawall/ hedged embankment with arable land beyond. Saltmarsh comprises mainly low to mid level communities, with a extensive network of creeks and salt pans. Much evidence of waders and wildfowl. Quality of the saltmarsh present was good with characteristic species. Marsh shelves into the mud of the river bed forming soft mud cliffs 1- 0.5m in height and there appears to be active erosion of the marsh frontage. Wash from boats evident and probably havng some impact. Some Spartina present. The unit is partly backed by a sea wall, meaning that coastal squeeze is an issue. The study by IECS (2010) was commissioned to investigate coastal squeeze mapped this stretch of saltmarsh. This noted that of the saltmarsh extent was mapped at 16.00ha in 2000 with a slight decrease by 2007 to 15.29ha (-0.71ha which equates to a loss of -0.10ha/yr-1). Although a lot of the saltmarsh extent remained stable (14.56ha), losses occurred on the outer marsh edge along the full extent of this Unit and along internal creek edges. This ISA concludes that the Unit is Unfavourable Declining due to coastal squeeze due to the active erosion of the saltmarsh frontage and lack of scope to	COASTAL - COASTAL SQUEEZE,

								respond to this by rolling back due to the seawall presence. However this seawall is fragile and has been breached in the adjacent unit.	
LITTORAL SEDIMENT	EMMA HAY	012	1009476	76.9712	0.00	08/10/2009	Unfavourable - Declining	Unit dominated by large swathes of sea aster, particularly 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.	COASTAL - COASTAL SQUEEZE,
LITTORAL SEDIMENT	EMMA HAY	013	1009478	62.7937	0.00	10/08/2011	Favourable	South of Waldringfield from Early Creek downstream to Spinney Marsh. It represents the largest area of saltmarsh within the estuary. A defunct seawall runs through the middle of the site which has been breached half way down the unit and there is a large area of intertidal mud behind it. The marsh shelves inland a fairly natural manner as the ground is naturally rising. The	

								saltmarsh in front of the seawall comprises mainly low to mid level communities, with a extensive network of creeks and pans. The quality of the saltmarsh present was good with characteristic species. The marsh shelves into the mud of the river bed forming soft mud cliffs 0.5-1.00m in height and there appears to be active erosion of the marsh frontage. Wash from boats evident and probably having some impact. Some Spartina present. The intertidal area behind the seawall showed pioneer saltmarsh developing on mud that was quite cliffed. The unit is probably an important roost site. Much evidence of waders and wildfowl. The study by IECS (2010) was commissioned to investigate coastal squeeze mapped this stretch of Saltmarsh at 31.53ha in 2000 with only minimal change in extent by 2007 to 30.87ha. Large areas of saltmarsh have remained stable (with only slight erosion mapped at the saltmarsh edge and within internal creek systems. As there has been a relatively good balance between erosion and accretion, this unit has lost only 0.66ha over the seven years averaging -0.09ha/yr-1. This ISA concludes that the Unit is in Favourable as the saltmarsh is not anthropogenically squeezed by a seawall due to the breach, intertidal habitat development and naturally rising land behind it.	
LITTORAL SEDIMENT	EMMA HAY	014	1009479	37.2574	0.00	30/06/2011	Favourable	Kirton Creek upstream to Spinney Marsh. It is partly backed by a small seawall/embankment with some large oaks, then arable land beyond. Saltmarsh comprises mainly low to mid level communities, with a extensive network of creeks and salt pans in front of the seawall. There is further saltmarsh behind the seawall also. The unit is probably an important roost site with evidence of waders and wildfowl. The quality of the	

								saltmarsh present was good with characteristic species. The marsh shelves into the mud of the river bed forming soft mud cliffs 1- 0.5m in height and there appears to be active erosion of the marsh frontage. Wash from boats evident and probably having some impact. Some Spartina present throughout, abundant locally. The study by IECS (2010) was commissioned to investigate coastal squeeze mapped this stretch of saltmarsh. This noted that of the saltmarsh extent was mapped at the 16.68ha present in 2000, a total of 0.93ha was lost to erosion or a transition in vegetation, but 0.76ha was gained elsewhere through natural accretion resulting in a net loss of -0.17ha by 2007. This resulted in the extent in 2007 mapped as 16.51ha, averaging a -0.02ha/yr-1 over the seven years. Erosion was mapped along the leading marsh edge and some widening of creeks within the marsh structure. Encroachment from the scrub vegetation at the back of the site accounted for some loss along the landward boundary at Hemley. Areas of accretion were mainly mapped within the main saltmarsh body where creeks formerly mapped had accreted or saltpans had recolonised. There are seawalls present in the unit but these were low, and would probably have little influence on natural roll back of marsh in reaction to squeeze as that land rose naturally behind it leaving little scope, plus the breach in Unit 13 had allowed intertidal habitat development behind the seawall in Unit 14. This ISA concludes that the Unit is in Favourable condition accordingly.	
LITTORAL SEDIMENT	EMMA HAY	015	1009480	57.8211	0.00	08/10/2009	Unfavourable - Declining	e southern end of the unit there are patches of vegetation dominated by Glasswort and Annual Sea-blite, patches of Spartina (15%) and patches	COASTAL - COASTAL SQUEEZE,

								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 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.	
LITTORAL SEDIMENT	EMMA HAY	016	1009481	29.8411	0.00	11/11/2009	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 - COASTAL SQUEEZE,

LITTORAL SEDIMENT	EMMA HAY	017	1009482	58.9908	0.00	12/11/2009	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 - COASTAL SQUEEZE,
LITTORAL SEDIMENT	EMMA HAY	018	1009483	54.2561	0.00	30/06/2011	Unfavourable - Declining	Boat Hard at Kirton Marshes in the north to just north of Falkenham Marshes to the south of the unit. It is backed by a seawall with a wide reedy ditch and arable land beyond.Saltmarsh comprises mainly low to mid level communities, with a extensive network of creeks and salt pans on Falkenham Creek area (an important roost site). Much evidence of waders and wildfowl. The quality of the saltmarsh present was good with characteristic species. The marsh shelves into the mud of the river bed forming soft mud cliffs 1-	COASTAL - COASTAL SQUEEZE,

								0.5m in height and there appears to be active erosion of the marsh frontage. Wash from boats evident and probably having some impact. Some Spatina present. The unit is backed by a sea wall, meaning that coastal squeeze is an issue. The study by IECS (2010) was commissioned to investigate coastal squeeze mapped this stretch of saltmarsh. This noted that of the 14.41ha of saltmarsh present in the unit n 2000, a total of 0.81ha was lost to erosion, but 0.71ha was gained elsewhere through natural accretion resulting in a net loss of only -0.10ha by 2007. This resulted in the extent in 2007 being mapped at 14.31ha, averaging only a -0.01ha/yr-1 loss over the seven years. Erosion was predominantly mapped along the whole of the fronting marsh edge, and within the main body of the marsh at Falkenham Creek. Saltmarsh gains were also accounted for within the main saltmarsh extent with the narrowing of internal creek systems, recolonisation of large mud pans and areas of fragmented saltmarsh unmapped in 2000 subsequently mapped in 2007. This ISA concludes that the Unit is Unfavourable Declining due to coastal squeeze due to the active erosion of the saltmarsh frontage and lack of scope to respond to this by rolling back due to the seawall presence.	
LITTORAL SEDIMENT	EMMA HAY	019	1009484	55.7065	0.00	30/06/2011	Unfavourable - Declining	Saltmarsh comprises mainly low to mid level communities, with a network of well-developed creeks and salt pans throughout. The quality of the saltmarsh was good with characteristic species. The north western edge has some Spartina anglica but not dominant as described in last CA, further Spartina anglica frequently along the seawall but not of concern. The marsh shelves into the mud of the river bed forming soft mud	COASTAL - COASTAL SQUEEZE,

								cliffs 1- 0.5m in height and there appears to be some active erosion, this looks dramatic from the other side of the estuary. Wash from boats evident and probably having some impact. The unit is backed by a sea wall with Saltmarsh right up to it. A study by IECS (2010) was commissioned to investigate coastal squeeze found that of the 15.94ha of saltmarsh present in 2000, a total of 0.50ha was lost to erosion, but an additional 0.28ha was gained elsewhere through natural accretion resulting in a net loss of -0.22ha by 2007, plus 15.45ha of saltmarsh remained stable throughout the seven years. This resulted in the extent mapped in 2007 at 15.72ha, averaging only a -0.03ha/yr-1 loss over the seven years. Erosion occurred along the entire marsh frontage, with some erosion of the internal marsh towards the northern end of the unit. The narrowing of creeks, both at the marsh front and within the internal body of the marsh accounts for the majority of saltmarsh gains within this unit. Changes along the landward boundary indicated a change in vegetation type. EH paced the narrowest piece of saltmasrh at ca 30m wide, the OS map (2006) shows this to be ca 50m which suggests erosion is of real concern. This ISA concludes that the Unit is still Unfavourable Declining due to coastal squeeze due to the active erosion of the saltmarsh frontage and lack of scope to respond to this by rolling back due to the seawall.	
LITTORAL SEDIMENT	EMMA HAY	020	1009485	30.1027	0.00	30/06/2011	Unfavourable - Declining	Immediately upstream of Kings Fleet and its sluice. Falkenham Marshes are on the landward side behind the sea wall. The narrow strips of saltmarsh present at each end of the unit abutting the seawall tightly and comprises mainly low to	COASTAL - COASTAL SQUEEZE,

								mid level communities, with a limited network of creeks and salt pans. In the centre of the unit for a substantial distance there is no saltmarsh at all, however a narrow strip of pioneer saltmarsh developing was evident in places. The quality of the saltmarsh present was good with characteristic species for low to mid level communities. Higher areas were quite grassy and spartina was present throughout the unit. The marsh shelves into the mud of the river bed forming soft mud cliffs 1-0.5m in height and there appears to be active erosion of the marsh frontage. Wash from boats evident and probably having some impact. Spartina present.The unit is backed by a sea wall, meaning that coastal squeeze is an issue. The study by IECS (2010) was commissioned to investigate coastal squeeze mapped this stretch of saltmarsh. This noted that the saltmarsh lay in two distinct blocks, one to the north adjacent to Red House Farm and the second to the south adjacent to Falkenham Marshes. The saltmarsh within these two areas had remained generally stable with a total of 3.06ha mapped in 2000, with only a 0.26ha loss resulting in 2.80ha in 2007. Of this, 2.70ha remained stable throughout the seven years, with 0.37ha lost and 0.10ha gained by natural accretion throughout the unit. This ISA concludes that the Unit is Unfavourable Declining due to coastal squeeze due to the active erosion of the saltmarsh frontage and lack of scope to respond to this by rolling back due to the seawall presence.	
LITTORAL SEDIMENT	EMMA HAY	021	1009486	40.6236	0.00	30/06/2011	Unfavourable - Declining	Saltmarsh present comprises mainly low to mid level communities, with a network of well-developed creeks (some large) and salt pans throughout the unit. The quality of the saltmarsh	COASTAL - COASTAL SQUEEZE,

								was good with characteristic species for low to mid level communities, plus much thrift, wormwood, sea lavender, etc, on the higher areas. There was frequent Spartina anglica but not dominant or of concern. The marsh shelves into the mud of the river bed forming soft mud cliffs 1- 0.5m in height and there appears to be some active erosion, this looks dramatic from the other side of the estuary. There was small areas of pioneer saltmarsh at the southern end of site by the concrete blocks. Wash from boats evident and probably having some impact. The study by IECS (2010) was commissioned to investigate coastal squeeze found that of the 13.95ha of saltmarsh present in 2000, a total of 0.49ha was lost to erosion, but an additional 0.52ha was gained through natural accretion resulting in a net gain of +0.03ha by 2007. The majority of this saltmarsh gain was mapped at the south of the unit adjacent to the amenity area off Ferry Road. Some erosion of the fronting marsh had occurred along the whole length of the unit with losses and gains to the internal marsh. This resulted in the extent mapped in 2007 at 13.98ha, averaging a +0.004ha/yr-1 gain over the seven years. This ISA concludes that the Unit is still Unfavourable Declining condition due to coastal squeeze due to the active erosion of the saltmarsh frontage and lack of scope to respond to this by rolling back due to the seawall presence. Intertidal sand bars are very dynamic in the Woodbridge Haven area and these coastal processes are likely to influence saltmarsh in the area.	
LITTORAL SEDIMENT	EMMA HAY	022	1009487	47.4327	0.00	30/06/2011	Unfavourable - Declining	Immediately upstream of Felixstowe Ferry and south of Kings Fleet and its sluice and runs south east to north west along the sea wall. The	COASTAL - COASTAL SQUEEZE,

								saltmarsh present comprises mainly low to mid level communities, with a network of well-developed creeks and salt pans throughout the unit. The presence of the creeks means that the saltings are inaccessible without a boat/crossing equipment, so the saltmarsh was surveyed from the seawall using binoculars. Unit abuts a busy boat yard and there are a number of houseboats/barges moored on the saltings along with some abandoned wrecks (see photos). The quality of the saltmarsh was good with characteristic species for low to mid level communities. The marsh shelves into the mud of the river bed forming soft mud cliffs 1- 0.5m in height and there appears to be some active erosion. Wash from boats evident and probably having some impact. The study by IECS (2010) was commissioned to investigate coastal squeeze mapped this stretch of saltmarsh at 13.44ha in 2000, experiencing a loss of -0.18ha resulting in an extent of 13.27ha by 2007. Although a lot of the saltmarsh extent remained stable (12.70ha) between the seven years, losses occurred at the outer marsh edge along the full extent of this Unit and along the landward edge of the saltmarsh. Losses and gains were also mapped in the internal saltmarsh body mainly at the northern end of this unit with mudpans recolonising or areas experiencing erosion. This ISA concludes that the Unit is Unfavourable Declining due to coastal squeeze due to the active erosion of the saltmarsh frontage and lack of scope to respond to this by rolling back due to the seawall presence. Intertidal sand bars are very dynamic in the Woodbridge Haven area and these coastal	

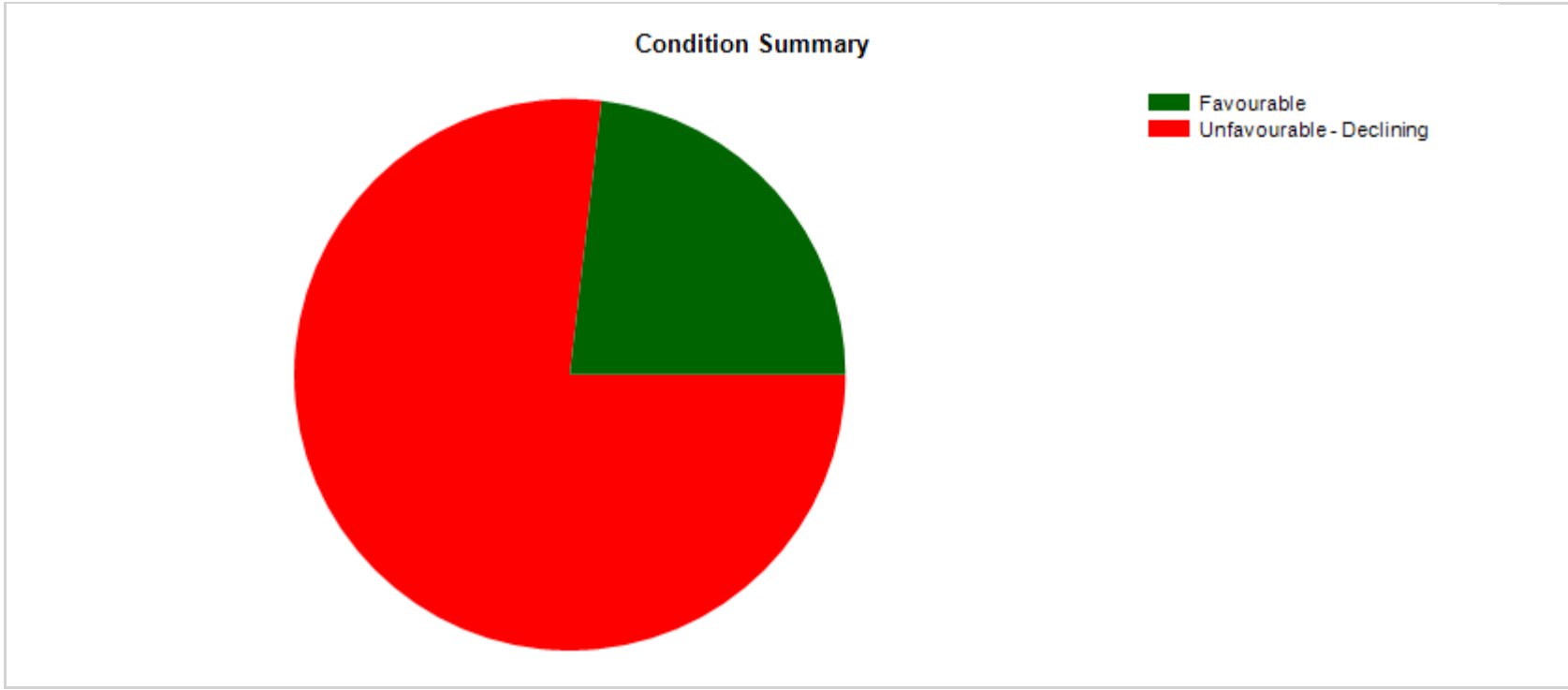
								processes are likely to influence saltmarsh in the area.	

Site: Deben Estuary SSSI

Report generated on: 13 Feb 2017

	Sites	Units	Units Assessed
Total number	1	22	22
Total area (ha)	981.08	981.08	981.08

	% meeting area of favourable or unfavourable recovering	Favourable	Unfavourable - Recovering	Unfavourable - No change	Unfavourable - Declining	Partially destroyed	Destroyed	Not Assessed
Area (ha)	227.24	227.24			753.84			
Percentage	23.16%	23.16%	0.00%	0.00%	76.84%	0.00%	0.00%	0.00%

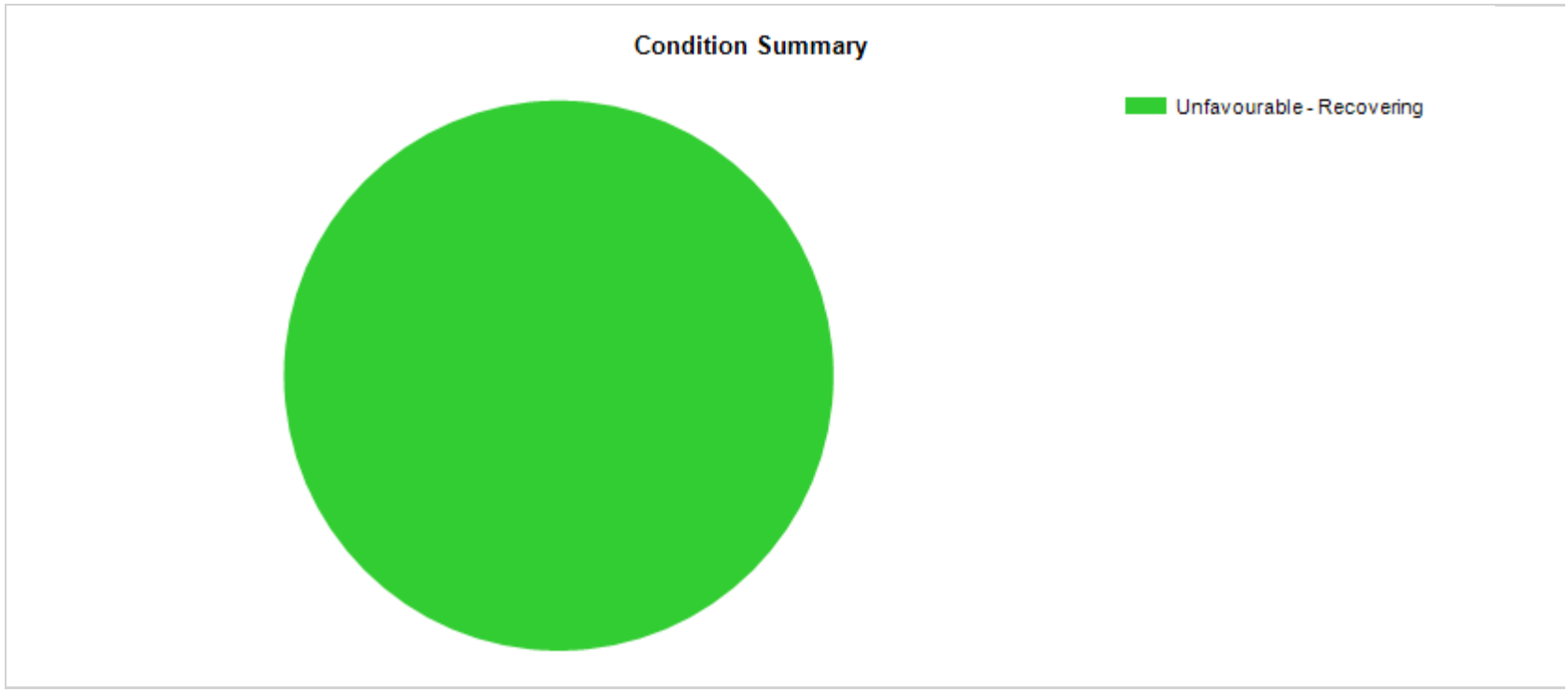

Condition Summary
Favourable
Unfavourable - Declining

Site: Blaxhall Heath SSSI

Report generated on: 13 Feb 2017

	Sites	Units	Units Assessed
Total number	1	1	1
Total area (ha)	45.90	45.90	45.90

	% meeting area of favourable or unfavourable recovering	Favourable	Unfavourable - Recovering	Unfavourable - No change	Unfavourable - Declining	Partially destroyed	Destroyed	Not Assessed
Area (ha)	45.90		45.90					
Percentage	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%


Condition Summary
Unfavourable - Recovering

Report generated on: 13 Feb 2017

Main Habitat	Responsible Officer	Unit Number	Unit Id	Area (ha)	NNR Overlap Area (ha)	Latest Assessment Date	Assessment Description	Comment	Adverse Condition Reasons
Blaxhall Heath SSSI - SUFFOLK (SUFFOLK COASTAL)									
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	001	1009494	45.9028	0.00	23/07/2015	Unfavourable - Recovering	The two criteria where the site failed are too much bracken cover and the heather age structure. There was too much degenerate heather, where it gets too 'leggy' and starts to fall over, and too much dead heather. The correct management is in place to return the site to favourable condition, hence 'recovering' status.	

Report generated on: 13 Feb 2017

Main Habitat	Responsible Officer	Unit Number	Unit Id	Area (ha)	NNR Overlap Area (ha)	Latest Assessment Date	Assessment Description	Comment	Adverse Condition Reasons
Leiston - Aldeburgh SSSI - SUFFOLK (SUFFOLK COASTAL)									
ACID GRASSLAND - Lowland	MATTHEW GINN	001	1021930	69.5714	0.00	05/08/2009	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.	
ACID GRASSLAND - Lowland	MATTHEW GINN	002	1021931	0.9636	0.00	16/08/2009	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.	
ACID GRASSLAND - Lowland	MATTHEW GINN	003	1021932	38.9639	0.00	17/12/2009	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.	
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	MATTHEW GINN	004	1021924	1.5912	0.00	26/07/2010	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.	
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	MATTHEW GINN	005	1021925	17.0505	0.00	26/07/2010	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 structural processes and possibly regeneration potential (although regeneration might not be expected under denser birch canopy). The unit includes woodland habitat, but woodland is not its only feature of the SSSI and the unit contributes to the overall SSSI (a mosaic of habitats) and its interests, notably the woodland, heath and variety of bird species features. The unit appears to have an interesting history; its includes the site of the old Aldringham landfill and has goood wood banks (Church Farm Wood).	
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	MATTHEW GINN	006	1021926	3.4888	0.00	16/11/2010	Unfavourable - Recovering	ma Hay and Emma Quick visited the site on 21 July 2010. The overall condition of the unit was found to be unfavourable-recovering.Unit 6 is small with a number of paths through it. It is secondary birch/oak woodland, plus rowan, occasional sycamore, with an understorey of bracken and bramble. There were few ancient trees but a very large old birch was noted at TM458599 on boundary bank (see	

								photo).Woodland feature of the unit was found to be unfavourable-recovering, the unit is not really SSSI woodland quality and failed on the structural processes target (age classes and possibly understorey). Woodland is not the only feature of the SSSI and the unit in its current state contributes to the overall SSSI (a mosaic of habitats) and its interests, notably the woodland, heath and possibly variety of bird species features. The woodland NVC types listed in the conservation objectives are W1, W2 and W6 (all wet) which does not necessarily fit the NVC types found on the ground (W10/W16, or scrub ones). A recent NVC survey of the site would provide valuable background information.There is a small area of encroachment onto the unit by Pine Cottage, The Fens area, through parking and dumping of garden waste, see photos, which needs to be addressed.	
ACID GRASSLAND - Lowland	MATTHEW GINN	007	1021933	24.7217	0.00	17/12/2009	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.	
SUPRALITTORAL SEDIMENT	MATTHEW GINN	008	1021938	12.4513	0.00	08/09/2010	Unfavourable - Declining	The unit has open shingle to the front, much trampled in places with limited more stable shingle behind due to a natural cliff constraining the site particularly to the north and south of the unit. This narrow linear unit does widen to a degree in the middle. Only limited zonation was evident to north and south of unit. No increase in constraints to shingle mobility in active foreshore zone, apart from gabion revetment at base of sandy cliff at southern end of site.Loss of vegetated substrate within the habitat as a result of anthropogenic activities;The whole Unit is used by people walking dogs, etc, There is much trampling throughout the unit but particularly where there is pedestrian	PUBLIC ACCESS/DISTURBANCE - PUBLIC ACCESS/DISTURBANCE,

								access down the cliffs at the Thorpeness end and the Sizewell/Leiston Caravan park end and along general ridge line. There was much trampling and several fire sites at the foot of Sizewell Hall. Erosion had lead to loss of vegetated shingle habitat 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 valariam, 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.	
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	MATTHEW GINN	009	1021927	14.4293	0.00	22/07/2010	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.	
FEN, MARSH AND SWAMP - Lowland	MATTHEW GINN	010	1021944	28.3326	0.00	05/08/2009	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.	
STANDING OPEN WATER AND CANALS	MATTHEW GINN	011	1021937	28.3063	0.00	12/07/2010	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.	
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	MATTHEW GINN	012	1021922	6.6361	0.00	16/08/2009	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.	
ACID GRASSLAND - Lowland	MATTHEW GINN	013	1021934	58.2992	0.00	04/08/2009	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.	
NEUTRAL GRASSLAND - Lowland	MATTHEW GINN	014	1021936	116.9513	0.00	12/07/2010	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 collaspsed 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.	
SUPRALITTORAL SEDIMENT	MATTHEW GINN	015	1021939	12.4145	0.00	01/09/2009	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.	
SUPRALITTORAL SEDIMENT	MATTHEW GINN	016	1021940	9.3824	0.00	20/09/2011	Unfavourable - Recovering	The unit has a main shingle vegetated ridge with sparse vegetation in places. There is more stable shingle behind the main shingle ridge, the vegetation (many areas of shingle with no vegetation behind main ridge) grades into short grassland with lichens, plus heathy communities. 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. The intertidal/shoreline area abuts the main ridge with a sharp shingle cliff with much erosion and roots of crambe etc showing through along the unit length along the beach. There is no increase in constraints to shingle mobility in active foreshore zone apart from long established pier/groyne to south of unitThere is a decrease in extent of vegetated shingle due to natural change. Loss of	

								vegetated substrate within the unit as a result of anthropogenic activities is of serious concern. The whole Unit is heavily used by people walking dogs, etc, There is much trampling throughout the unit. Species composition was not met, however, there were many characteristic species present within and outside the quadrat area and a good mosaic of habitats (more acid grassland/heath behind). Non native Lycium barbarum present in the unit and this should be removed. This assessment finds this unit to be in Unfavourable recovering condition as measures are in place to remedy the effect of trampling. If these measures were not in place the unit would be Unfavourable declining. More could be done with further fencing/demarcation, interpretation at sluice car park, etc and this has been discussed by NE, RSPB and SCDC. More detailed monitoring of vegetated shingle is recommended to accurately gauge any loss or development of vegetation, possibly using aerial photography.	
SUPRALITTORAL SEDIMENT	MATTHEW GINN	017	1021941	6.3859	0.00	20/09/2011	Unfavourable - Recovering	The unit is narrow (strip between sea and gardens) and has a single main shingle vegetated ridge with sparse vegetation in places, plus many areas of shingle with no vegetation behind main ridge. Limited zonation was evident and maintained but with much zonation disrupted by trampling/disturbance and constrained by gardens to the west. There are no increases in constraints to shingle mobility in active foreshore. There is a decrease in extent of vegetated shingle due to natural change (erosion). The intertidal/shoreline area abuts the main ridge with a sharp shingle cliff in places with much erosion and roots of crambe etc showing through. Species composition was not met, however, there were many characteristic	

								species present within and outside the quadrat area. Loss of vegetated substrate within the unit as a result of anthropogenic activities is of serious concern. The whole Unit is heavily used by people walking dogs, etc, There is much trampling throughout the unit. This assessment finds this unit to be in Unfavourable recovering condition as measures are in place to remedy the effect of trampling on adj unit are having a positive effect. If these measures were not in place the unit could be Unfavourable declining. More could be done with further fencing/demarcation, interpretation, etc (see Unit 16).	
ACID GRASSLAND - Lowland	MATTHEW GINN	018	1021935	1.4712	0.00	16/08/2009	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.	
SUPRALITTORAL SEDIMENT	MATTHEW GINN	019	1021942	6.2793	0.00	01/09/2009	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.	
SUPRALITTORAL SEDIMENT	MATTHEW GINN	020	1021943	17.5015	0.00	09/05/2011	Unfavourable - Recovering	The unit has a main shingle vegetated ridge with sparse vegetation in places. There is more stable shingle behind the main shingle ridge, the	

								vegetation (many areas of shingle with no vegetation behind main ridge) grades into short grassland with lichens, plus heathy communities. Limited zonation was evident including to other habitats (acid grassland, heath etc) although much zonation disrupted by trampling/disturbance and constrained by car park and road to the west. Around the shell sculpture and car park entrance to the beach there is no vegetation. The intertidal/shoreline area abuts the main ridge with a sharp shingle cliff in places. There is no increase in constraints to shingle mobility in active foreshore zone apart from long established pier/groyne to north of unit. There is a decrease in extent of vegetated shingle due to natural change. Loss of vegetated substrate within the unit as a result of anthropogenic activities is of serious concern, much trampling throughout the unit. Species composition was not met, however, there were characteristic species present and a good mosaic of habitats. Two areas of vegetation have been roped off (with explanatory signage) to act as exclusion zone and a third is proposed. SCDC wardening scheme has been running since 2008, supported by a specific leaflet, to raise awareness of the importance of vegetated shingle and have been undertaking some monitoring. Enhancement of this being discussed. Photo surveys show no decline in veg since 2007. This assessment finds this unit to be in Unfavourable no change but Recovering due to mitigation in place but at Risk due to the high recreational pressure it is under. More detailed monitoring of vegetated shingle is recommended to accurately gauge any loss or development of vegetation, possibly using aerial photography.	

BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	MATTHEW GINN	021	1021928	14.4524	0.00	16/11/2010	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 site would provide valuable background information.	
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	MATTHEW GINN	022	1021929	4.6545	0.00	16/11/2010	Favourable	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.	
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	MATTHEW GINN	023	1021923	40.466	0.00	10/08/2010	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	

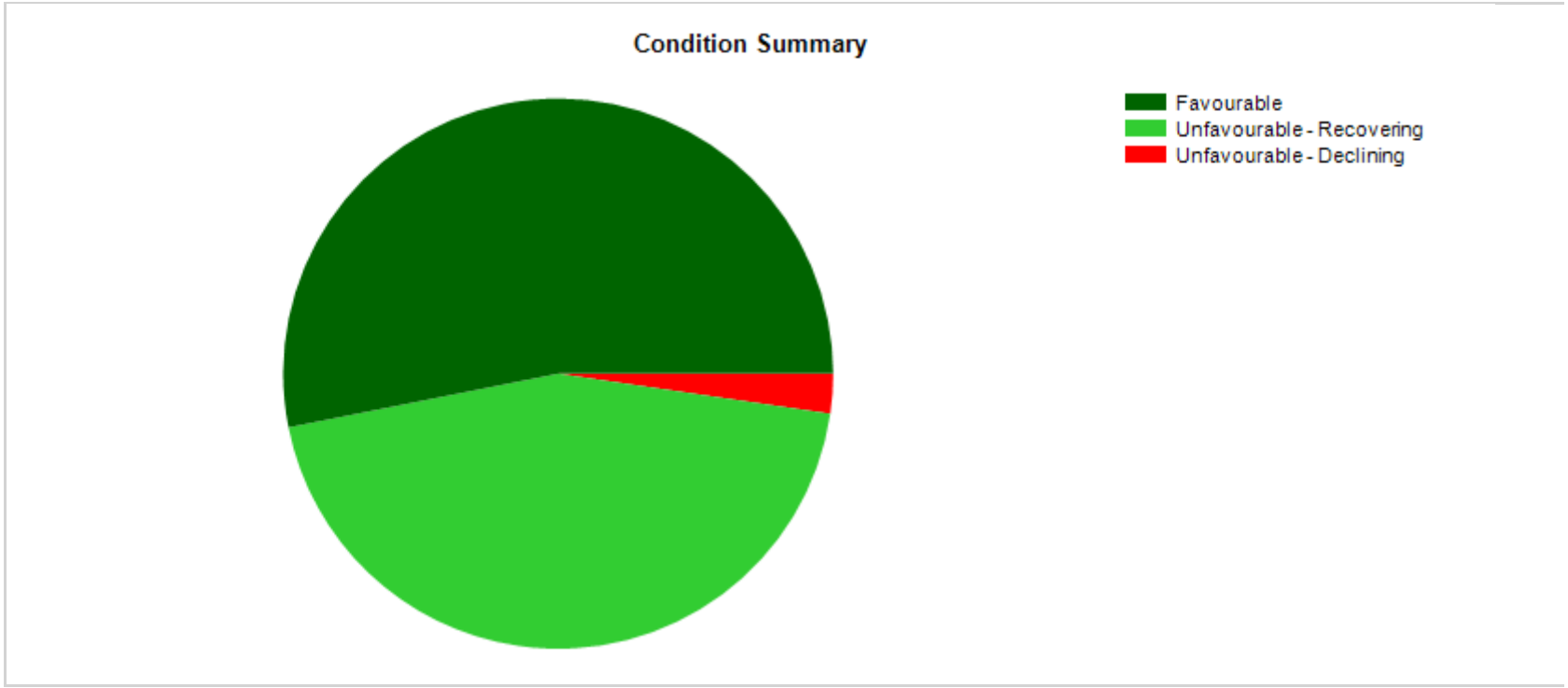
								1987 gales and replanted in the 1990?s. They are RSPB owned and managed or under management agreement with RSPB which provides for the introduction of trees/woodland management. The woodlands have formerly contributed to the maintenance of nightjar and woodlark populations, with bird using glades and 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 be an issue from a conservation point of view as neither are a threat to the heath and the woods are of limited interest. Livestock are being used to restructure plantation in Corporals? Belts. Red deer damaging young trees/regrowth and bark stripping & will need to be monitored.	

Site: Leiston - Aldeburgh SSSI

Report generated on: 13 Feb 2017

	Sites	Units	Units Assessed
Total number	1	23	23
Total area (ha)	534.76	534.76	534.76

	% meeting area of favourable or unfavourable recovering	Favourable	Unfavourable - Recovering	Unfavourable - No change	Unfavourable - Declining	Partially destroyed	Destroyed	Not Assessed
Area (ha)	522.31	284.12	238.19		12.45			
Percentage	97.67%	53.13%	44.54%	0.00%	2.33%	0.00%	0.00%	0.00%

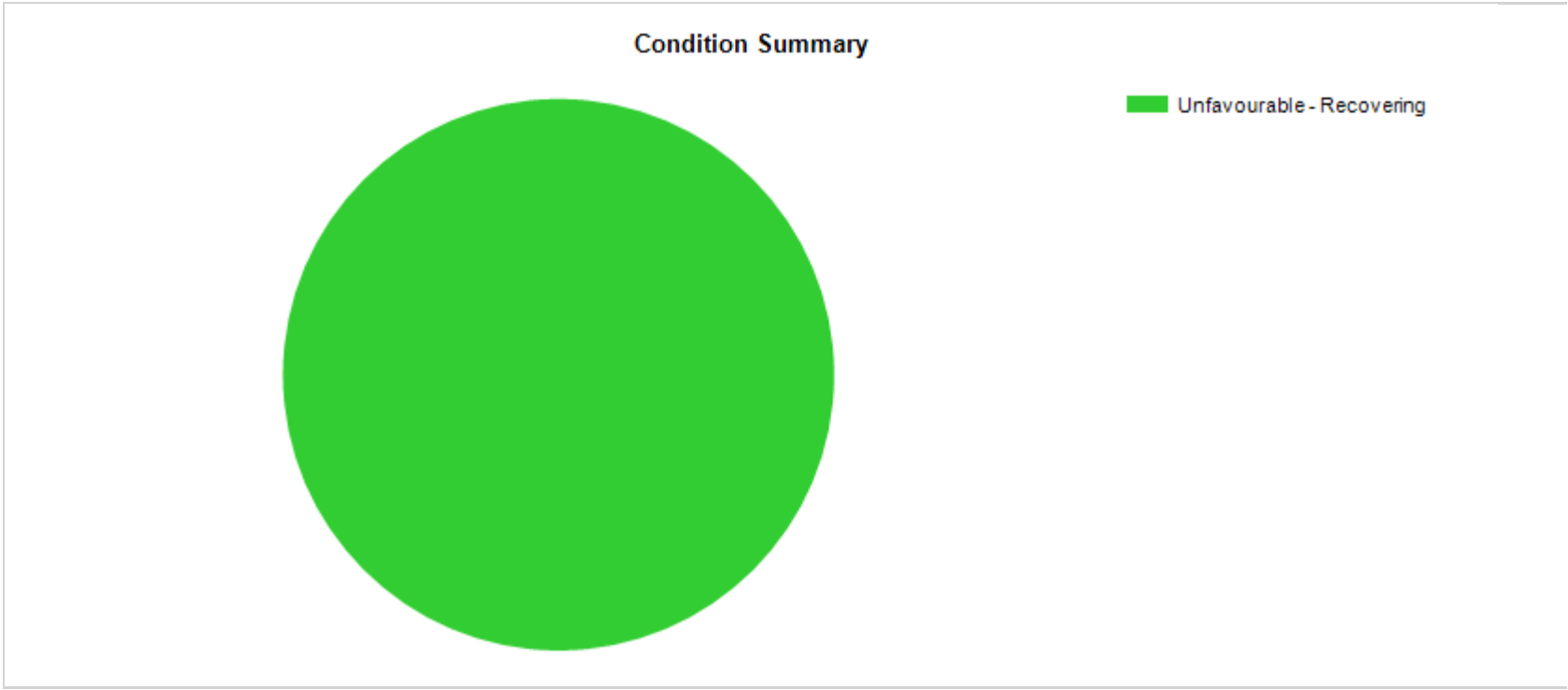

Condition Summary
Favourable
Unfavourable - Recovering
Unfavourable - Declining

Site: Sandlings Forest SSSI

Report generated on: 13 Feb 2017

	Sites	Units	Units Assessed
Total number	1	2	2
Total area (ha)	2,483.78	2,483.78	2,483.78

	% meeting area of favourable or unfavourable recovering	Favourable	Unfavourable - Recovering	Unfavourable - No change	Unfavourable - Declining	Partially destroyed	Destroyed	Not Assessed
Area (ha)	2,483.78		2,483.78					
Percentage	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%


Condition Summary
Unfavourable - Recovering

Report generated on: 13 Feb 2017

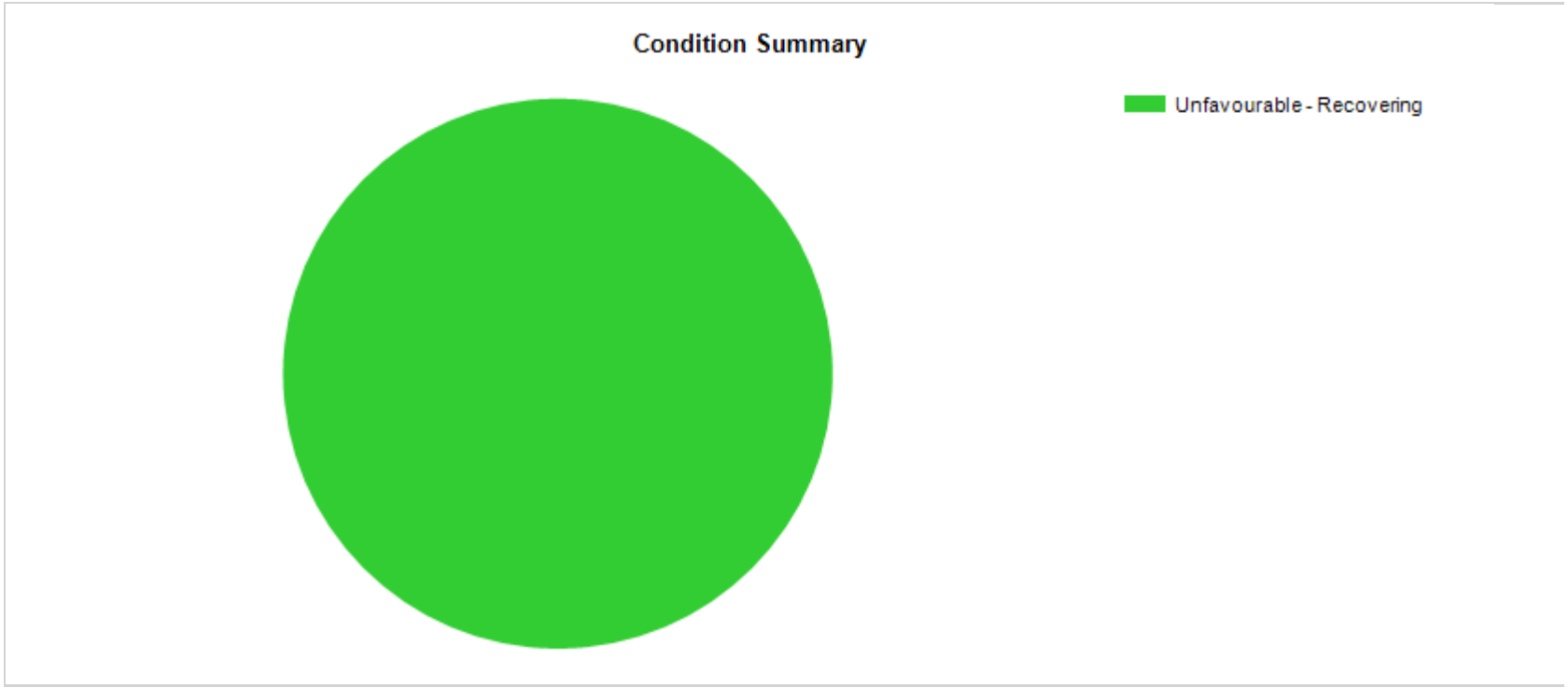
Main Habitat	Responsible Officer	Unit Number	Unit Id	Area (ha)	NNR Overlap Area (ha)	Latest Assessment Date	Assessment Description	Comment	Adverse Condition Reasons
Sandlings Forest SSSI - SUFFOLK (SUFFOLK COASTAL)									
CONIFEROUS WOODLAND	MATTHEW GINN	001	1026103	1053.4017	0.00	21/12/2010	Unfavourable - 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.	
CONIFEROUS WOODLAND	MATTHEW GINN	002	1026104	1430.3745	0.00	21/12/2010	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	

Site: Snape Warren SSSI

Report generated on: 13 Feb 2017

	Sites	Units	Units Assessed
Total number	1	1	1
Total area (ha)	47.96	47.96	47.96

	% meeting area of favourable or unfavourable recovering	Favourable	Unfavourable - Recovering	Unfavourable - No change	Unfavourable - Declining	Partially destroyed	Destroyed	Not Assessed
Area (ha)	47.96		47.96					
Percentage	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%


Condition Summary
Unfavourable - Recovering

Report generated on: 13 Feb 2017

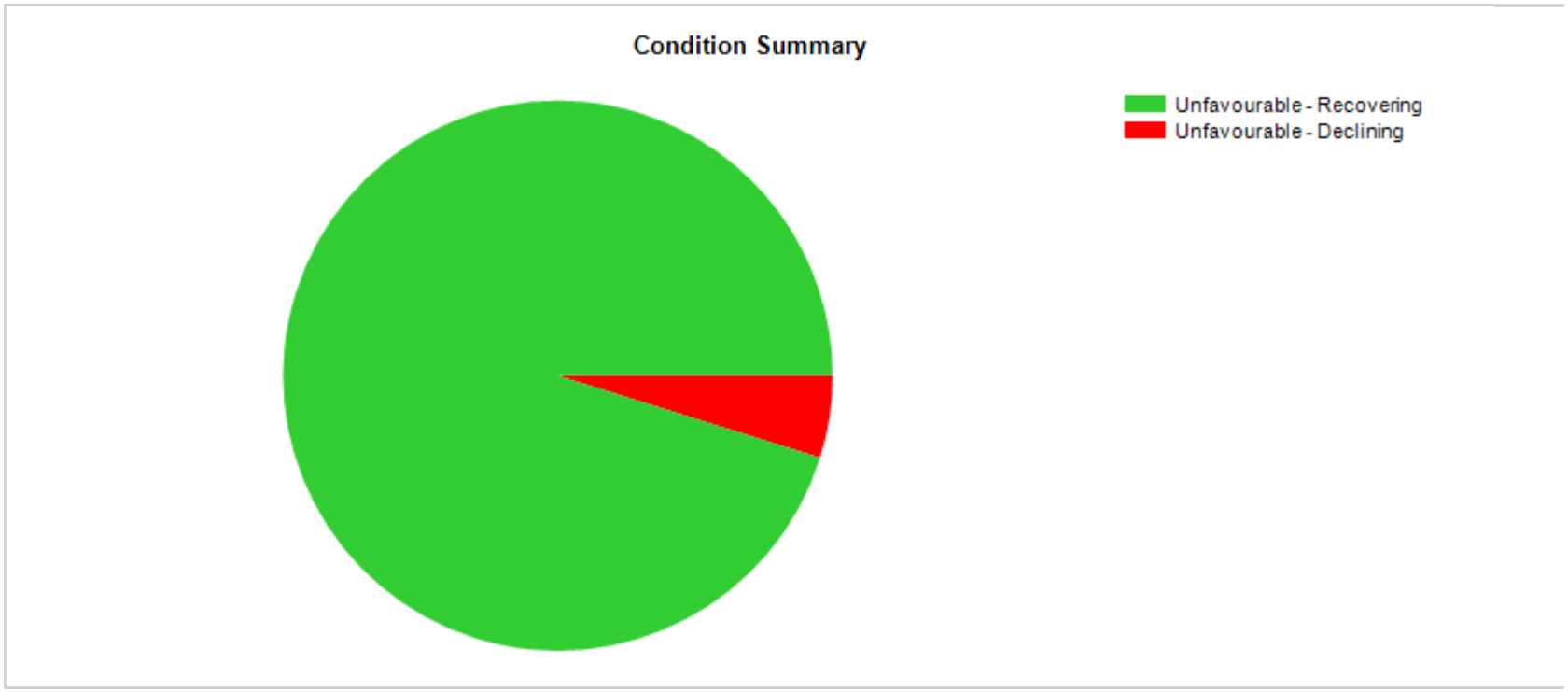
Main Habitat	Responsible Officer	Unit Number	Unit Id	Area (ha)	NNR Overlap Area (ha)	Latest Assessment Date	Assessment Description	Comment	Adverse Condition Reasons
Snape Warren SSSI - SUFFOLK (SUFFOLK COASTAL)									
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	001	1008792	47.9571	0.00	24/07/2013	Unfavourable - Recovering	Very dry conditions, mostly impossible to ID grasses and forbs.The unit fails on abundance of bracken and birch scrub overall, but there is a management plan in place to tackle the scrub and keep the heath open. Observed white admiral flying along wooded pathway on the edge of the site and found a purple hairstreak wing.	

Site: Sutton and Hollesley Heaths SSSI

Report generated on: 13 Feb 2017

	Sites	Units	Units Assessed
Total number	1	12	12
Total area (ha)	483.26	483.26	483.26

	% meeting area of favourable or unfavourable recovering	Favourable	Unfavourable - Recovering	Unfavourable - No change	Unfavourable - Declining	Partially destroyed	Destroyed	Not Assessed
Area (ha)	459.94		459.94		23.32			
Percentage	95.17%	0.00%	95.17%	0.00%	4.83%	0.00%	0.00%	0.00%


Condition Summary
Unfavourable - Recovering
Unfavourable - Declining

Report generated on: 13 Feb 2017

Main Habitat	Responsible Officer	Unit Number	Unit Id	Area (ha)	NNR Overlap Area (ha)	Latest Assessment Date	Assessment Description	Comment	Adverse Condition Reasons
Sutton and Hollesley Heaths SSSI - SUFFOLK (SUFFOLK COASTAL)									
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	001	1009151	11.8048	0.00	03/07/2015	Unfavourable - Recovering	Unit is responding well from bracken control. Follow up treatment and grazing is planned and this should deliver favourable condition by 2020.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	002	1009152	52.1606	0.00	08/07/2015	Unfavourable - Recovering	Passes assessment on heather structure, frequency of dwarf shrubs and species composition. Fails on bracken cover although management has been identified to counter this.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	003	1009153	39.9993	0.00	08/07/2015	Unfavourable - Recovering	Passes assessment on heather structure, frequency of dwarf shrubs and species composition. Fails on bracken cover although management has been identified to counter this.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	004	1009154	23.3222	0.00	24/09/2010	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.	LACK OF CORRECTIVE WORKS - INAPPROPRIATE SCRUB CONTROL,
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	005	1009155	23.0801	0.00	15/03/2009	Unfavourable - Recovering	In the open areas of this unit there is a good mix of ling and bell heather (both abundant) with appropriate amounts of heathland grasses/sedges and flowers. In areas cleared of trees regenerating vegetation includes heather. Rabbits and deer are grazing the regenerating vegetation. Significant areas of pine plantation remain.	

DWARF SHRUB HEATH - Lowland	MATTHEW GINN	006	1009156	45.1624	0.00	06/07/2015	Unfavourable - Recovering	Passes assessment on heather structure, frequency of dwarf shrubs and species composition. Fails on bracken cover although management has been identified to counter this. Not many forbs/grasses but this is characteristic of the unit.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	007	1009157	60.6327	0.00	15/03/2009	Unfavourable - Recovering	This unit comprised areas of heather in different growth phases, with some dense bracken and gorse which has been partially cleared. There is an established plantation in the centre of the unit, fringed with old oak pollards.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	008	1009158	40.1319	0.00	15/03/2009	Unfavourable - Recovering	is unit there is a mixture of acid grassland and heather, including ling, bell heather, fescues, heath bedstraw, lichens, sheep?s sorrel and sedges. On the western side of the unit there is a mix of trees, with young birch and pine scatted across the site. Tree clearance is taking place.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	009	1009159	59.4144	0.00	17/08/2010	Unfavourable - Recovering	Assessment carried out by Monica O'Donnell and Emma Quick on 29 July with a return visit by Emma on 5 August. This site is undergoing a tree clearance programme at the current time and the area that has already been clear felled is showing signs of recovery with heather re-establishment. An area towards the north (the bottom part) of the site is being grazed by hebridean sheep owned by the Suffolk Wildlife Trust. Heather has been cut (in one block) in some areas to create a diversity in the structure of the vegetation (allow natural regeneration). The current management is successfully improving the biodiversity of the site.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	010	1009160	39.1876	0.00	15/03/2009	Unfavourable - Recovering	This unit contains a mosaic of rabbit-grazed acid grassland, gorse, bracken and heather interspersed with suitable amounts of bare ground. The majority of the heather is building/mature. Sheep?s sorrel, lichens and	

								heath bedstraw are frequent through the unit. There is a block of mature pine plantation on the south-east side of the unit and some self sown pines on the north-west side.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	011	1009161	44.8592	0.00	15/03/2009	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.	
DWARF SHRUB HEATH - Lowland	MATTHEW GINN	012	1009162	43.5024	0.00	09/07/2015	Unfavourable - Recovering	Passes assessment on heather structure, frequency of dwarf shrubs and species composition. Fails on bracken cover although management has been identified to counter this.	

Report generated on: 13 Feb 2017

Main Habitat	Responsible Officer	Unit Number	Unit Id	Area (ha)	NNR Overlap Area (ha)	Latest Assessment Date	Assessment Description	Comment	Adverse Condition Reasons
Stour Estuary SSSI - ESSEX, SUFFOLK (BABERGH, TENDRING)									
LITTORAL SEDIMENT	CHRIS KEELING	001	1007088	44.8095	0.00	27/11/2010	Unfavourable - Declining	The unit contains the biotopes typically associated with upper estuarine soft muds and sandy muds. It also contains the biotpe known to support the burrowing anemone, Nematostella vectensis, and the tentacled lagoon worm, Alkmaria romijni - notified features. There is some upper foreshore erosion and evidence of active erosion of saltmarsh types associated with the notified feature, Limonium humile (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 and coastal squeeze may be a key contributory factor. 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. The assessment of this unit should 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.Field recording forms and photos are stored on file.	COASTAL - COASTAL SQUEEZE,
LITTORAL SEDIMENT	CHRIS KEELING	002	1007089	388.4535	0.00	01/11/2010	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 this unit - predominantly littoral muds consisting of sandy muds, with soft muds -and the infaunal community have not significantly altered. This unit contains the biotope which is known to support the burrowing anemone, Nematostella vectensis, and the tentacled lagoon worm, Alkmaria romijni. The vascular plant species represented in this unit are lax-flowered sea lavender, dittander and perennial glasswort. Dittander is found at Stutton Ness where the spit connects to the foreshore in front of the cliffs. 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 the viability of this species is not currently threatened by coastal squeeze, though there is erosion of the marsh edges. 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.Field recording forms cross referenced to photos are on file.	
LITTORAL SEDIMENT	CHRIS KEELING	003	1007090	374.9666	0.00	15/10/2010	Favourable	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 key vascular plant features represented in this unit are lax-	

								flowered sea lavender and perennial glasswort. They are both found in the most substantial area of saltmarsh within the unit on Ragmarsh Farm marsh where the supporting saltmarsh communities are currently stable. Lax-flowered sea lavender is also found in the embayments between Nether Hall and Wrabness Point. The saltmarsh in these sections is eroding and predominantly backed by low cliffs (representing 83.5% of the shoreline in this unit), a natural feature. There is some localised erosion in the upper marsh along the bridlepath and where vehicles have accessed. Field recording and forms and photos are available on file.	
LITTORAL SEDIMENT	CHRIS KEELING	004	1007091	713.77	0.00	27/10/2010	Favourable	The sediment character, biotope composition and distribution, and species composition of representative biotopes appears to be favourable. The supporting biotope for the Schedule 5 species - tentacled lagoon worm ? (Alkmaria romijni) and starlet sea anemone ? (Nematostella vectensis) is present. Mixed substrata are also recorded in this unit. The uncommon biotope containing the seaweed serrated wrack with sponges, sea squirts and red seaweed on mixed substrata is also present.The key vascular plant features represented in this unit are lax-flowered sea lavender and perennial glasswort. Lax-flowered sea lavender was represented as part of a saltmarsh community at several locations - east of Harkstead Point, protected by a shingle spit; on the eastern bank of Holbrook Creek; and on the gravel foreshore fronting Stutton House marsh, adjacent to a historical breach site. Perennial glasswort was found to be present within the cord grass marsh here. It also features on the west side of Alton Wharf/Holbrook Creek. There appears to	

								be no significant threat to the viability of these species at present. The sea wall length in this unit is 2.06km representing 23% of the coastline length of in this unit. The cliffs (accounting for 77% of the shoreline in this unit) are a natural dynamic feature of this embayment. Most of the length of sea wall in the unit is fronted by a series of historical breaches which are in various stages of interidal development. Erosion of the seaward edge of the intertidal mud and saltmarsh has been noted by Worsfold (2005). The influence of coastal squeeze in this unit is likely to be limited and localised and is not, at present, impacting on the features of interest.Field recording forms and photos for vascular plants and littoral sediments are available on file.	
LITTORAL SEDIMENT	CHRIS KEELING	006	1007094	162.8264	0.00	11/10/2010	Favourable	The site features assessed for this unit are: vascular plants and littoral sediments.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. The habitat in this unit facilitates the growth of perennial glasswort and golden samphire. Perennial glasswort has a rare distribution on the upper shore on the east side of the Erwarton Ness headland. There is cliff backing this section of foreshore. There is a developing erosive area on the lower shore. Golden samphire occurs as a zone of vegetation at the base of the sea wall embankment at the western end of the bay and has an occasional distribution within the saltmarsh. The drainage conditions and topography of the foreshore at the base of the sea wall favours this species. It is not found at the	

								base of the natural low cliff further east. The saltmarsh here is stable. `Coastal squeeze? does not appear to be impacting on the features of interest. The current satlmarsh extent was compared with maps from the EA?s saltmarsh survey (Environment Agency (2000). Erosion of the saltmarshes of Essex between 1988 and 1998. Coastal Geomorphology Partnership, University of Newcastle.) The areas of erosion recorded in 2000 mostly reflect the extent and distribution noted in the current survey,ie some erosion on the seaward edge - erosion steps are evident. The EA survey also records accretion on the seaward edge at the east and west ends of the saltmarsh in this embayment. Overall, the saltmarsh in this embayment supporting the features of interest is generally stable with plateaus of marshland with few dissections. Field recording forms (and photos) with the rationale for the condition assessment are available on file.	
EARTH HERITAGE	CHRIS KEELING	007	1007081	2.7718	0.00	22/09/2010	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.	
EARTH HERITAGE	CHRIS KEELING	008	1007080	3.4492	0.00	15/09/2010	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.	
LITTORAL SEDIMENT	CHRIS KEELING	009	1028137	84.0371	0.00	11/10/2010	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 that are above their conservation objectives threshold.	
LITTORAL SEDIMENT	CHRIS KEELING	010	1028138	472.9313	0.00	06/10/2010	Favourable	The notified features assessed are: littoral sediment and vascular plants. The sediment character, biotope composition and distribution, and species composition of representative biotopes appears to be favourable. The supporting biotope for the Schedule 5 species -tentacled lagoon worm and starlet sea anemone ? is present.The vascular plants represented in this unit are marsh-mallow; lax-flowered sea lavender; perennial glasswort; hoary mullein. At present, the plant populations appear to be viable. It would appear that erosion around the Copperas Wood farm headland is starting to impact on the section of foreshore supporting an extensive area of marsh mallow. There is a tyre revetment around the headland which may be exacerbating this process. Sea wall extends along a quarter of the coastline in this unit. The remainder of the coastline is a natural cliff bank. The Environment Agency report [Erosion of the saltmarshes of Essex between 1988 and 1998] indicates areas of saltmarsh erosion at the seaward edge and the edge of creeks. This appears to be more extensive at the east end of the embayment adjacent to the sea wall enclosing the bay at Parkeston Quay. Worsfold (2005) noted that some of the area of intertidal mud in Copperas Bay have been lost since publication of the most recent OS map - erosion steps are present on the seaward edges of both the saltmarsh and mudflats. This has been observed in the current survey. Other factors may also be influencing erosion such as historical activities related to port development and aggregate dredging carried out between the 1960s	

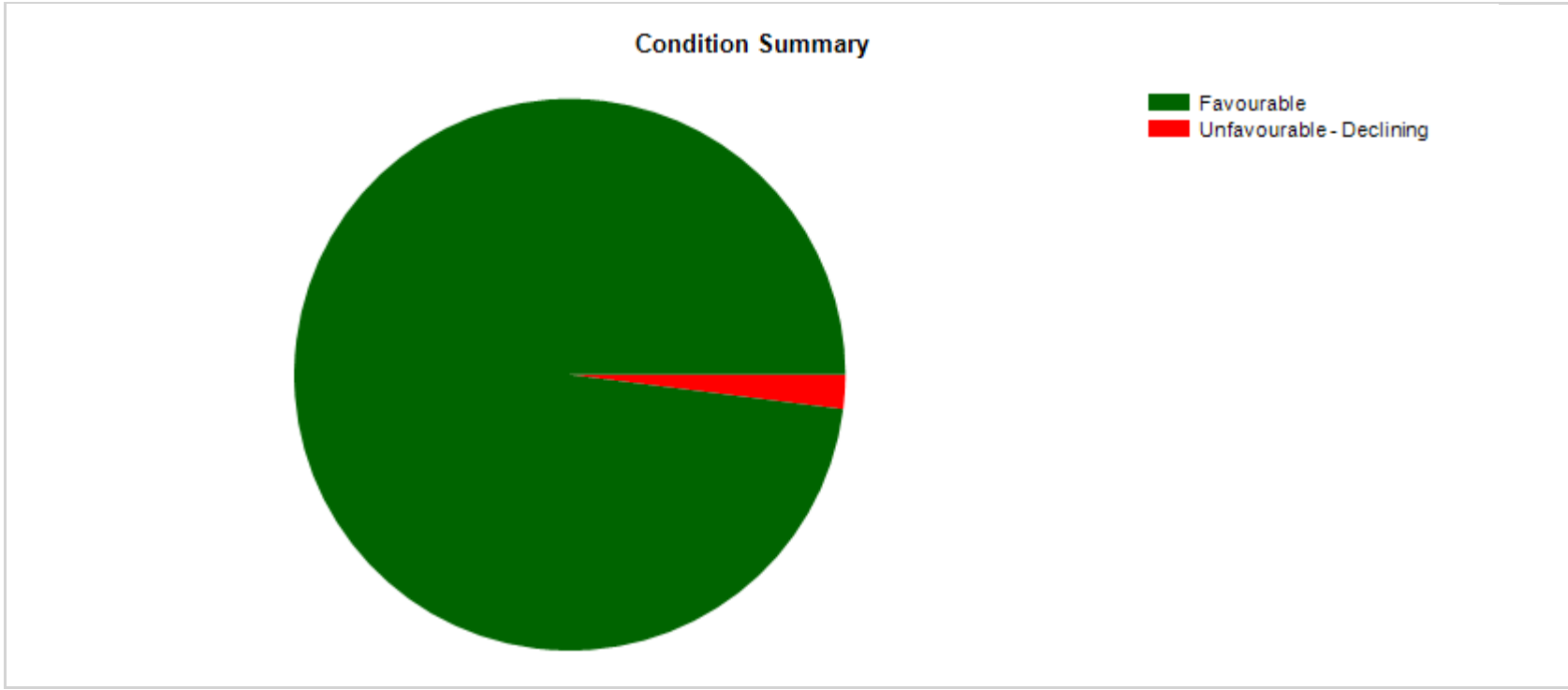
								and 1980s. Mitigation for the Harwich approaches dredge appears to be successful. Coastal squeeze needs to be considered alongside other factors and is considered here to be a localised risk factor. Field recording forms (and photos) with the rationale behind the condition assessment are available on file.	

Site: Stour Estuary SSSI

Report generated on: 13 Feb 2017

	Sites	Units	Units Assessed
Total number	1	9	9
Total area (ha)	2,248.02	2,248.02	2,248.02

	% meeting area of favourable or unfavourable recovering	Favourable	Unfavourable - Recovering	Unfavourable - No change	Unfavourable - Declining	Partially destroyed	Destroyed	Not Assessed
Area (ha)	2,203.21	2,203.21			44.81			
Percentage	98.01%	98.01%	0.00%	0.00%	1.99%	0.00%	0.00%	0.00%


Condition Summary
Favourable
Unfavourable - Declining

Appendix 5 European sites conservation objectives.

European Site Conservation Objectives for Deben Estuary Special Protection Area Site Code: UK9009261

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

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

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

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)

A132 *Recurvirostra avosetta*; Pied avocet (Non-breeding)

This is a European Marine Site

This SPA is a part of the Deben Estuary European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Regulation 35 Conservation Advice document for the EMS. For further details about this please visit the Natural England website at: http://www.naturalengland.org.uk/ourwork/marine/protectandmanage/mpa/europeansites.aspx or contact Natural England's enquiry service at enquiries@naturalengland.org.uk or by phone on 0845 600 3078.

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2010 (the "Habitats Regulations") and Article 6(3) of the Habitats Directive. They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where this is available) will also provide a framework to inform the management of the European Site under the provisions of Articles 4(1) and 4(2) of the Wild Birds Directive, and the prevention of deterioration of habitats and significant disturbance of its qualifying features required under Article 6(2) of the Habitats Directive.

These Conservation Objectives are set for each bird feature for a Special Protection Area (SPA). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 30 June 2014 (Version 2). This document updates and replaces an earlier version dated 29 May 2012 to reflect Natural England's Strategic Standard on European Site Conservation Objectives 2014. Previous references to additional features identified in the 2001 UK SPA Review have also been removed.

European Site Conservation Objectives for Sandlings Special Protection Area Site Code: UK9020286

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

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

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

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A224 *Caprimulgus europaeus*; European nightjar (Breeding)

A246 *Lullula arborea*; Woodlark (Breeding)

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2010 (the "Habitats Regulations") and Article 6(3) of the Habitats Directive. They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where this is available) will also provide a framework to inform the management of the European Site under the provisions of Articles 4(1) and 4(2) of the Wild Birds Directive, and the prevention of deterioration of habitats and significant disturbance of its qualifying features required under Article 6(2) of the Habitats Directive.

These Conservation Objectives are set for each bird feature for a Special Protection Area (SPA). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 30 June 2014 (Version 2). This document updates and replaces an earlier version dated 29 May 2012 to reflect Natural England's Strategic Standard on European Site Conservation Objectives 2014. Previous references to additional features identified in the 2001 UK SPA Review have also been removed.

European Site Conservation Objectives for Stour and Orwell Estuaries Special Protection Area Site Code: UK9009121

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

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

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

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)
A054 *Anas acuta*; Northern pintail (Non-breeding)
A132 *Recurvirostra avosetta*; Pied avocet (Breeding)
A141 *Pluvialis squatarola*; Grey plover (Non-breeding)
A143 *Calidris canutus*; Red knot (Non-breeding)
A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
A162 *Tringa totanus*; Common redshank (Non-breeding)
Waterbird assemblage

This is a European Marine Site

This SPA is a part of the Stour and Orwell Estuaries European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Regulation 35 Conservation Advice document for the EMS. For further details about this please visit the Natural England website at: http://www.naturalengland.org.uk/ourwork/marine/protectandmanage/mpa/europeansites.aspx or contact Natural England's enquiry service at enquiries@naturalengland.org.uk or by phone on 0845 600 3078.

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2010 (the "Habitats Regulations") and Article 6(3) of the Habitats Directive. They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where this is available) will also provide a framework to inform the management of the European Site under the provisions of Articles 4(1) and 4(2) of the Wild Birds Directive, and the prevention of deterioration of habitats and significant disturbance of its qualifying features required under Article 6(2) of the Habitats Directive.

These Conservation Objectives are set for each bird feature for a Special Protection Area (SPA). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 30 June 2014 (Version 2). This document updates and replaces an earlier version dated 29 May 2012 to reflect Natural England's Strategic Standard on European Site Conservation Objectives 2014. Previous references to additional features identified in the 2001 UK SPA Review have also been removed.



baker consultants