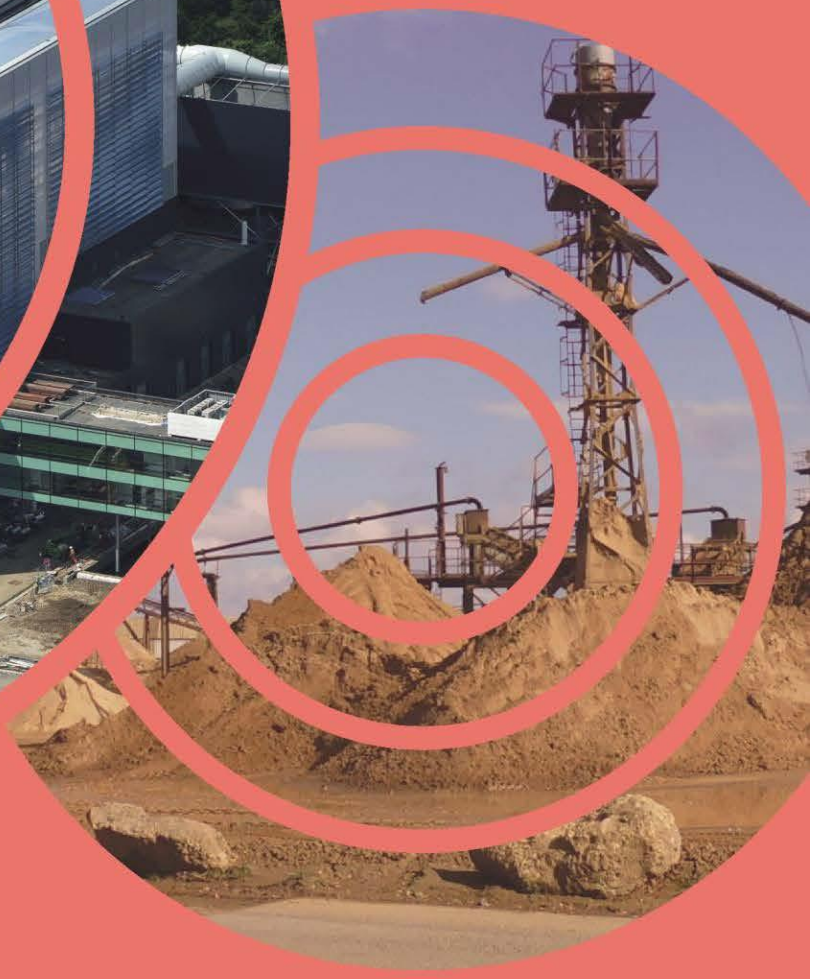

Suffolk County Council

Suffolk Minerals & Waste Local Plan
Strategic Habitats Regulation Assessment
Appendix 1 – Designated Sites

OCTOBER
2018

The Conservation of Habitats and Species Regulations 2017

Regulation 63 Assessment

Re: The Suffolk Minerals & Waste Local Plan

August 2018

Strategic Habitats Regulations Assessment

Appendix One: Designated Sites Details

Appendix One:

Designated Sites Details

Set out below are the pertinent details of the various Natura 2000 Sites where the proposals detailed in the Suffolk Minerals & Waste Local Plan may result in potential impacts upon their features of Conservation Interest.

The full information for each site is available on-line from JNCC and Natural England but links have been provided.

The Benacre to Easton Bavents Lagoons Special Area of Conservation:

*Extract from **Benacre to Easton Bavents Lagoons SAC** Citation:*

For further details see:
http://publications.naturalengland.org.uk/publication/6349053717643264

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name: Benacre to Easton Bavents Lagoons

Unitary Authority/County: Suffolk

SAC status: Designated on 1 April 2005

Grid reference: TM524830

SAC EU code: UK0013104

Area (ha): 366.93

Component SSSI: Benacre to Easton Bavents SSSI

Site description:

Benacre to Easton Bavents Lagoons is a series of percolation lagoons on the east coast of England. The lagoons (the Denes, Benacre Broad, Covehithe Broad and Easton Broad) have formed behind shingle barriers and are a feature of a geomorphologically dynamic system. Sea water enters the lagoons by percolation through the barriers, or by overtopping them during storms and high spring tides. The lagoons show a wide range of salinities, from nearly fully saline in South Pool, the Denes, to extremely low salinity at Easton Broad. This range of salinity has resulted in a series of lagoonal vegetation types, including beds of Narrow-Leaved Eelgrass *Zostera angustifolia* in fully saline or hypersaline conditions, beds of Spiral Tasselweed *Ruppia cirrhosa* in brackish water, and dense beds of Common Reed *Phragmites australis* in freshwater. The site supports a number of specialist lagoonal species.

Qualifying habitats: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Coastal lagoons*

Annex I priority habitats are denoted by an asterisk (*).

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European Site Conservation Objectives for Benacre to Easton Bavents Lagoons Special Area of Conservation Site Code: UK0013104

With regard to the SAC and the natural habitats and/or species for which the site has been designated (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 Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

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

Qualifying Features:

H1150. Coastal lagoons*

* denotes a priority natural habitat or species

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The Benacre to Easton Bavents Special Protection Area:

*Extract from **Benacre to Easton Bavents SPA** Citation:*

For further details see:
http://publications.naturalengland.org.uk/publication/4750287944286208

European Site Conservation Objectives for Benacre to Easton Bavents Special Protection Area (a Marine Site) Site Code: UK9009291

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

The conservation objective for the internationally important populations of the regularly occurring Annex 1 bird species:

Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of the regularly occurring Annex 1 bird species, under the Birds Directive, in particular:

- Shingle

• Shallow coastal waters

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The Breckland Special Area of Conservation:

Extract from Breckland SAC Citation:

For further details see:
http://publications.naturalengland.org.uk/publication/6145904885104640

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name: Breckland

Unitary Authority/County: Norfolk, Suffolk

SAC status: Designated on 1 April 2005

Grid reference: TL862948

SAC EU code: UK0019865

Area (ha): 7548.06

Component SSSI: Barnhamcross Common SSSI, Berner's Heath, Icklingham SSSI, Bridgham and Brettenham Heaths SSSI, Cavenham - Icklingham Heaths SSSI, Cranwich Camp SSSI, Deadman's Grave, Icklingham SSSI, East Wretham Heath SSSI, Field Barn Heaths, Hilborough SSSI, Foxhole Heath, Eriswell SSSI, Gooderstone Warren SSSI, Grime's Graves SSSI, Lakenheath Warren SSSI, RAF Lakenheath SSSI, Stanford Training Area SSSI, Thetford Golf Course and Marsh SSSI, Thetford Heaths SSSI, Wangford Warren and Carr SSSI, Weather and Horn Heaths, Eriswell SSSI, Weeting Heath SSSI

Site description:

Breckland in the heart of East Anglia is a gently undulating plateau underlain by bedrock of Cretaceous Chalk, covered by thin deposits of sand and flint. The conditions during the last glaciation have given rise to the patterned ground features and ice depressions (pingos) that we see today and that are of high geological and biological importance. The continental climate, with low rainfall and free-draining soils, has led to the development of dry heath and grassland communities. Relatively lush river valleys provide a gentle contrast to the drier harsher surroundings. Occasional woods with Alder *Alnus glutinosa* and Willow *Salix sp*. the most dominant trees occur beside rivers and streams in the floodplains. These woods rely on high water levels and sometimes surface flooding as both river flooding or spring flows can be very important.

The dry heaths of Breckland are of the *Calluna vulgaris – Festuca ovina* (Heather – Sheep's-Fescue) community. The Sand Sedge-dominated *Carex arenaria* sub-community is typical of areas of blown sand – a very unusual feature of this location. The highly variable soils of Breckland, with underlying chalk being largely covered with wind-blown sands, have resulted in mosaics of Heather-dominated heathland, acidic grassland and calcareous grassland that are unlike those of any other site. In many places there is a linear or patterned distribution of heath and grassland, arising from fossilised soil patterns that formed under peri-glacial conditions.

Breckland is the most extensive surviving area of the rare *Festuca ovina – Hieracium pilosella – Thymus praecox* (Sheep's-Fescue – Mouse-Ear-Hawkweed – Wild Thyme) grassland type. The grassland is rich in rare species typical of dry, winter-cold, continental areas, and approaches the features of grassland types in central Europe more than almost any other semi-natural dry grassland found in the UK.

Wangford Warren and adjoining parts of RAF Lakenheath have one of the best-preserved systems of active inland sand dunes in the UK. The habitat type, which is in part characterised by the nationally rare Grey Hair-Grass *Corynephorus canescens* occurring here at its only inland station, is associated with open conditions with active sand movement. The site shows the colonisation sequence from open sand to acidic grass-heath.

The Breckland meres are examples of hollows within glacial outwash deposits and are fed by water from the underlying chalk aquifer. Natural fluctuations in groundwater tables mean that these lakes occasionally dry out. The flora is dominated by Stonewort – Pondweed *Characeae – Potamogetonaceae* associations. A number of the water bodies within the site support populations of amphibians, including Great Crested Newts *Triturus cristatus.*

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*). (Alder woodland on floodplains) *
- European dry heaths
- Inland dunes with open *Corynephorus* and *Agrostis* grasslands. (Open grassland with Grey-Hair Grass and Common Bent Grass of inland dunes)
- Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation. (Naturally nutrient-rich lakes or lochs which are often dominated by pondweed)
- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*). (Dry grasslands and scrublands on chalk or limestone)

Qualifying species: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Great Crested Newt *Triturus cristatus*

Annex I priority habitats are denoted by an asterisk (*).

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European Site Conservation Objectives for

Breckland Special Area of Conservation
Site Code: UK0019865

With regard to the SAC and the natural habitats and/or species for which the site has been designated (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 Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

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

Qualifying Features:

H2330. Inland dunes with open *Corynephorus* and *Agrostis* grasslands; Open grassland with Grey-Hair Grass and Common Bent Grass of inland dunes
H3150. Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation; Naturally nutrient-rich lakes or lochs which are often dominated by pondweed
H4030. European dry heaths
H6210. Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*); Dry grasslands and scrublands on chalk or limestone
H91E0. Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*); Alder woodland on floodplains*
S1166. *Triturus cristatus*; Great Crested Newt

* denotes a priority natural habitat or species.

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Breckland Special Protection Area:

Extract from Breckland SPA Citation:

For further details see:
http://publications.naturalengland.org.uk/publication/4572292419944448

EC Directive 79/409 on the Conservation of Wild Birds Special Protection Area (SPA)

Name: Breckland

Unitary Authority/County: Norfolk, Suffolk

Component SSSI: Breckland SPA encompasses all or parts of: Barnham Heath Site of Special Scientific Interest (SSSI); Barnhamcross Common SSSI; Berner's Heath, Icklingham SSSI; Breckland Farmland SSSI; Breckland Forest SSSI; Bridgham and Brettenham Heaths SSSI; Cavenham-Icklingham Heaths SSSI; Cranberry Rough, Hockham SSSI; Cranwich Camp SSSI; Deadman's Grave, Icklingham SSSI; East Wretham Heath SSSI; Eriswell Low Warren SSSI; Field Barn Heaths, Hilborough SSSI; Foxhole Heath, Eriswell SSSI; Gooderstone Warren SSSI; Grimes Graves SSSI; How Hill Track SSSI; Lakenheath Warren SSSI; Little Heath, Barnham SSSI; Old Bodney Camp SSSI; Rex Graham Reserve SSSI; Stanford Training Area SSSI; Thetford Golf Course and Marsh SSSI; Thetford Heaths SSSI; Wangford Warren and Carr SSSI; Weather and Horn Heaths, Eriswell SSSI; Weeting Heath SSSI; and West Stow Heath SSSI.

Site description: The Breckland of Norfolk and Suffolk lies in the heart of East Anglia on largely sandy soils of glacial origin. In the nineteenth century the area was termed a sandy waste, with small patches of arable cultivation that were soon abandoned. The continental climate, with low rainfall and free-draining soils, has led to the development of dry heath and grassland communities. Much of Breckland has been planted with conifers throughout the twentieth century, and in part of the site, arable farming is the predominant land use. The remnants of dry heath and grassland which have survived these recent changes support heathland breeding birds, where grazing by rabbits and sheep is sufficiently intensive to create short turf and open ground. These breeding birds have also adapted to live in forestry and arable habitats. Woodlark *Lullula arborea* and Nightjar *Caprimulgus europaeus* breed in clear-fell and open heath areas, whilst Stone Curlews *Burhinus oedicnemus* establish nests on open ground provided by arable cultivation in the spring, as well as on Breckland grass-heath.

Size of SPA: The SPA covers an area of 39433.66 ha.

Qualifying species: The site qualifies under **article 4.1** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season:

Annex I species:	**Count and season:**	**Period:**	**% GB population:**
Stone Curlew *Burhinus oedicnemus*	115 pairs – breeding	5 year mean (1994 – 98)	60.1% GB
Nightjar *Caprimulgus europaeus*	415 males – breeding	Count as at 1998	12.2% GB
Woodlark *Lullula arborea*	430 pairs – breeding	Count as at 1997	28.7% GB

Non-qualifying species of interest: The SPA regularly supports small numbers (less than 1% of the GB population) of wintering Hen Harrier *Circus cyaneus* and breeding Goshawk *Accipiter gentilis*, both of which are listed in Annex I to the Birds Directive.

Status of SPA: Breckland was classified as a Special Protection Area on 21 September 2006.

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European Site Conservation Objectives for:

Breckland Special Protection Area
Site Code: UK9009201

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.**

Qualifying Features:

A133 *Burhinus oedicnemus*; Stone-Curlew (Breeding)
A224 *Caprimulgus europaeus*; European Nightjar (Breeding)
A246 *Lullula arborea*; Woodlark (Breeding)

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Minsmere to Walberswick Heaths and Marshes Special Area of Conservation:

Extract from Minsmere to Walberswick Heaths and Marshes SAC Citation:

For further details see:
http://publications.naturalengland.org.uk/publication/5360166388105216

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora
Citation for Special Area of Conservation (SAC)

Name: Minsmere to Walberswick Heaths and Marshes

Unitary Authority/County: Suffolk

SAC status: Designated on 1 April 2005

Grid reference: TM468682

SAC EU code: UK0012809

Area (ha): 1265.52

Component SSSI: Minsmere to Walberswick Heaths and Marshes SSSI

Site description:

Lowland dry heaths occupy an extensive area of this site on the east coast of England, which is at the extreme easterly range of heath development in the UK. The heathland is predominantly Heather – Western Gorse (*Calluna vulgaris – Ulex gallii*) heath, usually more characteristic of western parts of the UK. This type is dominated by Heather, Western Gorse and Bell Heather *Erica cinerea*.

Shingle beach forms the coastline at Walberswick and Minsmere. It supports a variety of scarce shingle plants including Sea Pea *Lathyrus japonicus*, Sea Campion *Silene maritima* and small populations of Sea Kale *Crambe maritima*, Grey Hair-Grass *Corynephorus canescens* and Yellow Horned-Poppy *Glaucium flavum*. A well-developed beach strandline of mixed sand and shingle supports annual vegetation. Species include those typical of sandy shores, such as Sea Sandwort *Honckenya peploides* and shingle plants such as Sea Beet *Beta vulgaris* ssp. *maritima*.
Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

 Annual vegetation of drift lines
 European dry heaths
 Perennial vegetation of stony banks. (Coastal shingle vegetation outside the reach of waves)

****

European Site Conservation Objectives for

Minsmere to Walberswick Heaths and Marshes Special Area of Conservation

Site Code: UK0012809

With regard to the SAC and the natural habitats and/or species for which the site has been designated (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 Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

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

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

Qualifying Features:

H1210. Annual vegetation of drift lines
H1220. Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves
H4030. European dry heaths

****

Minsmere-Walberswick Special Protection Area:

Extract from Minsmere-Walberswick SPA Citation:

EC Directive 79/409 on the Conservation of Wild Birds: Special Protection Area

MINSMERE-WALBERSWICK (SUFFOLK)

The Minsmere-Walberswick proposed SPA contains areas of grazing marsh, extensive reedbeds, the estuary of the River Blyth, and areas of lowland heath and woodland. The boundaries of the site follows those of the Minsmere-Walberswick Heath and Marshes SSSI.

Minsmere-Walberswick qualifies under Article 4.1, by supporting, in summer, nationally important breeding populations of the following Annex 1 species: 5 booming male Bitterns *Botauris stellaris* (presumed to represent 5 breeding pairs; 22% of the British breeding population) ; 15 breeding female Marsh Harriers *Circus aeruginosus* (20% of British) ; 47 pairs of Avocet *Recurvirostra avosetta* (12% of British) ; 32 pairs of Little Tern *Sterna albifrons* (1% of British): and 24 pairs of Nightjar *Caprimulgus europaeus* (1% of British).

The site qualifies also under Article 4.1 by regularly supporting, in winter, a nationally important wintering population of Hen Harrier *Circus cyaneus* (15 individuals, 2% of the British wintering population).

Minsmere-Walberswick qualifies under article 4.2 by supporting, in summer, in recent years, nationally important breeding populations of three regularly occurring migratory species: 24 pairs of Gadwall *Anas strepera* (4% of British); 73 pairs of Teal *A. crecca* (1% of British): and 23 pairs of Shoveler *A. clypeata* (2% of British). Also notable is a nationally important breeding population of Bearded Tit *Panurus biarmicus* (50 pairs, 8% of British).

The site qualifies also under Article 4.2 by supporting nationally important wintering populations of three migratory waterfowl (average peak counts for the five year period 1985/86 to 1989/90): 100 European White-Fronted Geese *Anser albifrons albifrons* (2% of the British wintering population); 90 Gadwall *Anas strepera* (1% of British), and 100 Shoveler *Anas clypeata* (1% of British).

Minsmere-Walberswick is also of importance for an outstandingly diverse assemblage of breeding birds of marshland and reedbed habitats, including Bittern, Garganey *Anas querquedula*, Marsh Harrier, Water Rail *Rallus aquaticus*, Cetti's Warbler *Cettia cetti* and

Savi's Warbler *Locustella lusciniodes.* Also notable is an assemblage of wintering waterfowl including, in addition to species listed above, Bewick's Swan *Cygnus columbianus,* Wigeon *Anas penelope*, Teal *Anas crecca,* Avocet; Spotted Redshank *Tringa erythropus*; and Redshank *Tringa totanus.*

During severe winter weather Minsmere-Walberswick can assume even greater national and international importance as wildfowl and waders from many other areas arrive, attracted by relatively mild climate, compared with continental areas, and the abundant food resources available.

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European Site Conservation Objectives for

Minsmere–Walberswick Special Protection Area
Site Code: UK9009101

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.**

Qualifying Features:

A021 *Botaurus stellaris*; Great Bittern (Breeding)
A051 *Anas strepera*; Gadwall (Non-breeding)
A051 *Anas strepera*; Gadwall (Breeding)
A052 *Anas crecca*; Eurasian Teal (Breeding)
A056 *Anas clypeata*; Northern Shoveler (Breeding)
A056 *Anas clypeata*; Northern Shoveler (Non-breeding)
A081 *Circus aeruginosus*; Eurasian Marsh Harrier (Breeding)
A082 *Circus cyaneus*; Hen Harrier (Non-breeding)
A132 *Recurvirostra avosetta*; Pied Avocet (Breeding)
A195 *Sterna albifrons*; Little Tern (Breeding)
A224 *Caprimulgus europaeus*; European Nightjar (Breeding)
A394 *Anser albifrons albifrons*; Greater White-Fronted Goose (Non-breeding)

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Minsmere-Walberswick Ramsar Site:

Extract from: Ramsar Wetlands Site Information Sheet:

For further details see: http://jncc.defra.gov.uk/pdf/RIS/UK11044.pdf

Minsmere-Walberswick Ramsar Site

Ramsar Criterion 1:

The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and rare transition in grazing marsh ditch plants from brackish to fresh water.

Ramsar Criterion 2:

This site supports nine nationally scarce plants and at least 26 red data book invertebrates.

Supports a population of the mollusc *Vertigo angustior* (Habitats Directive Annex II; British Red Data Book Endangered), recently discovered on the Blyth Estuary river walls.

An important assemblage of rare breeding birds associated with marshland and reedbeds including:

Botaurus stellaris, Anas strepera, Anas crecca, Anas clypeata, Circus aeruginosus, Recurvirostra avosetta, Panurus biarmicus

General ecological features:

This composite Suffolk coastal site contains a complex mosaic of habitats notably, areas of marsh with dykes, extensive reedbeds, mud flats, lagoons, shingle, woodland and areas of lowland heath.

The site supports the largest continuous stand of Reed *Phragmites australis* in England and Wales and nationally rare transition in grazing marsh ditch plants from brackish to fresh water. The combination of habitats create an exceptional area of scientific interest supporting nationally scarce plants, RDB invertebrates and nationally important numbers of breeding and wintering birds.

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Stour and Orwell Estuaries Special Protection Area:

Extract from Stour and Orwell Estuaries SPA Citation:

For further details see:
http://publications.naturalengland.org.uk/publication/6069687402102784

EC Directive 79/409 on the Conservation of Wild Birds Special Protection Area (SPA)

Name: Stour and Orwell Estuaries

Unitary Authority/County: Essex, Suffolk.

Site description: The Stour and Orwell estuaries straddle the eastern part of the Essex/Suffolk border in eastern England. The SPA is coincident with Cattawade Marshes Site of Special Scientific Interest (SSSI), Orwell Estuary SSSI and Stour Estuary SSSI. The estuaries include extensive mud-flats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. The mud-flats hold *Enteromorpha*, *Zostera* and *Salicornia* spp. The site also includes areas of low-lying grazing marsh at Shotley Marshes on the south side of the Orwell and at Cattawade Marshes at the head of the Stour. Trimley Marshes on the north side of the Orwell includes several shallow freshwater pools, as well as areas of grazing marsh, and is managed as a nature reserve by the Suffolk Wildlife Trust. In summer, the site supports important numbers of breeding Avocet *Recurvirostra avosetta*, while in winter it holds major concentrations of waterbirds, especially geese, ducks and waders. The geese also feed, and some waders roost, in surrounding areas of agricultural land outside the SPA. The site has close ecological links with the Hamford Water and Mid-Essex Coast SPAs, lying to the south on the same coast.

Size of SPA: The SPA covers an area of 3,676.92 ha.

Qualifying species: The site qualifies under **article 4.1** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season:

Annex 1 species:	Count and season:	Period:	% of GB population:
Avocet *Recurvirostra avosetta*	21 pairs - breeding	5 year peak mean 1996 – 2000	3.6%

The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed in Annex I) in any season:

Migratory species:	Count and season:	Period:	% of subspecies/population:
Redshank *Tringa totanus*	2,588 individuals – autumn passage	5 year peak mean 1995/96 – 1999/2000	2.0% *brittanica*
Dark-bellied Brent Goose *Branta bernicla bernicla*	2,627 individuals - wintering	5 year peak mean 1995/96 – 1999/2000	1.2% *bernicla*, Western Siberia (breeding)
Pintail *Anas acuta*	741 individuals - wintering	5 year peak mean 1995/96 – 1999/2000	1.2% North-western Europe (non-

			breeding)
Grey Plover *Pluvialis squatarola*	3,261 individuals - wintering	5 year peak mean 1995/96 – 1999/2000	1.3% Eastern Atlantic (non-breeding)
Knot *Calidris canutus islandica*	5,970 individuals - wintering	5 year peak mean 1995/96 – 1999/2000	1.3% *islandica*
Dunlin *Calidris alpina alpina*	19,114 individuals - wintering	5 year peak mean 1995/96 – 1999/2000	1.4% *alpina*, Western Europe (non-breeding)
Black-Tailed Godwit *Limosa limosa islandica*	2,559 individuals - wintering	5 year peak mean 1995/96 – 1999/2000	7.3% *islandica*
Redshank *Tringa totanus*	3,687 individuals - wintering	5 year peak mean 1995/96 – 1999/2000	2.8% *brittanica*

Assemblage qualification: The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season:

In the non-breeding season, the area regularly supports 63,017 individual waterbirds (5 year peak mean 1993/94 - 1997/98), including Great Crested Grebe *Podiceps cristatus*, Cormorant *Phalacrocorax carbo*, Dark-Bellied Brent Goose *Branta bernicla bernicla*, Shelduck *Tadorna tadorna*, Wigeon *Anas penelope*, Gadwall *Anas strepera*, Pintail *Anas acuta*, Goldeneye *Bucephala clangula*, Ringed Plover *Charadrius hiaticula*, Grey Plover *Pluvialis squatarola*, Lapwing *Vanellus vanellus*, Knot *Calidris canutus islandica*, Dunlin *Calidris alpina alpina*, Black-Tailed Godwit *Limosa limosa islandica*, Curlew *Numenius arquata*, Redshank *Tringa totanus* and Turnstone *Arenaria interpres*.

Non-qualifying species of interest: The SPA/Ramsar site as a whole, including the proposed extensions, is used by non-breeding Marsh Harrier *Circus aeruginosus*, Hen Harrier *Circus cyaneus*, Merlin *Falco columbarius*, Peregrine *Falco peregrinus*, Short-Eared Owl *Asio flammeus* and Kingfisher *Alcedo atthis* (all species listed in Annex I of the EC Birds Directive) in numbers of less than European importance (less than 1% GB population). It also supports breeding Common Tern *Sterna hirundo*, Little Tern *Sterna albifrons* and Kingfisher (all listed in Annex I) in numbers of less than European importance.

Status of SPA:

1) Stour and Orwell Estuaries was classified as a Special Protection Area on 13 July 1994.
2) Extensions to the Stour and Orwell Estuaries SPA were classified on 19 May 2005.

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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.**

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

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Stour and Orwell Estuaries Ramsar Site:

Extract from: Ramsar Wetlands Site Information Sheet:

For further details see: http://jncc.defra.gov.uk/pdf/RIS/UK11067.pdf

Stour and Orwell Estuaries Ramsar Site

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):

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)

General ecological features:

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.

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Outer Thames Estuary Special Protection Area:

For further details see: http://publications.naturalengland.org.uk/publication/3233957

Summary of draft Conservation Objectives and Advice on Operations for the Outer Thames Estuary Special Protection Area (SPA)

This advice is based on information on the Special Protection Area (SPA) presented in Natural England's and the Joint Nature Conservation Committee's (JNCC) "Departmental Brief: Outer Thames Estuary SPA document (Version May 2010) (1). Natural England and JNCC's conservation objectives and advice on operations is site and feature specific, and has been developed using the best available scientific information and expert interpretation as at July 2012. The advice is generated through a coarse grading of sensitivity and exposure of the site's interest feature and its supporting habitat to physical, chemical and biological pressures associated with human activity. Sensitivity and exposure have been combined to provide a measure of the vulnerability of the interest feature to operations which may cause damage or deterioration, and therefore may require management.

The exact impact of any operation will be dependent upon the nature, scale, location and timing of events. This advice on operations for the Outer Thames Estuary SPA site will be kept under review and will be periodically updated to reflect changes in both sensitivity and exposure.

The Conservation Objective for the Outer Thames Estuary Special Protection Area is, subject to natural change(2), maintain(3) or enhance the Red-Throated Diver population (*Gavia stellata*) and its supporting habitats in favourable condition(4)

The interest feature Red-Throated Diver will be considered to be in favourable condition only when both of the following two conditions are met:

(i) The size of the Red-Throated Diver population is at, or shows only non-significant fluctuation around the mean population at the time of designation of the SPA to account for natural change;

(ii) The extent of the supporting habitat within the site is maintained.

Management actions should enable the **Annex I feature *Gavia stellata* (wintering Red-Throated Diver) and its supporting habitat in the Outer Thames Estuary** to

maintain or enhance its population and extent of supporting habitat for the foreseeable future. This will require assessment and management of human activities likely to affect these adversely, and of activities likely to impact the functioning of natural processes upon which the feature is dependent.

To fulfil the conservation objectives for the **Annex I feature *Gavia stellata* and its supporting habitat**, the relevant and competent authorities for this area are advised to manage human activities within their remit such that they do not result in deterioration or disturbance, or impede the restoration of this feature through any of the following:

i) **Physical loss** of habitat by removal (e.g. capital dredging, harvesting, coastal and marine development)

ii) **Physical damage** by physical disturbance or abrasion of habitat (e.g. extraction)

iii) **Non-physical disturbance** through noise or visual disturbance (e.g. shipping, wind turbines)

iv) **Toxic contamination** by introduction of synthetic and/or non-synthetic compounds (e.g. polychlorinated biphenyls (PCBs), pollution from oil and gas industry, shipping);

v) **Non-toxic contamination** to prey species only by changes in e.g. turbidity (e.g. capital and maintenance dredging);

vi) **Biological disturbance** by selective extraction of species (e.g. commercial fisheries) and non-selective extraction (e.g. entanglement with netting and wind turbine strike)

The advice describes the above impacts and activities for both the habitat and prey species of the Red-Throated Divers and on the Red-Throated Divers themselves.

Notes:

(1) http://www.naturalengland.org.uk/Images/Thames-brief_tcm6-21728.pdf

(2) “Natural change” means changes in the species or habitat which are not a result of human influences. Human influence on the Red-Throated Diver population is acceptable provided that it is proved to be/can be established to be compatible with the achievement of the conditions set out under the definition of favourable condition. A failure to meet these conditions, which is entirely a result of natural process will not constitute unfavourable condition, but may trigger a review of the definition of favourable condition.

(3) “Maintain” is used here because existing evidence suggests the feature to be in favourable condition, and the objective is for it to remain so. Existing activities are deemed to be compatible with the conservation objectives if current practices are continued at current levels and in the absence of evidence that current activities are significantly affecting the Red-Throated Diver population or its habitat. However, it must be borne in mind that gradually damaging activities can take time to show their effects. If evidence later shows an activity to be undermining the achievement of the conservation objectives, then the Red-Throated Diver population will be deemed to be in unfavourable condition.

(4) Favourable Condition **–** Relates to the maintenance of the structure, function, and typical species for that feature within the site.

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