



South Cambridgeshire Local Plan Habitats Regulations Assessment

Draft Screening Report for Cabinet

Prepared for:
**South Cambridgeshire District Council
Cambourne**

Prepared by:
**ENVIRON
Exeter, UK**

Date:
June 2013

Project or Issue Number:
UK18-18630

Contract No:	UK18-18630
Issue:	2
Author	V.Tanner-Tremaine / Matt Neale
(signature):	
Project Manager/Director	V.Tanner-Tremaine
(signature):	
Date:	June 2013

This report has been prepared by ENVIRON with all reasonable skill, care and diligence, and taking account of the Services and the Terms agreed between ENVIRON and the Client. This report is confidential to the client, and ENVIRON accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by ENVIRON beforehand. Any such party relies upon the report at their own risk.

ENVIRON disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the Services.

Version Control Record				
Issue	Description of Status	Date	Reviewer Initials	Author Initials
1	First Draft for Cabinet	20/06/13	PB	VTT/MN
2	Draft for Cabinet	21/06/13	PB	VTT/MN

Contents

Executive Summary	i
1 Introduction	1
1.1 The need for Habitats Regulations Assessment	1
1.2 Consultation - How to comment on this report	2
1.3 Habitats Regulations Assessment to date	3
2 South Cambridgeshire Local Plan	5
2.1 Introduction	5
3 Screening Methodology	7
3.1 Approach to the HRA	8
3.2 In combination effects	10
4 European Sites and Issues Affecting them	11
4.1 Introduction	11
5 Assessment of the Local Plan	17
5.1 Introduction	17
5.2 Summary of Results of the Screening Exercise	17
6 Summary of conclusions on the likelihood of significant effects	1
6.1 Overall Significant Effect Conclusion	1
6.2 Limitations of the screening assessment	1
6.3 A Note on the legal purpose of this assessment	1
7 References	2

Annex A: Cambridgeshire Local Plan

Annex B: European Sites

Annex C: Screening Assessment

List of Tables

Contents of Submission Draft Local Plan	1
---	---

List of Figures

Box 1.1: Objectives of the South Cambridgeshire Local Plan	5
--	---

Executive Summary

This report records a Habitats Regulations Assessment (HRA) screening of the development of the South Cambridgeshire Local Plan. This report follows on from a HRA Screening Report of the Local Plan Issues and Options Report which was published in 2012 and presents the findings of a screening assessment of a draft version of the Local Plan which was undertaken in May 2013.

HRA is required under the EU Habitats Directive (92/43/EEC) for any proposed plan or project which may have a significant effect on one or more European sites and which is not necessary for the management of those sites. The purpose of HRA is to determine whether or not significant effects on European sites are likely and to suggest ways in which they could be avoided.

European sites are Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). National planning policy also recommends that Ramsar sites should be afforded the same level of consideration as SPAs and SACs. HRA relates specifically to the reasons why sites have been identified as European sites (qualifying interests). European sites are often formed of several component Sites of Special Scientific Interest (SSSI).

1 Introduction

ENVIRON UK Limited (ENVIRON) was commissioned by South Cambridgeshire District Council (the Client) to prepare a Habitats Regulations Screening Assessment of the South Cambridgeshire Local Plan.

This report is a draft screening report to inform a determination under Regulation 102 of The Conservation of Habitats and Species Regulations 2010¹ (as amended). The purpose of the report is to provide a screening assessment to examine whether the policies and allocations in the South Cambridgeshire Local Plan are likely to have significant impacts on European sites (including Ramsar sites) either alone or in combination with other plans and projects, in view of the conservation objectives of the European sites.

1.1 The need for Habitats Regulations Assessment

Directive 92/43/EEC on the conservation of natural habitats and wild flora and fauna, commonly known as the 'Habitats Directive,' provides for the protection of habitats and species of European Community importance. Article 2 of the Directive requires the maintenance (or restoration), at favourable conservation status, of habitats and species of European Community interest. This is partly implemented through a network of protected European sites, sometimes also referred to as 'Natura 2000 sites', consisting of:

- Special Areas of Conservation (SACs) - designated under the Habitats Directive²;
- Special Protection Areas (SPAs) - designated under the Wild Birds Directive³.

National planning policy also recommends that 'Ramsar sites', designated under the Ramsar Convention 1971, should be afforded the same level of consideration as SPAs and SACs. They should be included in assessment, where relevant.

Article 6(3) of the Habitats Directive requires that 'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.'

The South Cambridgeshire Local Plan is not directly connected to the management of any European sites.

This requirement in the Habitats Directive is implemented in domestic English law through The Conservation of Habitats and Species Regulations 2010, with Regulation 102 setting out the obligations of the Directive's Article 6 placed upon local plan-making authorities:

102 (1) Where a land use plan –

¹ Statutory instrument No.490.

² Council Directive 94/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive')

³ Council Directive 79/409/EEC on the conservation of wild birds. The 'Wild Birds' Directive.

- (a) is likely to have a significant effect on a European sites or a European offshore marine site (either alone or in combination) with other plans or projects), and*
- (b) is not directly connected with or necessary to the management of the site,*
- the plan-making authority must, before the plan is given effect, make an appropriate assessment of the implications for the site in view of that site's conservation objectives.*
- (4) In the light of the conclusions of the assessment, and subject to regulation 103 (considerations of imperative reasons of overriding public interest), the plan-making authority... must give effect to the land use plan only after having ascertained that it will not adversely affect the integrity of the European site or the offshore European marine site (as the case may be).*

Undertaking of these particular requirements is often termed a 'Habitat Regulations Assessment'.

The purpose of a Habitat Regulations Assessment (HRA) is to assess the significance of impacts of a plan on relevant European sites. The assessment should determine whether the plan would adversely affect the integrity of the site in terms of its nature conservation objectives. Where negative effects are identified other options should be examined to avoid any potential for damaging effects.

Screening is the initial step in the assessment process to identify likely impacts on European sites from a project or plan, either alone or in combination with other projects or plans, and consider whether these impacts are likely to be significant. During screening the precautionary principle must be applied. If an effect cannot be ruled out it must be reported as likely. Where significant adverse effects are identified, the law requires further assessment to be undertaken.

1.2 Consultation - How to comment on this report

This draft HRA Report is being published for comment alongside the South Cambridgeshire Proposed Submission Local Plan. If you have any comments on this report please respond as indicated in Box 1.2.

Box 1.2: How to comment on the HRA Report

Public consultation on the draft Local Plan and accompanying sustainability appraisal takes place between 19th July and 30th September 2013.

Website: www.scambs.gov.uk

E Mail: ldf@scambs.gov.uk/ldf/localplan

Write to: Jo Mills, Director of Planning and New Communities, South Cambridgeshire District Council, South Cambridgeshire Hall, Cambourne Business Park, Cambridge, CB23 6EA

Telephone: 03450 450 500

1.3 Habitats Regulations Assessment to date

The Local Plan Sustainability Appraisal Scoping Report (June 2012)⁴ included a Chapter (number 20) dedicated specifically to Habitats Regulations Assessment. The Scoping Report set out the scope of the HRA and recorded information on the European sites within the District and surrounding area, their characteristics and current condition which were scoped in to the assessment, as agreed by Natural England.

An initial investigation was undertaken to identify European sites, (and Ramsar sites), within and outside the Plan Area with potential to be affected by the South Cambridgeshire Local Plan. The identification of European sites to be considered within the HRA Screening exercise was undertaken in consultation with the Natural England Four Counties team. Using GIS, European sites lying wholly or partially within South Cambridgeshire administrative boundaries plus a 25km buffer area around the boundaries was included to reflect the fact that the Local Plan may affect sites outside the plan area itself. This scoping for European sites found that:

There is one European site within South Cambridgeshire District:

- Eversden and Wimpole Woods SAC.

There are a number of other European sites within the surrounding districts:

- Ouse Washes SAC and SPA
- Fenland SAC
- Portholme SAC
- Devil's Dyke SAC
- Breckland SAC and SPA

Two Ramsar sites:

- Ouse Washes
- Fenland (Woodwalton Fen, Chippenham Fen, Wicken Fen)

All these sites were considered as part of this initial screening assessment, because of their proximity to South Cambridgeshire and / or the nature of their conservation interest and their vulnerabilities.

Natural England confirmed that this list was comprehensive for the purposes of Habitats Regulations Assessment (by letter 9.11.06). Breckland SAC was added later to this list in order to ensure that a thorough assessment can be made of all the designated sites that may be impacted by proposals in the future. Other local planning authorities within Cambridgeshire have included the Breckland area into their HRA work and it was therefore considered as a precautionary principle for South Cambridgeshire District Council to do likewise.

At the Issues and Options stage of the Local Plan an initial HRA screening was made of the options identified in the issues and options report, to flag up impacts that would need to be explored. The Scoping Report identified a wide range of potential impacts which could arise

⁴ South Cambridgeshire District Council, Local Plan Sustainability Appraisal Scoping Report (June 2012)

from the Local Plan and the activities it allows or promotes, and these can be summarised as -

- Land take by developments;
- Impact on protected species found within but which travel outside the protected sites may be relevant where development could result in effects on qualifying interest species within the European or Ramsar site, for example through the loss of feeding grounds for an identified species.
- Increased disturbance, for example from recreational use resulting from new housing development and / or improved access due to transport infrastructure projects;
- Changes in water availability, or water quality as a result of development and increased demands for water treatment, and changes in groundwater regimes due to increased impermeable areas;
- Changes in atmospheric pollution levels due to increased traffic, waste management facilities etc. Pollution discharges from developments such as industrial developments, quarries and waste management facilities.

Screening matrices were prepared to consider potential impacts for each site, and these were reviewed to inform the current assessment.

The Initial Sustainability Appraisal Report 2012⁵ included a screening exercise in Appendix 8, which identified any potential significant effects of options for the Local Plan. The initial screening assessment suggested no significant effects are likely as a result of the options, alone or in combination with other plans. It also concluded that Council would need to continue to work with stakeholders, Anglian Water, Cambridge Water, and the Environment Agency, to ensure options selected can be appropriately served by water and waste water infrastructure.

⁵ Appendix 8, South Cambridgeshire District Council, Initial Sustainability Appraisal Report (July 2012).

2 South Cambridgeshire Local Plan

2.1 Introduction

South Cambridgeshire District Council is preparing a Local Plan for their planning area.

The Local Plan sets out a Vision for the district, that:

'South Cambridgeshire will continue to be the best place to live, work and study in the country. Our district will demonstrate impressive and sustainable economic growth. Our residents will have a superb quality of life in an exceptionally beautiful, rural and green environment.'

It then establishes six objectives for the plan to deliver this vision. The objectives of the Local Plan are given in Box 1.1. below.

The Local Plan sets the levels of employment and housing development that should be provided over the plan period to best meet the needs of the area and establish a clear strategy for meeting development needs in the most sustainable way that protects the quality of life of existing and future residents. Its policies aim to ensure that development is of high quality and will meet the challenges we face with an ageing population and changing climate. It will ensure that new development comes with the necessary schools, health facilities, shops, leisure facilities and open spaces that residents need to provide a good quality of life.

Box 1.1: Objectives of the South Cambridgeshire Local Plan

- A. To support economic growth by supporting South Cambridgeshire's position as a world leader in research and technology based industries, research, and education; and supporting the rural economy.
- B. To protect the character of South Cambridgeshire, including its built and natural heritage, as well as protecting the Cambridge Green Belt. New development should enhance the area, and protect and enhance biodiversity.
- C. To provide land for housing in sustainable locations that meets local needs and aspirations, and gives choice about type, size, tenure and cost.
- D. To deliver new developments that are high quality and well-designed with distinctive character that reflects their location, and which responds robustly to the challenges of climate change.
- E. To ensure that all new development provides or has access to a range of services and facilities that support healthy lifestyles and well-being for everyone, including shops, schools, doctors, community buildings, cultural facilities, local open space, and green infrastructure.
- F. To maximise potential for journeys to be undertaken by sustainable modes of transport including walking, cycling, bus and train.

The Local Plan includes the following chapters:

- **Chapter 1** is the introduction which describes the overall purpose of the document.
- **Chapter 2** sets out the vision and objectives and development needs for South Cambridgeshire to 2031 together with the spatial strategy which focuses development on the edge of Cambridge, at new towns/new villages; and in selected villages. It also has policies for small scale development in villages. It includes a policy about phasing, delivering and monitoring of the plan to ensure that it continues to meet its objectives.
- **Chapter 3** contains the strategic sites which will contribute most to the delivery of sustainable development in South Cambridgeshire.
- **Chapter 4** is concerned with sustainable development, climate change, water resources and flooding.
- **Chapter 5** is concerned with design, landscape, and public realm.
- **Chapter 6** contains proposals to protect and enhance the historic built and the natural environment.
- **Chapter 7** is concerned with delivering high quality housing and includes village housing sites.
- **Chapter 8** deals with building a strong and competitive economy, including sections on employment, retail and tourism and development sites.
- **Chapter 9** is concerned with creating successful communities, including the provision of open space, leisure facilities and community facilities.
- **Chapter 10** deals with promoting and delivering sustainable transport and other kinds of infrastructure.

These chapters include policies to control development, and site specific policies which make allocations for different types of development. A list of the policies in each of these chapters is provided in Annex A.

3 Screening Methodology

The purpose of screening is to ascertain whether the South Cambridgeshire Local Plan, either alone or in combination, is likely to have effects on (relevant) European sites, and to consider whether it can be objectively concluded that these effects will not be significant. During the screening assessment the importance of the international conservation interest of the site is at the forefront of decision-making.

Neither the Habitats Directive nor the Habitats Regulations⁶ specify the method of assessment required; only that it must be 'appropriate'. The scope and depth of the assessment is to be decided by the 'Competent Authority'⁷ (in this case the South Cambridgeshire District Council as the local planning authority adopting the Local Plan) and depends on the location, influence and significance of the proposed plan. The scope of the assessment was set out in Chapter 20 of the Local Plan Sustainability Appraisal Scoping Report June 2012 and was subject to consultation with Natural England.

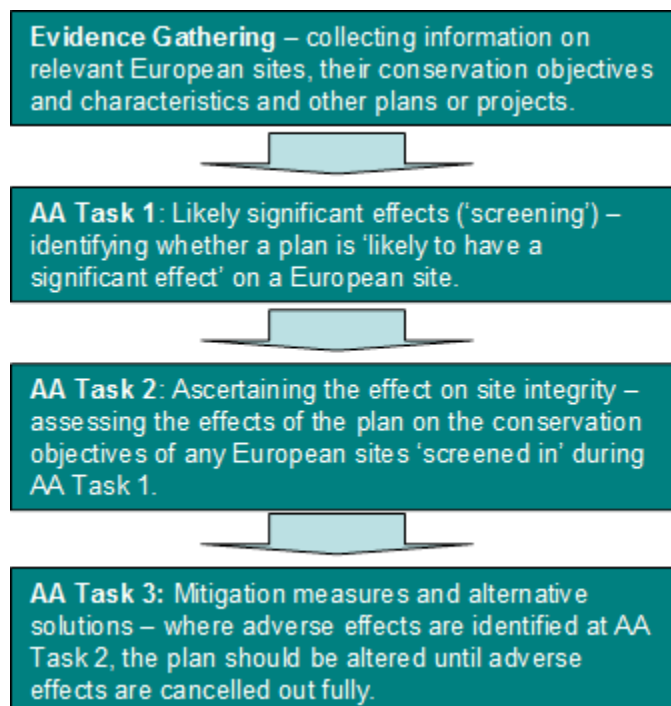
The sites chosen were identified by South Cambridgeshire District Council for the Habitats Directive Assessment as part of their Local Plan Initial Sustainability Report (July 2012) and Local Plan Sustainability Appraisal Scoping Report (June 2012). Natural England confirmed that these sites were appropriate for the purposes of a Habitats Regulations Assessment in a letter to South Cambridgeshire District Council dated the 9th November 2006. Breckland SAC and SPA was included in these previous assessments as it has been included in many other Local Authorities' Habitats Regulations Assessment. This approach has been reviewed, and a check for any new European sites within the 25k buffer undertaken. No additional sites were identified, and it is therefore considered appropriate to follow the previously agreed scope for this round of screening assessment.

⁶ The Conservation of Habitats and Species Regulations 2010, commonly known as the 'Habitats Regulations'.

⁷ South Cambridgeshire District Council.

3.1 Approach to the HRA

Figure 3.1 below sets out the overall HRA process in accordance with the Department for Communities and Local Government draft guidance⁸. This draft guidance document was never formalised but provides some useful suggestions for a staged approach to HRA. Current best practice has moved on since 2006 and demonstrates that a more flexible approach to the sequencing of the stages is the most effective method of assessing a plan as it develops.



The European Commission's Environment Directorate produced guidance in 2001, *Assessment of plans and projects significantly affecting Natura 2000 sites Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. These guidelines and reference to the requirements of the Directive were used to inform the screening.

Screening decisions were made on the basis of currently available information relating to the European sites. The following information was collated:

1. List of SACs and SPAs agreed with Natural England in previous screening;
2. Site characterisation information;
3. Evidence base for the Local Plan;

⁸ Department for Communities and Local Government (August 2006) Planning for the Protection of European Sites: Appropriate Assessment, Guidance for Regional Spatial Strategies and Local Development Documents, Consultation Document. DCLG Publications

4. Other relevant Habitats Regulations Assessments

Site characterisation has used information drawn from:

1. SAC, SPA and Ramsar site Data Forms
2. SAC, SPA and Ramsar site data on JNCC website
3. Conservation Objectives and Favourable Condition Tables
4. Component SSSI information including:
 - a) Citations
 - b) Condition Assessments
 - c) Views about Management
 - d) Operations Likely to Damage

Information about each of the relevant sites is given in section 4 of this report. Key factors affecting site integrity and its vulnerabilities are included. This information assisted in determining possible effects on individual sites from policies or allocations within the Local Plan.

3.1.1 Assessing 'significance'

In terms of European sites a 'significant' effect is one that is not inconsequential and which is likely to undermine the achievement of the site's conservation objectives⁹.

Examples of the types of effects, which are considered likely to be significant, are provided in guidance from English Nature¹⁰ and the European Commission¹¹ shown below:

1. Causing change to the coherence of the site or to the Natura 2000 network of European sites (e.g. presenting a barrier between isolated fragments, or reducing the ability of the site to act as a source of new colonisers);
2. Causing reduction in the area of habitat or of the site;
3. Causing direct or indirect change to the physical quality of the environment (including the hydrology) or habitat within the site;
4. Causing ongoing disturbance to species or habitats for which the site is notified;
5. Altering community structure (species composition);
6. Causing direct or indirect damage to the size, characteristics or reproductive ability of populations on the site;
7. Altering the vulnerability of populations etc. to other impacts;

⁹ In Case C-127/02 [2004] OJ C 262/2 the European Court of Justice held that *any effect* likely to undermine the Conservation Objectives of an international site should be regarded as a likely significant effect.

¹⁰ English Nature, The Determination of Likely Significant Effect under The Conservation (Natural Habitats, &c.) Regulations 1994 HRGN3 English Nature 1999. [English Nature is now part of Natural England].

¹¹ European Commission Environment DG, Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC

8. Causing a reduction in the resilience of the feature against external change (for example its ability to respond to extremes of environmental conditions);
9. Affecting restoration of a feature where this is a conservation objective;
10. Interfering with key relationships that define the structure of the site;
11. Interfering with key relationships that define the function of the site.

It must be acknowledged that this list is not exhaustive, it is only indicative. Additional guidance has subsequently been published on the principles to be used in judging a likely significant effect (Tyldesley, D., 2011).¹²

Judgements on the 'significance' of impacts have been based upon the likely effect on qualifying features of each particular site as well as the probability, duration, frequency and reversibility of those impacts. The risk or likelihood of these impacts occurring was also considered.

3.2 In combination effects

In considering the potential for in combination effects at this stage the assessment has taken account of the following plans and projects:

- Northstowe Area Action Plan (AAP) - wholly within South Cambridgeshire
- Cambridge Southern Fringe AAP - wholly within South Cambridgeshire
- Cambridge East AAP - jointly prepared plan
- North West Cambridge AAP - jointly prepared plan.

All four AAPs were subject to an HRA and found not to impact on any identified European sites or Ramsar sites.

Local Plans for neighbouring authorities will be reviewed with relation to specific potential impacts if considered appropriate.

¹² Tyldesley, D. 2011 Assessing projects under the Habitats Directive: guidance for competent authorities. Report to the Countryside Council for Wales, Bangor

4 European Sites and Issues Affecting them

4.1 Introduction

An initial investigation was undertaken to identify European sites, (and Ramsar sites), within and outside the Plan Area with potential to be affected by the South Cambridgeshire Local Plan. The identification of European sites to be considered within the HRA Screening exercise was undertaken in consultation with the Natural England Four Counties team. Using GIS, European sites lying wholly or partially within South Cambridgeshire administrative boundaries plus a 25km buffer area around the boundaries was included to reflect the fact that the Local Plan may affect sites outside the plan area itself. This scoping was reviewed to check for any additional newly designated European sites since the previous screening. No additional European sites were identified.

The distribution of European sites is shown on **Figures XXX** in Annex B.

4.1 European Sites Considered in the Screening Exercise

The European sites considered in this screening exercise are listed in Table 4.1 below.

SPAs	SACs	Ramsar
	Eversden and Wimpole Woods SAC.	
Breckland	Breckland	
	Devil's Dyke	
	Portholme	
	Fenland	Fenland (Woodwalton Fen, Chippenham Fen, Wicken Fen)
Ouse Washes	Ouse Washes	Ouse Washes

Eversden and Wimpole Woods SAC is the only European site within South Cambridgeshire District.

Information relating to the reasons for designation of the sites, their conservation objectives, requirements to maintain favourable condition of the site and the key factors affecting site integrity are all set out within in Annex B.

The text below presents a brief description of each site and provides information needed to inform the assessment.

4.1.1 Special Protection Areas

Ouse Washes

The Ouse Washes Ramsar site and the Special Protection Area is a wetland of major international importance comprising seasonally flooded wash lands, which are agriculturally

managed in a traditional manner. It provides breeding and winter habitats for important assemblages of wetland bird species, particularly wildfowl and waders.

The boundaries of the Special Protection Area are coincident with those of the Ouse Washes SSSI, apart from the exclusion of a section of the Old Bedford River in the north of the SSSI.

The Ouse Washes qualifies under Article 4.1 of the EC Birds Directive by supporting, in summer, a nationally important breeding population of ruff *Philomachus pugnax*, an Annex 1 species. In recent years an average of 57 individuals have been recorded, a significant proportion of the British population.

The site also qualifies under Article 4.1 by regularly supporting internationally or nationally important wintering populations of three Annex 1 species. During the five year period 1986/87 to 1990/91, the following average peak counts were recorded: 4,980 Bewick's swan *Cygnus columbarius bewickii* (29% of the north-west European wintering population, 70% of the British wintering population), and 590 whooper swans *Cygnus Cygnus* (3% of the international population, 10% of British). In addition, between 1982-87 an average of 12 wintering hen harrier *Circus cyaneus* was recorded, representing 2% of the British wintering population.

The Ouse Washes qualifies under Article 4.2 by supporting, in summer, in recent years, nationally important breeding populations of five migratory species: 111 pairs of gadwall *Anas strepera* (20% of the British breeding population); 850 pairs of mallard *Anas platyrhynchos* (2% of British); 14 pairs of garganey *Anas querquedula* (20% of British), 155 pairs of shoveler *A. clypeata* (12% of British), and 26 pairs of black-tailed godwits *Limosa limosa* (44% of British).

The site further qualifies under Article 4.2 as a wetland of international importance by virtue of regularly supporting over 20,000 waterfowl, with an average peak count of 60,950 birds recorded in the five winter period 1986/1 to 1990/91. This total included-internationally or nationally important wintering populations of the following migratory waterfowl (figures given are average peak counts for the five winter period 1986/87 - 1990/91): 270 cormorant *Phalacrocorax carbo* (296 of the British wintering population); 490 mute swan *Cygnus olor* (3% of British); 38,000 wigeon *Anas penelope* (596 of the north-west European population, 1596 of British); 320 gadwall *Anas strepera* (5% of British); 4,100 teal *A. crecca* (1% of NW European, 4% of British); 1,450 pintail *Anas acuta* (2% NW European, 6% of British); 750 shoveler *Anas clypeata* (2% of NW European, 8% of British); 2,100 pochard *Aythya ferina* (4% of British); 860 tufted duck *Aythya fuligula* (1% of British); and 2,320 coot *Fulica atra* (1% of British).

The site also qualifies under Article 4.2 by virtue of regularly supporting, in summer, a diverse assemblage of the breeding migratory waders of lowland wet grassland including: oystercatcher *Haematopus ostralegus*, redshank *Tringa totanus*, snipe *Gallinago gallinago*, Ruff *Philomachus pugnax* lapwing *Vanellus vanellus*, and black-tailed godwit *Limosa limosa*; and a diverse assemblage of breeding wildfowl with mute swan *Cygnus olor*, shelduck *Tadorna tadorna*, gadwall *Anas strepera*, teal *A. crecca*, mallard *A. platyrhynchos*, pintail *A. acuta*, garganey *A. querquedula*, shoveler *A. clypeata*, pochard *Aythya ferina*, tufted duck *Aythya fuligula*, moorhen *Gallinula chloropus* and coot *Fulica atra* occurring regularly. Many of these species are rare and much restricted in Britain and the European Community owing to habitat loss and degradation. The site thus has an important role in maintaining the

ranges of several of these species, which have been affected by changes in habitat elsewhere in Britain.

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

The continued international importance of this site is dependent on the maintenance of a winter flooding regime and a high, but controlled summer water table.

Breckland

The site qualifies as an SPA for breeding populations of stone-curlew *Burhinus oedicanus*, European nightjar *Caprimulgus europaeus* and Woodlark *Lullula arborea*. The site also qualifies as an SAC and habitat descriptions are provided below.

4.1.2 Special Areas for Conservation

Eversden and Wimpole Woods

The site is located in South Cambridgeshire District and comprises a mixture of ancient coppice woodland (Eversden Wood) and high forest woods likely to be of more recent origin (Wimpole Wood). A colony of barbastelle *Barbastella barbastellus* bats is associated with the trees in Wimpole Woods. These trees are used as a summer maternity roost where the female bats gather to give birth and rear their young. Most of the roost sites are within tree crevices. The bats also use the site as a foraging area. Some of the woodland is also used as a flight path when bats forage outside the area.

Devil's Dyke

This section is the most species rich of the Devil's Dyke which as a whole stretches from the Fen Edge at Reach ending at Ditton Green. The section that is identified as a SAC is adjacent to Newmarket Heath. Devil's Dyke consists of a mosaic of CG3 *Bromus erectus* and CG5 *Bromus erectus* – *Brachypodium pinnatum* calcareous grasslands. It is the only known UK semi-natural dry grassland site for lizard orchid *Himantoglossum hircinum*. Lizard orchid is nationally rare (i.e. occurring in 15 or fewer 10x10 km squares) and is vulnerable in Great Britain. It is restricted to calcareous grasslands and dunes in southern England.

Fenland

Fenland is a group of three sites that form SAC and Ramsar components; Wicken Fen, Woodwalton Fen and Chippenham Fen.

Wicken Fen is a marginal remnant of the original peat fenland of the East Anglian basin. It has been preserved as a flood catchment area, and its water level is controlled by sluice gates. The original peat fen lies to the north of Wicken Lodge. The site here supports fen communities of carr and sedge. The carr scrub is largely of alder buckthorn *Frangula alnus*, buckthorn *Rhamnus catharticus* and sallow over a sparse vegetation of fen plants and including marsh fen *Thelypteris palustris*. The more open areas of sedge fen are typically of tall grasses, saw sedge *Cladium mariscus*, purple moor grass *Molina caerulea*, sedges *Carex spp* and rushes *Juncus spp*. Nationally important higher plants include *Viola persicifolia*, *Lathyrus palustris*, *Myriophyllum verticillatum*, *Oenanthe fluviatilis* and milk parsley *Peucedanum palustre*. To the south of the Wicken Lode, the area is of rough

pasture land, reedbed and pools which are attractive to breeding wetland birds and to wintering wildfowl, the area being subjected to winter flooding. The dykes, abandoned claypits and other watercourses carry a great wealth of aquatic plants. Many, such as greater spearwort *Ranunculus flammula* and lesser water-plantain *Baldellia ranunculoides* are now uncommon elsewhere.

Chippenham Fen comprises areas of tall and often rich fen, fen grassland and basic flush that have developed over shallow peat soils. The site also contains calcareous grassland, neutral grassland, woodland, mixed scrub and open water. The site is in a shallow peat-filled depression underlain by a thick layer of marl which rises to the surface in places. The fen is fed by rainfall and springs from the chalk aquifer. There are several ponds on the site and a system of dykes take water from the springs, in the south of the reserve, to the Chippenham River, near its northern boundary.

The areas of tall fen are dominated by a mosaic of saw sedge *Cladium mariscus* and reed *Phragmites australis* are present with abundant purple moor grass *Molinia caerulea*. A rich fen has developed in mown areas supporting the nationally rare *Selinum carvifolia*. In one area this merges into a species rich basic flush where black bog rush *Schoenus nigricans* becomes abundant. Dense and scattered scrub has developed. There are areas of chalk grassland that grade into the fen grassland. The damp neutral grassland meadows are developing a fen meadow flora. The ditches support a rich aquatic flora. The water level is controlled within a series of ditches.

Because the fen contains such a wide range of habitats it supports a wide variety of breeding bird species, including hobby *Falco subbuteo*, short eared owl *Asio flammeus*, nightingale *Luscinia megarhynchos* and several species of warbler. It also forms the winter roosting for hen harriers.

Woodwalton Fen holds a range of wetland plant communities once characteristic of large areas of the East Anglian fens. The site was once a raised bog associated with the former Whittlesey Mere and was dug for peat in the late 19th century when most of the acidic peat was removed, exposing the underlying fen peat. The vegetation of the area today largely reflects this historical use of the site. The open fen and swamp communities represented are of several types. A relict of the acid peat holds stands of purple moor-grass *Molinia caerulea* with ling *Calluna vulgaris*, bog myrtle *Myrica gale*, tormentil *Potentilla erecta* and the saw sedge *Cladium mariscus*. A further swamp community is dominated by purple small-reed *Calamagrostis epigejos*. Mixed fen covers a significant part of the site. This vegetation community is floristically rich and contains species such as meadow rue *Thalictrum flavum*, yellow iris *Iris pseudacorus*, swamp meadow-grass *Poa palustris* and great water dock *Rumex hydrolapathum*. Rare fen plants such as the fen wood-rush *Luzula pallescens* and fen violet *Viola persicifolia* occur.

Of particular note is the network of ditches on the site and these hold many water plants which are now relatively uncommon in Britain including bladderwort *Urticularia vulgaris* and water violet *Hottonia palustris*. In addition, two meres have been dug in order to increase the area of standing water on the site and these have proved valuable for aquatic plant and animal communities. Further habitats of significance on the site include marshy grassland, birch and alder woodland and fen carr. The carr is varied in composition and contains willow *Salix spp.*, blackthorn *Prunus spinosa*, birch *betula spp* and guelder rose *Viburnum opulus*.

The whole site is a patchwork of wetland communities, providing a habitat for many uncommon plant and insect species-a number of which are confined to East Anglia.

Ouse Washes

The Ouse Washes support spined loach *Cobitis taenia* populations within the River Ouse catchment. The Counter Drain with its clear water and abundant macrophytes is particularly important and a healthy population of spined loach is known to occur.

The site is an area of seasonally flooded washlands habitat managed in a traditional agricultural manner. The washlands support nationally and internationally important numbers of wintering waterfowl and nationally important numbers of breeding waterfowl. The site is also of note for the large area of unimproved neutral grassland communities, which it holds, and for the richness of the aquatic flora within the associated watercourses.

The Ouse Washes Ramsar site and its proposed extension is a wetland of major international importance comprising seasonally flooded washlands, which are agriculturally managed in a traditional manner. It provides breeding and winter habitats for important assemblages of wetland bird species, particularly wildfowl and waders.

Portholme

It is the largest surviving traditionally managed meadow in the UK with an area of 104 ha. of alluvial flood meadow (7% of the total UK resource). It is almost completely surrounded by water. There has been a long history of favourable management on traditional lines as a 'lammas' meadow and very little of the site has suffered from agricultural improvement, and so it demonstrates good conservation of structure and function. It supports a small population of fritillary *Fritillaria meleagris*. Watercourses on the periphery of the site have populations of some uncommon invertebrates including one dragonfly, which is of a nationally restricted distribution.

The grassland communities are characterised by the presence of such grasses as Yorkshire fog *Holcus lanatus*, yellow oat-grass *Trisetum flavescens*, meadow foxtail *Alopecurus pratensis*, and meadow fescue *Festuca pratensis*. The range of herbs present, typical of such meadows, includes lady's bedstraw *Galium verum*, pepper-saxifrage *Silaum silaus* and great burnet *Sanguisorba officinalis*. A number of locally rare and one nationally rare plant are also present.

Channels of the River Ouse surround the meadow, and the Alconbury Brook is close by. These water bodies are important for dragonflies (*Odonata*) in particular the restricted dragonfly *Libellula fulva*. Large flocks of waders use this site in winter.

Breckland

Wangford Warren and adjoining parts of RAF Lakenheath are included in the Breckland site as the only occurrence of this habitat type in the UK. The site has 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 colonization sequence from open sand to acidic grass-heath.

The Breckland meres in Norfolk represent natural eutrophic lakes in the east of England. They 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.

The dry heaths of Breckland are representative of European dry heaths in East Anglia, in eastern England, developed under a semi-continental climate. Breckland has an average annual precipitation of only 600 mm, relatively hot summers and cool winters. Frosts can occur in any month of the year. The dry acidic heath of Breckland represents H1 *Calluna vulgaris* – *Festuca ovina* heath in the SAC series. The sand sedge dominated *Carex arenaria* sub-community (H1d) 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 important for rare plants, such as perennial knawel *Scleranthus perennis* ssp. prostrates, and rare invertebrates.

Breckland in East Anglia is the most extensive surviving area of the rare grassland type CG7 *Festuca ovina* – *Hieracium pilosella* – *Thymus praecox* grassland. 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-dry grassland found in the UK. The terrain is relatively flat, with few physical variations, but there are mosaics of calcareous grassland and heath/acid grassland, giving rise to patterns of structural variation.

Current issues Affecting the European Sites (by topic)

The issues affecting the European sites can be summarised as follows;

- land take by developments;
- impact on protected species found within but which travel outside the protected sites may be relevant where development could result in effects on qualifying interest species within the European or Ramsar site, for example through the loss of feeding grounds for an identified species;
- increased disturbance, for example from recreational use resulting from new housing development and / or improved access due to transport infrastructure projects;
- changes in water availability, or water quality as a result of development and increased demands for water treatment, and changes in groundwater regimes due to increased impermeable areas; and
- changes in atmospheric pollution levels due to increased traffic, waste management facilities etc. Pollution discharges from developments such as industrial Developments, quarries and waste management facilities.

These issues have been identified from the factors affecting site integrity, and the site vulnerabilities identified in the Conservation Objectives for the identified European sites.

5 Assessment of the Local Plan

5.1 Introduction

The results of the screening exercise are provided in full in Annex C. Within the screening exercise all of the potential pathways for effects identified in section 4 are compared with the European site's vulnerabilities and conservation objectives. This section summarises the results of the screening exercise where specific pathways of effect have been identified as being an issue for a particular site.

5.2 Summary of Results of the Screening Exercise

Ouse Washes SPA

Potential Locally Significant Effects (LSEs) have been identified as follows:

- Additional sewage discharge. The revised consents being negotiated between Anglian Water and the Environment Agency with regard to additional sewage discharge arising at Northstowe need to ensure that there is no deterioration in the quality or flow of the downstream watercourse due to an increase in new homes, relevant to the strategic site allocations at Northstowe and Cambourne West.
- Additional flow in the Swavesey Drain network could potentially result from an increase in the rate of surface runoff into watercourses as development is established at the Northstowe greenfield site. However, as this is being promoted as an Eco-Town it will have a high level of surface water attenuation which, with proposed on-site flood storage for events up to those with a 1 in 200 chance of occurring in any year, would result in run-off rates lower than existing greenfield.

There are unlikely to be any LSEs to Ouse Washes SPA associated with the Local Plan provided the revised consents ensure there is no deterioration in water quality.

Breckland SAC / SPA

Impacts on groundwater-dependent terrestrial ecosystems (GWDTE) and the species they support can occur from increased demand on water supply. Drawdown of groundwater levels as a result of additional abstraction could result in damage to associated GWDTEs. However, since the groundwater aquifer has been identified as vulnerable to over-abstraction, no new consumptive abstractions will be licensed by the Environment Agency. Additionally, the bulk transfer infrastructure owned and operated by Cambridge Water Company to transfer water from Thetford to Cambridge would not require modification to accommodate growth within the Local Plan area. The abstraction licences currently in force at Euston and Brettenham are considered to have acceptable levels of risk of groundwater drawdown within the Breckland European sites. Therefore, because this licensed abstraction will not need to be changed to accommodate the proposed developments in South Cambridgeshire, there is no risk that development would have an adverse impact on any Breckland SPA or SAC conservation objectives.

There are unlikely to be any LSEs to either Breckland SPA or SAC associated with the Local Plan.

Eversden and Wimpole Woods SAC

The current use of the woods, including public access, is considered compatible with the Barbastelle bat interest and is not considered to affect the Barbastelle population or their roosts. The Local Plan is unlikely to cause a significant rise in visits to the woods.

There are unlikely to be any LSEs to Eversden and Wimpole Woods SAC associated with the Local Plan.

Devils Dyke SAC

Recreation - additional visitor pressure resulting in trampling and changes to vegetation structure. There is a public right of way running along the dyke and additional visitor pressure could adversely affect the habitats for which it is designated. However, due to the distance from South Cambridgeshire, it is considered that visitor numbers would be unlikely to increase significantly.

There are unlikely to be any LSEs to Devils Dyke SAC associated with the Local Plan.

Fenland SAC

Wicken Fen and Chippenham Fen habitats sensitive to inorganic fertilisers and pesticides. The Local Plan is unlikely to lead to changes in fertiliser or pesticide use.

Recreation. Additional visitor pressure to Wicken Fen may lead to trampling and changes to vegetation structure. Access to this site, and any recreational activities within, may need to be controlled. Visitors are already managed by zoning parts of the Fen near the entrance, leaving the more remote parts of the site relatively undisturbed.

Additional sewage discharge at Wicken Fen. This wetland site is located c.1km at its nearest point east of the Cam valley, downstream of Cambridge. The Cam receives treated sewage discharges from Cambridge wastewater treatment works (WwTW), just south of the A11 at Cambridge. That WwTW would receive additional effluent in the future from proposed developments at Cambridge, with potential consequences for downstream flows and water quality. However, analysis of hydrology indicates that Wicken Fen is topographically higher than the Cam and drains via Wicken Lode then Burwell Lode towards it. As the Cam does not feed it, there are no associated risks, which could arise from additional sewage effluent discharge at Cambridge irrespective of any changes in effluent flow or quality from that site, so such scenarios have not been considered further in this assessment.

Impacts on water availability at Chippenham Fen from increased demand on water supply. Additional pressure in the region from water abstraction may affect the local springs and aquifer. The EA are currently undertaking water management investigations being carried out to understand the best method of mitigating the reduction in water in the aquifer due to settlement growth in Red Lodge, Newmarket and other parts of the catchment.

Portholme SAC

Changes in water levels and water quality. The Environment Agency has produced a Water Level Management Plan which aims to maintain the current water level management regime in the long-term.

There are unlikely to be any LSEs associated with the Local Plan.

6 Summary of conclusions on the likelihood of significant effects

6.1 Overall Significant Effect Conclusion

There are unlikely to be significant effects on the identified European sites as a consequence of the policies and allocations as worded in the Submission Draft Local Plan. Therefore, at this stage, no policies require advancement to appropriate assessment.

6.2 Limitations of the screening assessment

The Screening has been undertaken on the consultation version of the Submission Draft Local Plan and has screened the effect of the policies and site allocations. Any major changes, to these policies during the preparation of the Submission version of the Local Plan not in line with recommendations in this screening report, would require revisiting. Whether the alterations made are significant enough to warrant assessment will need to be considered, taking advice from Natural England.

6.3 A Note on the legal purpose of this assessment

It is important to note that the assessment process required under Regulation 61 of The Conservation of Habitats and Species Regulations 2010 (as amended) is focused on the protection of **European sites**.

The findings of this assessment do not obviate the competent authorities of their statutory duty to consider **European protected species** present *outside* European sites, both in the use of policies and the delivery of actions, as required by The Conservation of Habitats and Species Regulations 2010 (as amended).

7 References

DG Environment, Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites. Methodological Guidance on the provisions of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC European Commission, 2001

English Nature, The Determination of Likely Significant Effect under The Conservation (Natural Habitats &c) Regulations 1994 Habitats regulations guidance note 3 English Nature, 1999

European Commission, Managing Natura 2000 Sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC European Commission, 2000.

Annex A: Cambridgeshire Local Plan

Contents of Submission Draft Local Plan

Contents of Submission Draft Local Plan		
Chapter	Title	Policies
1	Introduction	None
2	Spatial Strategy	Policy S/1: Vision
		Policy S/2: Objectives of the Local Plan
		Policy S/3: Presumption in favour of Sustainable Development
		Policy S/4: Cambridge Green Belt
		Policy S/5: Provision of new Jobs and Homes
		Policy S/6: The Development Strategy to 2031
		Policy S/7 Development Frameworks
		Policy S/8 Rural Centres
		Policy S/9 Minor Rural Centres
		Policy S/10 Group Villages
		Policy S/11: Infill Villages
		Policy S/12: Phasing, Delivery and Monitoring
3	Strategic Sites	Policy SS/1: Orchard Park
		Policy SS/2: North West Cambridge - Land between Huntingdon Road and Histon Road
		Policy SS/3: Cambridge East
		Policy SS/4: Cambridge Northern Fringe East and land surrounding the proposed Cambridge Science Park Station
		Policy SS/5: Waterbeach New Town
		Policy SS/6: New Village at Bourn Airfield
		Policy SS/7: West Cambourne
4	Climate Change	Policy CC/1: Mitigation and Adaptation to Climate Change
		Policy CC/2: Renewable and Low Carbon Energy Generation
		Policy CC/3: Renewable and Low Carbon Energy in New Developments
		Policy CC/4 Sustainable Design and Construction

Contents of Submission Draft Local Plan		
Chapter	Title	Policies
		Policy CC/5: Sustainable Show Homes
		Policy CC/6: Construction Methods
		Policy CC/7: Water Quality
		Policy CC/8: Sustainable Drainage Systems
		Policy CC/9: Managing Flood Risk
5	Delivering High Quality Places	Policy HQ/1: Design Principles
		Policy HQ/2: Public Art and New Development
6	Protecting and Enhancing the Natural and Historic Environment	Policy NH/1: Conservation Area and Green Separation at Longstanton
		Policy NH/2: Protecting and enhancing Landscape Character
		Policy NH/3: Protecting Agricultural Land
		Policy NH/4: Biodiversity
		Policy NH/5: Sites of Biodiversity or Geological Importance
		Policy NH/6: Green Infrastructure
		Policy NH/7: Ancient woodlands and veteran trees
		Policy NH/8: Mitigating the Impact of Development in and adjoining the Green Belt
		Policy NH/9: Redevelopment of previously developed sites and infilling in the Green Belt
		Policy NH/10: Recreation in the Green Belt
		Policy NH/11: Protected Village Amenity Areas
		Policy NH/12: Local Green Space
		Policy NH/13: Important Countryside Frontage
		Policy NH/14: Heritage Assets
		Policy NH/15: Heritage assets and adapting to climate change
7	Delivering High Quality Homes	Policy H/1: Allocations for Residential Development at Villages
		Policy H/2 : Bayer CropScience Site, Hauxton
		Policy H/3 : Papworth Everard West Central
		Policy H/4 : Fen Drayton Former Land Settlement Association Estate
		Policy H/5 : South of A1307, Linton

Contents of Submission Draft Local Plan		
Chapter	Title	Policies
		Policy H/6 : Residential Moorings
		Policy H/7: Housing Density
		Policy H/8: Housing Mix
		Policy H/9: Affordable Housing
		Policy H/10: Rural Exception Site Affordable Housing
		Policy H/11: Residential Space Standards for Market Housing
		Policy H/12: Extensions to Dwellings in the Countryside
		Policy H/13: Replacement Dwellings in the Countryside
		Policy H/14: Countryside Dwellings of Exceptional Quality
		Policy H/15: Development of Residential Gardens
		Policy H/16: Re-use of Buildings in the Countryside for Residential Use
		Policy H/17: Working at Home
		Policy H/18: Dwellings to Support a Rural-based Enterprise
		Policy H/19: Provision for Gypsies and Travellers and Travelling Showpeople Additional wording in Appendix E to add to this policy
		Policy H/20: Gypsy and Traveller Provision at New Communities
		Policy H/21: Proposals for Gypsies, Travellers and Travelling Showpeople Sites on Unallocated Land Outside Development Frameworks
		Policy H/22: Design of Gypsy and Traveller Sites, and Travelling Showpeople Sites
8	Building a Strong and Competitive Economy	Policy E/1: New Employment Provision near Cambridge – Cambridge Science Park
		Policy E2: – Fulbourn Road East (Fulbourn)
		Policy E3 Allocations for Class B1 Employment Uses
		Policy E4: Allocations for Class B1, B2 and B8 Employment Uses
		Policy E/5 : Papworth Hospital
		Policy E/6: Imperial War Museum at Duxford
		Policy E/7 : Fulbourn and Ida Darwin Hospitals
		Policy E/8: Mixed-use development in Histon & Impington Station area
		Policy E/9: Promotion of Clusters

Contents of Submission Draft Local Plan		
Chapter	Title	Policies
		Policy E/10: Shared Social Spaces in Employment Areas
		Policy E/11: Large Scale Warehousing and Distribution Centres
		Policy E/12: New Employment Development in Villages
		Policy E/13: New Employment Development on the Edges of Villages
		Policy E/14: Loss of Employment Land to Non Employment Uses
		Policy E/15: Established Employment Areas
		Policy E/16: Expansion of Existing Businesses in the Countryside
		Policy E/17: Conversion or Replacement of Rural Buildings for Employment
		Policy E/18: Farm Diversification
		Policy E/19: Tourist Facilities and Visitor Attractions
		Policy E/20: Tourist Accommodation
		Policy E/21: Retail Hierarchy
		Policy E/22: Applications for New Retail Development
		Policy E/23: Retailing in the Countryside
9	Promoting Successful Communities	Policy SC/1 Allocation for Open Space
		Policy SC/2 Health Impact Assessment
		Policy SC/3 Protection of Village Services and Facilities
		Policy SC/4 Meeting Community Needs NEW SUB-REGIONAL COMMUNITY AND LEISURE FACILITIES Add supporting text to Policy SC/4 (rather than adding a new policy) from Appendix E:
		Policy SC/5 Hospice Provision
		Policy SC/6 Indoor Community Facilities
		Policy SC/7 Outdoor Play Space, Informal Open Space and New Developments
		Policy SC/8 Open Space Standards
		Policy SC/9 Protection of Existing Recreation Areas, Allotments and Community Orchards
		Policy SC/10 Lighting Proposals
		Policy SC/11 Noise Pollution
		Policy SC/12 Contaminated Land

Contents of Submission Draft Local Plan		
Chapter	Title	Policies
		Policy SC/13: Air Quality
		Policy SC/14 Hazardous Installations
		Policy SC/15: Odour and other fugitive emissions to air
10	Transport and Infrastructure	Policy TI/1: Chesterton Rail Station and Interchange
		Policy TI/2: Planning for Sustainable Travel
		Policy TI/3: Parking Provision
		Policy TI/4: Rail Freight and Interchanges
		Policy TI/5: Aviation-Related Development Proposals
		Policy TI/6: Cambridge Airport Public Safety Zone
		Policy TI/7: Lord's Bridge Radio Telescope
		Policy TI/8: Infrastructure and New Developments
		Policy TI/9: Education facilities
		Policy TI/10: Broadband

Annex B: European Sites

NAME: EVERS DEN AND WIMPOLE WOODS

Designation and Code

Special Area of Conservation (SAC) – UK0030331

SSSI boundary is the same as the SAC

Location

The site is located in South Cambridgeshire District, but outside the area covered by the North West Cambridge Area Action Plan. The site is located close to Wimpole Park.

Grid ref: TL 340526 **Area:** 66.48 ha.

Primary reason for selection of the site

Presence of colony of Barbastelle bats *Barbastella barbastellus* for which it is considered to be one of the best areas in UK.

Conservation objectives

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

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

General Site characteristics

Broadleaved deciduous woodland (100%)

Soil and geology – Basic, Clay

Geomorphology and Landscape – Lowland

Qualifying Features

Barbastella barbastellus Barbastelle bats. This is one of the UK's rarest mammals. The species is protected on Schedule 5 of the Wildlife and Countryside Act 1981.

Site Description

The site comprises a mixture of ancient coppice woodland (Eversden Wood) and high forest woods likely to be of more recent origin (Wimpole Wood). A colony of barbastelle bats is associated with the trees in Wimpole Woods. These trees are used as a summer maternity roost where the female bats gather to give birth and rear their young. Most of the roost sites are within tree crevices. The bats also use the site as a foraging area. Some of the woodland is also used as a flight path when bats forage outside the area.

Eversden Wood is species-rich example of ancient ash (*Fraxinus excelsior*) field maple (*Acer campestre*) – dog's mercury (*Mercurialis perennis*) woodland and one of the largest remaining sites of this type on the Cambridgeshire chalky boulder-clay.

The woodland is predominantly relict coppice of ash and field maple over an understorey of hazel (*Corylus avellana*) with aspen (*Populus tremula*), birch (*Betula sp*) and small-leaved elm (*Ulmus minor*) also locally dominant.

The ground flora is characterised by dog's mercury and bluebell (*Hyacinthoides non-scripta*), and the damp soil conditions are reflected in the local abundance of associated plants such as meadowsweet (*Filipendula ulmaria*) and tufted hair-grass (*Deschampsia cespitosa*). Many herbs typical of old woodlands are present including yellow archangel (*Galeobdolon luteum*), wood anemone (*Anemone nemorosa*) and the nationally scarce oxlip (*Primula elatior*) a species largely confined to damp chalky boulder-clay woods of eastern England. Other locally uncommon plants represented include herb-Paris (*Paris quadrifolia*), and, particularly on the drier wood banks, pignut (*Conopodium majus*) and hairy wood-rush (*Luzula pilosa*).

The woodland rides provide additional habitat diversity and support herbs such as ragged-Robin (*Lychnis flos-cuculi*) and false fox-sedge (*Carex otrubae*).

Management and ownership

The primary management principles used for this site are those that maintain a regime of minimum management with little disturbance in order to protect the roosting sites in the woodland for the barbastelle bats.

Wimpole Woods is owned and managed by the National Trust and their management is aimed at maintaining and where possible, enhancing the barbastelle population.

Eversden Wood is privately owned and the current management is considered compatible with the use of this wood as a foraging area / flight path by barbastelles.

Access

There is public access to the woods. Public rights of way go through both areas of woodland.

Wimpole Wood is near to Wimpole Park where the National Trust provide car parking for visitors to their estate. This is around 1km as the crow flies from the start of the woodland. There is also a minor road that runs between Wimpole and Eversden Woods and this provides very limited on road parking available closer to Eversden Wood but still some 500m away. This is not signposted as available for parking.

Current condition (October 2011)

Natural England compiled a conditions report on Eversden and Wimpole Wood SSSI in October 2011 (from survey work in January / December 2010) and found that the site is meeting 100% of its PSA targets.¹³ 39.88% of the area is in a favourable condition and 60.12% is in an unfavourable recovering condition. None of the area is in decline.¹⁴

Barbastelle bats require minimal disturbance within 2 km of their roost. They can forage up to 20km from their roosts but more typically venture around 6-8km. Barbastelle bats' foraging routes radiate out from their roosting sites using a limited number of main routes, which split into major limbs and then into small branches.¹⁵ The main area of importance for them is shown on Map 1 in the Biodiversity Supplementary Planning Document adopted by South Cambridgeshire District Council in July 2009 (see page 23). It reflects the landscape and habitat of known value to bats, and also where survey effort has been deployed to date.

Vulnerability

The current use of the woods, including public access, is considered compatible with the barbastelle interest and should not affect the barbastelle population or their roosts.

¹³ PSA target – the Government's Public Service agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.

¹⁴ Favourable condition means that the SSSI land is being adequately conserved and is meeting its conservation objectives.

¹⁵ Greenaway F (2004) Advice for the management of flightlines and foraging habitats of the barbastelle Bat *Barbastella barbastellus*, English Nature Research Report 657.

NAME: DEVIL'S DYKE**Designation and Code**

Special Area of Conservation (SAC) – UK0030037

Location

The site is located in East Cambridgeshire district and also extends into Forest Heath district in Suffolk.

Grid ref: TL 611622**Area:** 8.02 ha.**Primary reason for selection of the site**

Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*). (important orchid sites)

Conservation Objective

To maintain in favourable condition unimproved calcareous grassland with particular reference to semi-natural dry grasslands and scrubland facies on calcareous substrates (CG3 and CG5 grassland) and *Himantoglossum hircinum* lizard orchid.

General site characteristics

Dry grassland. Steppes (100%)

Soil and geology – Basic, Limestone

Geomorphology and landscape – Lowland

Species

CG3 *Bromus erectus*

CG5 *Bromus erectus* – *Brachypodium pinnatum* calcareous grasslands

Himantoglossum hircinum – lizard orchid

Pulsatilla vulgaris - Pasque flower

Site Description

This section is the most species rich of the Devil's Dyke which as a whole stretches from the Fen Edge at Reach ending at Ditton Green. The section that is identified as a SAC is adjacent to Newmarket Heath. Devil's Dyke consists of a mosaic of CG3 *Bromus erectus* and CG5 *Bromus erectus* – *Brachypodium pinnatum* calcareous grasslands.

It is the only known UK semi-natural dry grassland site for lizard orchid *Himantoglossum hircinum*. Lizard orchid is nationally rare (i.e. occurring in 15 or fewer 10x10 km squares) and is vulnerable in Great Britain. It is restricted to calcareous grasslands and dunes in southern England.

Management and ownership

The dyke is in private ownership. There is a Devil's Dyke Restoration Project set up which is a partnership scheme involving Natural England, English Heritage, Cambridgeshire Wildlife Trust and the Cambridgeshire County Council working with landowners and managers and local people. The aim of the project is to restore the dyke and there is an agreed management plan. The species rich calcareous grassland requires active management

without which it rapidly becomes dominated by rank grasses which leads to the encroachment of scrub over time. Traditional management is by grazing.

The Pasque flower is a speciality of the dyke and a Local Species Action Plan has been produced for this plant.

Access

There is a public right of way running along the dyke. There is parking available at the July Race course, Newmarket.

Current condition (October 2011)

As grazing declined in the early part of the twentieth century scrub has encroached onto many areas of the dyke. In the SAC area there had been some scrub encroachment on the southern part of the site and some clearance work has been undertaken.

Surveys have been carried out by Natural England of the Dyke - the last being in July 2008. The report compiled in October 2011 indicated that 49.57% of the area is in a favourable condition; 23.43% is in an unfavourable recovering condition but that 27% of the area is unfavourable with no change.

In May 2002 the site was meeting 100% of its PSA targets and this reduced to 86% in 2008 and now in 2011 is 73%. This would appear to indicate that the condition of the area is not improving.

Vulnerability

Although clearance work has been undertaken there will need to be control over any regrowth of scrub and any weediness of this section. The area remains vulnerable as the reduction in meeting its PSA targets indicates over the last ten years.

Cambridge Water Cycle Strategy Phase 2 findings (August 2011)

This site did not mentioned in the assessment.

NAME: FENLAND**Designation and Code**

Special Area of Conservation (SAC) – UK 0014782

There are three fens that together form the Fenland SAC

1. Wicken Fen
2. Chippenham Fen
3. Woodwalton Fen

Each site is also a Ramsar site.

Location

Wicken Fen and Chippenham Fen are in East Cambridgeshire District; Woodwalton Fen is in Huntingdonshire District.

Grid ref: Wicken Fen TL 555700; Chippenham Fen TL 648697;
Woodwalton Fen TL 230840**Area:** 618.64 ha.**Primary reason for selection of site for SAC***Molinia* meadows on calcareous peaty or clayey-silt-laden soils (*Molinion caeruleae*) – considered to be one of the best areas in UK.Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* – considered to be rare as its total extent in the UK is estimated to be less than 1,000 ha; considered to be one of the best areas in UK.**Conservation objectives**

To maintain in favourable condition:

- *Molinia* meadows on chalk and clay (*Eu-Molinion* community)
- Calcareous fens with *Cladium mariscus* (great fen sedge) and species of the *Caricion davallianae* vegetation community.

To maintain in favourable condition the habitats for the population of spined loach and great crested newts.

General site characteristics

Bog. Marshes. Water fringed vegetation. Fens (70%)

Broadleaved deciduous woodland (20%)

Inland water body (standing water, running water) (5%)

Other arable land (5%)

Soil and geology – Basic, peat

Geomorphology – Floodplain, Lowland

Species*Molinion caeruleae**Cladium mariscus**Caricion davallianae**Cobitis taenia* (Spined loach)*Triturus cristatus* (Great crested newt)**Current conditions**

The fenland grasslands are dependent upon traditional management practices of cutting and grazing by livestock. In recent decades scrub and woodland have spread at the expense of fen vegetation. Appropriate water management is vital to maintenance of the special feature. The three constituent sites are all National Nature Reserves and the site management plans include actions to address this problem.

DESCRIPTION OF EACH SITE THAT TOGETHER FORMS THE FENLAND SAC**1. WICKEN FEN****Location**

This site is in East Cambridgeshire District.

Area: 254 ha.

Reason for Ramsar allocation

Criterion 1 – One of the most outstanding remnants of East Anglian peat fens. The area is one of the few, which has not been drained. Traditional management has created a mosaic of habitats from open water to sedge and litter fields.

Criterion 2 - The site supports one species of British Red Data Book plant fen violet *Viola persicifolia* which survives at only two other sites in Britain. It contains eight nationally scarce plants and 121 British Red Data invertebrates.

Site description

This site is a marginal remnant of the original peat fenland of the East Anglian basin. It has been preserved as a flood catchment area, and its water level is controlled by sluice gates.

The original peat fen lies to the north of Wicken Lodge. The site here supports fen communities of carr and sedge. The carr scrub is largely of alder buckthorn *Frangula alnus*, buckthorn *Rhamnus catharticus* and willow over a sparse vegetation of fen plants and including marsh fen *Thelypteris palustris*. The more open areas of sedge fen are typically of tall grasses, saw sedge *Cladium mariscus*, purple moor grass *Molina caerulea*, sedges *Carex* spp and rushes *Juncus* spp.

Nationally important higher plants include *Viola persicifolia*, *Lathyrus palustris*, *Myriophyllum verticillatum*, *Oenanthe fluviatilis* and milk parsley *Peucedanum palustre*.

To the south of the Wicken Lode, the area is of rough pasture land, reedbed and pools which are attractive to breeding wetland birds and to wintering wildfowl, the area being subjected to winter flooding.

The dykes, abandoned claypits and other watercourses carry a great wealth of aquatic plants. Many, such as greater spearwort *Ranunculus flammula* and lesser water-plaintain *Baldellia ranunculoides* are now uncommon elsewhere.

Management and ownership

The site is owned by the National Trust and managed by a local management committee, which reports to the East Anglian Regional Office of the National Trust.

The continuation of the historic systems of management and the effective monitoring and maintenance of water levels underlies the Fen's ecology and are crucial for the success of all other management practices. The Fen is artificially protected from drying out by a water-retaining membrane.

Access

There is a visitor centre and shop, nature trails, three hides and 16km of walking routes. Entry is by permit only to help control visitor numbers. Visitors are also managed by 'zoning' parts of the Fen near the entrance, leaving the more remote parts of the site relatively undisturbed. The Fen is open throughout the year from dawn to dusk.

Current conditions (October 2011)

In 2008 Natural England compiled a report about the condition of the SSSI and only 36% of the site was then meeting PSA targets with 53% of the area in unfavourable decline. More recently the condition of the fen was surveyed in 2009/10 and it was found that the site had improved from the previous survey results. The latest report by Natural England in October 2011 shows the site meeting 100% of PSA targets with no areas declining – 47.08% of the area in a favourable condition and 52.92% in unfavourable recovering.

The condition of the site would appear to have improved since 2008.

Vulnerability

Work carried out in the nearby river system to prevent flooding in the 1960s has meant that the site no longer receives the amount of winter water as it did in the past. This has brought about a lowering of the water table over the past 40 years (Ramsar Report 5.5.06).

The habitats within this site are highly sensitive to inorganic fertilisers and pesticides. Access to this site, and any recreational activities within, may need to be controlled.

Cambridge Water Cycle Strategy Phase 2 findings (August 2011)

This wetland site is located c.1km at its nearest point east of the Cam valley, downstream of Cambridge. The Cam receives treated sewage discharges from Cambridge wastewater treatment works (WwTW), just south of the A11 at Cambridge. That WwTW would receive additional effluent in the future from proposed developments at Cambridge, with potential consequences for downstream flows and water quality.

However, analysis of hydrology indicates that Wicken Fen is topographically higher than the Cam and drains via Wicken Lode then Burwell Lode towards it. As the Cam does not feed it, there are no associated risks, which could arise from additional sewage effluent discharge at Cambridge irrespective of any changes in effluent flow or quality from that site, so such scenarios have not been considered further in this assessment.

Wicken Fen Ramsar site can be screened out of any further assessment.

2. CHIPPENHAM FEN

Location

This site is in East Cambridgeshire District Council.

Area: 112 ha.

Reason for Ramsar allocation

Criterion 1 - A spring-fed calcareous basin mire with a long history of management which is partly reflected in the diversity of the present-day vegetation.

Criterion 2 – The invertebrate fauna is very rich partly due to its transitional position between Fenland and Breckland. The species list is very long, including many rare and scarce invertebrates characteristics of ancient fenland sites in GB.

Criterion 3 – The site supports diverse vegetation types, rare and scarce plants. The site is the stronghold of Cambridge milk parsley *Selinum carvifolia*

Site description

The site comprises areas of tall and often rich fen, fen grassland and basic flush that have developed over shallow peat soils. The site also contains calcareous grassland, neutral grassland, woodland, mixed scrub and open water.

The site is in a shallow peat-filled depression underlain by a thick layer of marl which rises to the surface in places. The fen is fed by rainfall and springs from the chalk aquifer. There are several ponds on the site and a system of dykes take water from the springs, in the south of the reserve, to the Chippenham River, near its northern boundary.

The areas of tall fen are dominated by a mosaic of saw sedge *Cladium mariscus* and reed *Phragmites australis* are present with abundant purple moor grass *Molinia caerulea*. A rich fen has developed in mown areas supporting the nationally rare *Selinum carvifolia*. In one area this merges into a species rich basic flush where black bog rush *Schoenus nigricans* becomes abundant. Dense and scattered scrub has developed. There are areas of chalk grassland that grade into the fen grassland. The damp neutral grassland meadows are developing a fen meadow flora. The ditches support a rich aquatic flora.

The water level is controlled within a series of ditches.

Because the fen contains such a wide range of habitats it supports a wide variety of breeding bird species, including hobby, short eared owl, nightingale and several species of warbler. It also forms the winter roosting for hen harriers.

Management and ownership

Both the site and surrounding areas are privately owned. Part of the site is under unspecified tenure. The site is mainly used for nature conservation

The site is actively managed by Natural England through regular cutting and grazing with cattle. Encroaching scrub is being removed to restore fen where appropriate. A water compensation scheme has been instituted to ameliorate the effects of water abstraction. The Environment Agency monitors groundwater changes in the aquifer.

Access

There are rights of way across the site. Access away from the paths is by permit only. The nearest car parking is in the villages of Fordham or Chippenham.

There is a low level of usage by local inhabitants using the rights of way through the middle of the site according to the Ramsar information sheet. Few people apply for permits for recreational purposes, they are mainly requested by naturalists.

Current conditions (October 2011)

100% of the area is now meeting the PSA target – 72.65% of the area is in a favourable condition and 27.35% in and unfavourable recovering condition.

Chippenham Fen NNR has suffered from a changed hydrological regime due to abstraction from the underlying chalk aquifer. This problem is being addressed through supply of supplementary water together with a programme of vegetation and invertebrate population monitoring. This project is being taken forward by Natural England, the Environment Agency and Anglian Water Services plc.

Vulnerability

There is considerable pressure in the region from the water abstraction that may affect the local springs and aquifer.

The Green Infrastructure Strategy for Cambridgeshire published in July 2011 identifies Chippenham Fen as a target area within the strategy and indicates that there are water management investigations being carried out by the Environment Agency to understand the best method of mitigating the reduction in water in the aquifer due to settlement growth in Red Lodge, Newmarket and other parts of the catchment.

The habitats within the site are highly sensitive to inorganic fertilisers and pesticides, applications of which should be avoided both within the site itself and in adjacent surrounding areas.

Cambridge Water Cycle Strategy findings (August 2011)

The Fenland SAC did not meet the criteria to be included in the assessment.

3. WOODWALTON FEN

Location

This fen is in Huntingdonshire District.

Area: 229.7 ha.

Reason for Ramsar allocation

Criterion 1 – The site is within an area of one of the remaining parts of East Anglia, which has not been drained.

Criterion 2 – The site supports two species of British Red Data Book plants - fen violet and fen wood rush.

Site description

This fen holds a range of wetland plant communities once characteristic of large areas of the East Anglian fens. The site was once a raised bog associated with the former Whittlesey Mere and was dug for peat in the late 19th century when most of the acidic peat was removed, exposing the underlying fen peat. The vegetation of the area today largely reflects this historical use of the site. The open fen and swamp communities represented are of

several types. A relict of the acid peat holds stands of purple moor-grass *Molinia caerulea* with ling *Calluna vulgaris*, bog myrtle *Myrica gale*, tormentil *Potentilla erecta* and the saw sedge *Cladium mariscus*. A further swamp community is dominated by purple small-reed *Calamagrostis epigejos*. Mixed fen covers a significant part of the site. This vegetation community is floristically rich and contains species such as meadow rue *Thalictrum flavum*, yellow iris *Iris pseudacorus*, swamp meadow-grass *Poa palustris* and great water dock *Rumex hydrolapathum*. Rare fen plants such as the fen wood-rush *Luzula pallescens* and fen violet *Viola persicifolia* occur.

Of particular note is the network of ditches on the site and these hold many water plants which are now relatively uncommon in Britain including bladderwort *Urticularia vulgaris* and water violet *Hottonia palustris*. In addition, two meres have been dug in order to increase the area of standing water on the site and these have proved valuable for aquatic plant and animal communities. Further habitats of significance on the site include marshy grassland, birch and alder woodland and fen carr. The carr is varied in composition and contains willow *Salix* spp., blackthorn *Prunus spinosa*, birch *betula* spp and guelder rose *Viburnum opulus*.

The whole site is a patchwork of wetland communities, providing a habitat for many uncommon plant and insect species-a number of which are confined to East Anglia.

Management and ownership

The site was purchased by Hon Charles Rothschild in 1910 and donated to the Society for the Promotion of Nature Reserves (now the Royal Society for Nature Conservation) in 1919. Since the 1950s the pro-active management of the site has sought to reverse the drying out process and therefore conserve this crucial fenland habitat. The site is leased from the Wildlife Trust to Natural England.

The effective monitoring and maintenance of water levels underlies the Fen ecology and is crucial for the success of all other management practises. A Water Level Management Plan has been implemented and the site is flooded in winter in time of high water flows thus protecting low-lying farmland. However as a consequence nutrient levels in the water can be high due to agricultural runoff. Water inflows and outflows are strictly controlled. In the 1980s clay sealed banks were constructed around the perimeter of the reserve, this isolated water levels on the fen from that of the surrounding area.

The Great Fen project aims to link this nature reserve with Holme Fen.

Access

Parking is limited at this site – some being available alongside the Great Raveley Drain. There are three marked trails around the fen following the rides. There are no public rights of way across the reserve but visitors are allowed access to the site. There is restricted access to some areas of the site and no dogs are allowed onto any part of the site.

Current condition (October 2011)

The site is meeting 97.91% of its PSA target - 53.28% of the area is in favourable condition and 44.63% is unfavourable recovering. However 2.09% is unfavourable with no change. In 2008 the site was meeting 100% of the PSA targets so there is a slight decline in its condition.

Vulnerability

Woodwalton Fen takes water in the summer months from the surrounding drains. In the winter months the fen is designed to be used as a flood storage area, although this occurs infrequently. In both these circumstances the water entering the Fen is high in nutrients from

agricultural run-off. It is intended to undertake research to investigate what effects the flooding may be having on the site's interests. The quality of the water from the agricultural run-off needs to be monitored.

Cambridge Water Cycle Strategy findings (August 2011)

The Fenland SAC did not meet the criteria to be included in the assessment.

NAME: OUSE WASHES**Designation and Code**

Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Site – UK0013011.

The boundaries of the Ramsar site as extended are coincident with those of the Ouse Washes SSSI.

Location

This site is located in East Cambridgeshire, Fenland and West Norfolk Districts.

Grid reference: TL 498895

Area: 2,403 ha. (Ramsar site and SSI site): 311.35 ha. (SAC site).

Primary reason for selection of this site as SAC

Spined loach *Cobitis taenia* – This site is only one of four known outstanding localities in the UK.

Conservation objective:

To maintain, in favourable condition, the habitats for the populations of *Annexe 1* species (Bewicks swan, whooper swan, hen harrier, spotted crake, and ruff) migratory species of European importance (widgeon, gadwall, pintail, shoveler, pochard and black-tailed Godwit) and wintering waterfowl assemblage of European importance, with particular reference to grassland / marshy grassland with ditches and open water.

Also to maintain in favourable condition the habitat for spined loach.

General site characteristics

Inland water bodies (standing water, running water) (50%)

Bogs Marshes. Water fringed vegetation. Fens (20%)

Improved grassland (30%)

Site Description

The Ouse Washes represent spined loach populations within the River Ouse catchment. The Counter Drain with its clear water and abundant macrophytes is particularly important and a healthy population of spined loach is known to occur.

The site is an area of seasonally flooded washlands habitat managed in a traditional agricultural manner. The washlands support nationally and internationally important numbers of wintering waterfowl and nationally important numbers of breeding waterfowl. The site is also of note for the large area of unimproved neutral grassland communities, which it holds, and for the richness of the aquatic flora within the associated watercourses.

Reasons for identification as a Ramsar Site

The Ouse Washes Ramsar site and its proposed extension is a wetland of major international importance comprising seasonally flooded washlands, which are agriculturally managed in a traditional manner. It provides breeding and winter habitats for important assemblages of wetland bird species, particularly wildfowl and waders.

Ramsar Criterion 1a - The site qualifies by being a particularly good representative example of a natural or near-natural wetland characteristic of its biogeographical region. It is one of the most extensive areas of seasonally flooding washland of its type in Britain, and the wetland has high conservation value for many plant and animal groups.

Ramsar Criterion 2a - The site qualifies by supporting a number of rare species of plants and animals. The site holds several nationally scarce plants, including the whorled water-milfoil *Myriophyllum verticillatum*, greater water parsnip *Sium latifolium*, river water-dropwort *Oenanthe fluviatilis*, fringed water-lily *Nymphoides peltata*, long stalked pondweed *Potamogeton praelongus*, hair-like pondweed *Potamogeton trichoides*, grass-wrack pondweed *Potamogeton compressus*, tasteless water-pepper *Polygonum mite*, small water-pepper *Polygonum minus* and marsh dock *Rumex palustris*. Invertebrate records indicate that the site holds a good relict fenland fauna for several groups, reflecting the diversity of wetland habitats. Two rare Red Data Book insects have been recorded, the large darter dragonfly *Libellula fulva* and the riffle beetle *Oulimnius major*.

Ramsar Criterion 2a - The Ouse Washes also qualifies by supporting a diverse assemblage of rare breeding waterfowl associated with seasonally flooding wet grassland. This includes breeding migratory waders of lowland wet grassland: oystercatcher *Haematopus ostralegus*, redshank *Tringa totanus*, snipe *Gallinago gallinago*, ruff *Phdomachus pugnax*, lapwing *Vanellus vanellus*, and black-tailed godwit *Limosa limosa*, and a diverse assemblage of breeding wildfowl with mute swan *Cygnus olor*, shelduck *Tadorna tadorna*, gadwall *Anas strepera*, teal *A. crecca*, mallard *A. platyrynchus*, pintail *A. acuta*, garganey *A. querquedula* shoveler *A. clypeata*, pochard *Aythya ferina*, tufted duck *Aythya fuligula*, moorhen *Gallinula chloropus* and coot *Fulica atra* occurring regularly. Many of these species are rare and much restricted in Britain and the European Community owing to habitat loss and degradation. The site thus has an important role in maintaining the ranges of several of these species, which have been affected by changes in habitat elsewhere in Britain. Breeding gadwall, mallard, garganey *A. querquedula*, shoveler and bar-tailed godwit are all present in nationally important numbers.

Ramsar Criterion 5 - The Ouse Washes qualifies as a wetland of international importance by virtue of regularly supporting over 20,000 waterfowl, with an average peak count of 60,950 birds recorded in the five winter periods 1986/7 to 1990/91.

Ramsar Criterion 6 - The Ouse Washes also qualifies by supporting, in winter, internationally important populations of the following species (figures given are average peak counts for the five winter period 1986/87 - 1990/91): 4,980 Bewick's swan *Cygnus columbarius bewicki* (29% of the north-west European wintering population); 590 whooper swans *Cygnus Cygnus* (3% of the international population); 38,000 wigeon *Anas penelope* (5% of the north-west European population); 4,100 teal *A. crecca* (1% of NW European); 1,450 pintail *Anas acuta* (2% NW European); and 750 shoveler *Anas clypeata* (2% of NW European). Also notable are the following nationally important wintering populations: 270 cormorant *Phalacrocorax carbo* (2% of the British wintering population); 490 mute swan *Cygnus olor* (3% of British); 320 gadwall *Anas strepera* (5% of British); 2,100 pochard *Aythya ferina* (4% of British); 860 tufted duck *Aythya fuligula* (1 % of British); and 2,320 coot *Fulica atra*.

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

The continued international importance of this site is dependant on the maintenance of a winter flooding regime and a high, but controlled summer water table.

Reasons for identification as a Special Protection Area

The Ouse Washes Ramsar site and the Special Protection Area is a wetland of major international importance comprising seasonally flooded wash lands, which are agriculturally managed in a traditional manner. It provides breeding and winter habitats for important assemblages of wetland bird species, particularly wildfowl and waders.

The boundaries of the Special Protection Area are coincident with those of the Ouse Washes SSSI, apart from the exclusion of a section of the Old Bedford River in the north of the SSSI.

The Ouse Washes qualifies under Article 4.1 of the EC Birds Directive by supporting, in summer, a nationally important breeding population of ruff *Philomachus pugnax*, an Annex 1 species. In recent years an average of 57 individuals have been recorded, a significant proportion of the British population.

The site also qualifies under Article 4.1 by regularly supporting internationally or nationally important wintering populations of three Annex 1 species. During the five year period 1986/87 to 1990/91, the following average peak counts were recorded: 4,980 Bewick's swan *Cygnus columbarius bewickii* (29% of the north-west European wintering population, 70% of the British wintering population), and 590 whooper swans *Cygnus Cygnus* (3% of the international population, 10% of British). In addition, between 1982-87 an average of 12 wintering hen harrier *Circus cyaneus* was recorded, representing 2% of the British wintering population.

The Ouse Washes qualifies under Article 4.2 by supporting, in summer, in recent years, nationally important breeding populations of five migratory species: 111 pairs of gadwall *Anas strepera* (20% of the British breeding population); 850 pairs of mallard *Anas platyrhynchos* (2% of British); 14 pairs of garganey *Anas querquedula* (20% of British), 155 pairs of shoveler *A. clypeata* (12% of British), and 26 pairs of black-tailed godwits *Limosa limosa* (44% of British).

The site further qualifies under Article 42 as a wetland of international importance by virtue of regularly supporting over 20,000 waterfowl, with an average peak count of 60,950 birds recorded in the five winter period 1986/1 to 1990/91. This total included-internationally or nationally important wintering populations of the following migratory waterfowl (figures given are average peak counts for the five winter period 1986/87 - 1990/91): 270 cormorant *Phalacrocorax carbo* (296 of the British wintering population); 490 mute swan *Cygnus olor* (3% of British); 38,000 wigeon *Anas penelope* (596 of the north-west European population, 1596 of British); 320 gadwall *Anas strepera* (5% of British); 4,100 teal *A. crecca* (1% of NW European, 4% of British); 1,450 pintail *Anas acuta* (2% NW European, 6% of British); 750 shoveler *Anas clvpeata* (2% of NW European, 8% of British); 2,100 pochard *Aythya ferina* (4% of British); 860 tufted duck *Aythya fuligula* (1% of British); and 2,320 coot *Fulica atra* (1 % of British).

The site also qualifies under Article 4.2 by virtue of regularly supporting, in summer, a diverse assemblage of the breeding migratory waders of lowland wet grassland including: oystercatcher *Haematopus ostrmlegus*, redshank *Tringa totanus*, snipe *Gallinago gallinago*, Ruff *Philomachus pugnax* lapwing *Vanellus vanellus*, and black-tailed godwit *Limosa limosa*;

and a diverse assemblage of breeding wildfowl with mute swan *Cygnus olor*, shelduck *Tadorna tadorna*, gadwall *Anas strepera*, teal *A. crecca*, mallard *A. platyrhynchos*, pintail *A. acuta*, garganey *A. querquedula*, shoveler *A. clypeata*, pochard *Aythya farina*, tufted duck *Aythya fuligula*, moorhen *Gallinula chloropus* and coot *Fulica atra* occurring regularly. Many of these species are rare and much restricted in Britain and the European Community owing to habitat loss and degradation. The site thus has an important role in maintaining the ranges of several of these species, which have been affected by changes in habitat elsewhere in Britain.

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

The continued international importance of this site is dependant on the maintenance of a winter flooding regime and a high, but controlled summer water table.

Management and ownership

Given the extent of the Ouse Washes there are a number of management techniques that need to be carried out in the washes. Wetland grassland requires active management if it is to retain its conservation interest this has traditionally been done by grazing. Partial winter flooding is required to maintain suitable habitat conditions for wintering birds. A mosaic of winter flooded grassland and permanently un-flooded grassland is desirable. Ditches are artificial habitats created by land drainage – if left unmanaged silt accumulates in the bottom of the ditches leading to the loss the range of aquatic plants and animals colonising the ditches. There needs to be a rotation undertaken on ditch management. Also the level of water in the ditches and its quality needs to be regulated to maintain the optimum level for the plant and animal community. All the habitats are highly sensitive to inorganic fertilisers and pesticides.

Access

There is a network of public rights of way in the Washes. The RSPB manage a nature reserve at Welches Dam where there is a visitor centre and a number of bird hides. The WWT manage a nature reserve at Welney, Norfolk also with a centre and hides.

Current condition (November 2011)

Assessment work was carried out in 2003 and at this time many of the units that comprise the Washes were in an unfavourable state. Only 12.93% of the site meets the PSA target. The water quality regularly fails to meet total Phosphorus target of 0.1mg/l. Until this can be remedied the site will continue to remain unfavourable.

More recent survey work carried out in November 2009 on a number of different units that make up the Washes showed no improvements because there was inappropriate water levels within the unit areas. This survey work showed that there was a decline in the majority of the breeding bird features, some wintering bird features and the loss of extent and quality of neutral grassland feature.

In August and September 2011 further units were surveyed and found to be favourable.

The report compiled by Natural England in November 2011 on the condition of the SSSI found that only 19.13% of the site meets the PSA target which is a slight improvement from

2009. Of this 15.56% of the area is favourable and 3.57% is unfavourable recovering. 80.87% of the area is in an unfavourable condition with no change.

Vulnerability

Two independent and parallel rivers comprise the SAC. The Counter Drain / Old Bedford (known also as the outer river) drains adjacent farmland. The Old Bedford / Delph (known also as the inner river) is sourced by the River Great Ouse. During the winter and increasingly during the spring and summer months as well, the inner river takes flood-water from the Great Ouse, and therefore has an important flood defence function. Issues of concern relate to water quantity, water quality, salinity, turbidity and sediment.

The need to ensure there is sufficient water for the rivers is addressed through the Water Level Management Plan agreed by the Environment Agency and partner organisations. The outer river is also a source of water for nearby arable land forming spray irrigation, but this abstraction is unmetered for the most part. Abstraction of water from the Great Ouse system to Essex via the Ely-Ouse Transfer Scheme is monitored through the Denver License Variation. Other proposals for water abstraction, e.g. to Rutland Water by Anglia Water, have been the subject of assessment, but there are no current proposals.

It has been found that in the Environment Agency Review of Consents that there was very little difference between the different abstraction scenarios in terms of water resource availability to the Ouse Washes. The water table depth ranges are, therefore, relatively similar between the different scenarios i.e. there is little difference between the naturalised and current and maximum licensed scenarios. Therefore abstraction licences have no effect on the vegetation supporting the SPA features under the existing operating regime. Therefore the Agency concluded that water resources consents do not adversely affect the integrity of the European site, with respect to SPA features.

Water quality is a major issue of concern. Increases in two plant nutrients - nitrogen and particularly phosphorus (thought to be derived from sewage treatment works) - are leading to changes in the macrophyte communities, shown by a decline in species diversity and the loss of species together with an increase in species tolerant of eutrophic conditions. This is particularly apparent in the inner river. There is evidence that agricultural inputs are a minor component. In addition, blanket-weed (aquatic algae) poses problems to navigation and angling, leading to issues of timing and frequency of aquatic weed-cutting.

It is clear from the Environment Agency Review of Consents process that high phosphorus concentrations are currently the main issue for the Ouse Washes leading to eutrophication in the main watercourses and internal ditches and degradation of the wet grassland habitat. From all of the available evidence, phosphorus levels are above the desired target level, in some cases by a considerable amount. The main contribution to the phosphorus load comes from consented point source discharges of sewage effluent.

In addition, flood water draining off the adjacent Ouse Washes into the inner river can be of a very poor quality (particularly in warm weather) leading to problems of deoxygenation with resultant fish-kills. The frequency of increased spring and summer flooding on the Ouse Washes is being studied to ascertain ways of ameliorating its effects.

Saline intrusion through the northernmost tidal lock gate may be contributing to an increase in salinity levels of the outer river.

Conditions must be applied to planning permissions for gravel extraction from quarries near to the SAC, to ensure that drainage water from de-watering and washings does not affect the turbidity and sediment levels in the outer river.

Cambridge Water Cycle Strategy Phase 2 findings

Ouse Washes SAC, Ramsar site and SSSI lies between the New Bedford River and the Old Bedford River to the east of Earith. The site is seasonally-flooded washland, internationally important for birds. Recent reports identify that water levels across the Ouse Washes are increasingly too high in the Spring and Summer as a result of impeded seasonal drainage which itself is consequent upon siltation in the Hundred Foot Drain.

Potential concerns associated with the Cambridge WCS are related to the discharge of sewage via the Uttons Drove WwTW, which would serve the proposed development at Northstowe. This discharges to the Swavesey Drain, which in turn feeds into the River Great Ouse upstream of Ouse Washes. Significant additional flow could exacerbate the existing problem associated with high Spring / Summer water levels. Significant deterioration in sewage effluent quality could also have adverse effects on standing water quality at Ouse Washes. However, any such risks need to be considered in the context of the following:

The distance from Uttons Drove WwTW to Ouse Washes is greater than 10 km by river, providing for considerable dilution and dispersal of any contamination between this potential source and potential receptor.

The WwTW can make only a very minor contribution to total flow at Ouse Washes, since the total catchment draining to the River Great Ouse at Earith is approximately 3000 km². For comparison, the mean flow from the sewage works discharge is currently estimated at 4332m³/day compared a mean flow in the Ouse in excess of 1,185,408 m³/day (which is the flow at Offord, upstream of Earith).

The current consented dry weather flow (i.e. foul sewage excluding surface drainage) at the works is 3350 m³/day. However, Anglian Water plc has submitted a proposal to Ofwat under PRO9 (i.e. spending proposals for the period 2010 to 2015) to increase the consent to 6992m³/day. Whilst the existing consent would not be able to accommodate additional influent from proposed development at Northstowe, the proposed new consent would.

The proposed revised consent would have associated improvements in effluent quality, to ensure no deterioration in downstream water quality, specifically tightening of effluent quality to:

- Biochemical Oxygen Demand - 10 mg/l (evidence in the Phase 2 WCS indicates the consent might need to be set to 9 mg/l to ensure no deterioration);
- Ammonia - 5 mg/l;
- Phosphate - 2 mg/l.

Thus, any requirement for HRA associated with additional sewage discharge arising at Northstowe rests with Anglian Water Services as the body promoting the change in consented discharge and the Environment Agency as the competent authority considering that revised consent. Based on the revised consents being negotiated between Anglian Water and the Environment Agency this will ensure that there is no deterioration in the downstream watercourse due to growth.

Additional flow in the Swavesey Drain network could potentially result from an increase in the rate of surface runoff into watercourses as development is established at the Northstowe greenfield site. However, as this is being promoted as an Eco-Town it will have a high level of surface water attenuation which, with proposed on-site flood storage for events up to those with a 1 in 200 chance of occurring in any year, would result in run-off rates lower than existing greenfield.

Thus, Ouse Washes SAC and Ramsar site can be screened out of any further assessment, but it is noted that implementation of the Northstowe development as planned is subject to approval of the proposed consent revision at Uttons Drove sewage treatment works. And hence further HRA may be required dependent upon the outcome of consenting process / details and appropriate implementation and management of SUDS.

NAME: PORTHOLME**Designation and Code**

Special Area of Conservation (SAC) – UK0030054.

Location

This site is within Huntingdonshire District.

Grid reference: TL 237708 **Area:** 91.93 ha.**Primary reason for selection of this site**Lowland hay meadows MG4 *Alopecurus pratensis* *Sanguisorba officinalis* – considered to be one of the best areas in UK.**Conservation objectives**

To maintain in favourable condition the lowland hay meadow.

General site characteristics

Humid grassland (100%)

Soil and geology – Alluvial, Neutral

Geomorphology and landscape – Floodplain, Lowland

Species*Alopecurus pratensis**Sanguisorba officinalis**Fritillaria meleagris**Libellula fulva*.**Site Description**

It is the largest surviving traditionally managed meadow in the UK with an area of 104 ha. of alluvial flood meadow (7% of the total UK resource). It is almost completely surrounded by water. There has been a long history of favourable management on traditional lines as a 'lammas' meadow and very little of the site has suffered from agricultural improvement, and so it demonstrates good conservation of structure and function. It supports a small population of fritillary (*Fritillaria meleagris*). Watercourses on the periphery of the site have populations of some uncommon invertebrates including one dragonfly, which is of a nationally restricted distribution.

The grassland communities are characterised by the presence of such grasses as Yorkshire fog *Holcus lanatus*, yellow oat-grass *Trisetum flavescens*, meadow foxtail *Alopecurus pratensis*, and meadow fescue *Festuca pratensis*. The range of herbs present, typical of such meadows, includes lady's bedstraw *Galium verum*, pepper-saxifrage *Silaum silaus* and great burnet *Sanguisorba officinalis*. A number of locally rare and one nationally rare plant are also present.

Channels of the River Ouse surround the meadow, and the Alconbury Brook is close by. These water bodies are important for dragonflies (*Odonata*) in particular the restricted dragonfly *Libellula fulva*.

Large flocks of waders use this site in winter.

Management and ownership

The London Anglers Association owns the site and is advised on the management of the site by Natural England.

Neutral grassland requires active management if it is to retain its conservation interest. In order to maintain a species rich sward, each year's growth of vegetation must be removed; otherwise the sward becomes progressively dominated by tall and vigorous grasses. These, together with an associated build up of dead plant matter, suppress less vigorous species and reduce the botanical diversity of the site.

The traditional management of this site, which still continues, is by cutting for hay followed by grazing of the aftermath in later summer until the autumn. In winter and early spring Portholme is inundated by floodwaters. This provides natural fertilising of the soil and it is this seasonal flooding coupled with the traditional management that maintains the diversity of the natural plant communities.

The Environment Agency carried out drainage improvements on Portholme Meadow, Huntingdon, in September 2010 to help re-establish rare types of grassland that had been found to be not in good condition. This unfavourable condition was due to the amount of curled dock present. Curled dock is an invasive weed which degrades the quality of the natural grassland. Floodwater ponding had caused deterioration in the vegetation community and these inappropriate water levels had resulted in the changes to the meadows. The plan by the Environment Agency has allowed the floodwater to drain off more quickly from the affected area and reduce the curled dock populations, allowing the desired grassland communities to reestablish. The works also improved the site's ability to adapt to climate change.

In the past MAFF had sponsored dipwell monitoring of the meadows. Water table levels are vital to the management of this site. Anglian Water Services (AWS) is required to produce a statutory water company drought plan under the requirements of the new s39B of the Water Industry Act 1991 as introduced by the Water Act 2003. For each site, potential changes arising from the drought actions have been identified and the existence and adequacy of current monitoring programmes has been provisionally assessed. For the most part, existing monitoring are adequate for monitoring the effects of the drought actions. In relation to Portholme it recommends in the 2006 Drought Plan the following:

'One site (Portholme Meadow) has been monitored in the past and this work is probably sufficient to determine a baseline. However, no monitoring is currently being undertaken. Previous modelling studies suggest that reductions in river water levels are likely to be very small and are therefore unlikely to have any effect on riparian water table levels in adjacent meadows or water levels in adjacent gravel pits.'

Access

There are three main entrances to the meadow and visitors can walk around the site on the extensive footpaths, which lead off the main entrances. The footpaths form a triangle across the meadow and each footpath is approximately 1.6km in length.

Current condition (November 2011)

The units of the site were assessed in June 2005 and 2006 and it was found to have inappropriate cutting / mowing regimes and inappropriate weed control. The site was not meeting the PSA target at all. 90.92% of the area was seen to be in unfavourable but remaining unchanged i.e. not in decline. By November 2010 there was an improvement since the site was recorded as meeting 100% of the PSA target in an unfavourable recovering condition.

The latest report compiled by Natural England in November 2011 indicates that the site is meeting 100% of its PSA targets and that it is favourably recovering. The last survey of the site was carried out in June 2011. It would appear that the drainage improvement works carried out by the Environment Agency has had a positive impact.

Vulnerability

Without a controlled management plan the site will not retain its conservation interest. The improvement in drainage carried out by the Environment Agency shows how the correct management can greatly improve an area's biodiversity.

Cambridge Water Cycle Strategy Phase 2 findings (August 2011)

This site did not meet the criteria to be included in the assessment.

NAME: BRECKLAND**Designation and Code**

Special Area of Conservation (SAC) – UK0019865

Special Protection Area (SPA) – UK9009201

Although covering much of the same land the boundary of the SAC is not contiguous with that of the SPA.

Location

This site is within Forest Heath in Suffolk and Kings Lynn and West Norfolk District in Norfolk.

Grid reference: TL862948

Area: SPA – 39433.65; SAC – 7548.06

Primary reason for selection of this site for SAC

- Inland dunes with open *Corynephorus* and *Agrostis* grasslands.
- Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation
- European dry heaths
- Semi-natural dry grasslands and scrubland species on calcareous substrates (*Festuco-Brometalia*).

Other qualifying features:

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

The area is considered to support a significant presence.

Triturus cristatus (great crested newt)

The area is considered to support a significant presence.

General site characteristics

Inland water bodies (0.5%)

Bogs. Marshes. Water fringed vegetation. Fens (1%)

Dry grassland (59.4%)

Heath. Scrub. Maquis and garrigue. Phygrana (20%)

Improved grassland (0.2%)

Other arable land (0.1%)

Broad-leaved deciduous woodland (9%)

Coniferous woodland (4%)

Inland rocks. Scree. Sands. Permanent snow and ice (0.5%)

Other land (0.3%)

Site Description

Wangford Warren and adjoining parts of RAF Lakenheath are included in the Breckland site as the only occurrence of this habitat type in the UK. The site has 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 colonization sequence from open sand to acidic grass-heath.

The Breckland meres in Norfolk represent natural eutrophic lakes in the east of England. They 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.

The dry heaths of Breckland are representative of European dry heaths in East Anglia, in eastern England, developed under a semi-continental climate. Breckland has an average annual precipitation of only 600mm, relatively hot summers and cool winters. Frosts can occur in any month of the year. The dry acidic heath of Breckland represents H1 *Calluna vulgaris* – *Festuca ovina* heath in the SAC series. The sand sedge dominated *Carex arenaria* sub-community (H1d) 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 important for rare plants, such as perennial knawel *Scleranthus perennis* ssp. *prostrates*, and rare invertebrates.

Breckland in East Anglia is the most extensive surviving area of the rare grassland type CG7 *Festuca ovina* – *Hieracium pilosella* – *Thymus praecox* grassland. 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-dry grassland found in the UK. The terrain is relatively flat, with few physical variations, but there are mosaics of calcareous grassland and heath/acid grassland, giving rise to patterns of structural variation.

Current Condition:

In recent decades, scrub and woodland have spread at the expense of the heathland and chalk grassland vegetation due to the cessation of traditional cutting and grazing management. Management agreements and particularly Environmentally Sensitive

Area payments go part of the way towards re-introducing this largely uneconomical traditional management, and controlling the scrub. Strong populations of rabbits are important in maintaining the Breckland swards.

Vulnerability:

Grazing by sheep/cattle is essential to the maintenance of habitats. Problems include nutrient deposition from the atmosphere and adjacent arable land, invasion by self sown trees/shrubs, and uncontrolled and inappropriate recreational activities. Local ground water abstraction has a deleterious impact on the natural eutrophic lakes, the Breckland meres, and is the subject of active liaison between Natural England and the Environment Agency.

Reasons for identification as a Special Protection Area:

During the breeding season the area regularly supports:

- *Burhinus oediconemus* (Western Europe - breeding) - 60.1% of the GB breeding population of stone curlews

- *Caprimulgus europaeus* - 12.2% of the GB breeding population of nightjars.

Lullula arborea - 28.7% of the GB breeding population of woodlarks.

General Site Characteristics:

Heath. Scrub. Maquis and garrigue. Phygrana (0.9%)

Dry Grassland. Steppes (19.7)

Humid grassland. Mesophile Grassland (1.3%)

Improved grassland (0.3%)

Other arable land (31.5%)

Broad-leaved deciduous woodland (1.4%)

Coniferous woodland (44.7%)

Vulnerability:

Stone-Curlews are largely reliant on arable land for nesting and are thus vulnerable to disturbance and nest destruction from agricultural operations. Stone curlews require very short vegetation, with abundant patches of bare and stony ground. The bare stony ground provides excellent camouflage for adults, chicks and eggs, whilst the short vegetation allows good visibility for predator avoidance.

The best way to achieve suitable conditions for stone curlews in arable land is to plant spring-sown crops that develop slowly. Autumn sown crops are usually too dense and tall by the spring nesting season. It can be useful to provide a rotation system of a range of spring sown crops that includes summer fallows, thus supplying both nest sites and invertebrate rich areas for foraging. Ideal ploughing times are just before the birds arrive (usually early March) and just before egg laying commences (usually early May). Alternatively, crops that grow too tall for nesting stone-curlew can be treated with herbicide to restore bare ground.

Management agreements are in place to provide nest plots and thus safeguard the population.

Stone-Curlew, Nightjar and Woodlark are vulnerable to predation from corvids¹⁶ and foxes and to disturbance caused by human activity, including dog walking. There should be the absolute minimum of disturbance to breeding stone-curlew, particularly by people on foot within sight of, and up to 500m from nests. In 2005, new public access was introduced on heaths by legislation. Safeguards to protect stone-curlew have been included but the situation will require monitoring to determine how successful restrictions have been in preventing additional disturbance.

¹⁶ Corvids; Crows, jays, magpies, ravens, jackdaws and rooks all belong to the Family of birds called Corvidae.

Breckland heathlands and acid grasslands supporting stone-curlew, nightjar and woodlark are fragile in terms of the high background levels of air pollution in the area, particularly high nitrogen loads causing undesirable habitat changes. Research on this topic is ongoing, and measures to export the nutrients off heaths (such as night time sheep folding or topsoil stripping) to counter the effects of pollution are potential management options. There are development pressures on the area, particularly for infrastructure, which requires substantial discussion and mitigation in some cases.

This is achieved through Natural England commenting on planning applications and providing input to structural and local plans.

Woodlark and nightjar benefit from clear-fell forestry rotational management. Surveys for both woodlark and nightjar were carried out in 2010. The woodlark survey recorded 209 breeding pairs; a figure below 253 would indicate unfavourable condition. The nightjar survey recorded 240 churring males; a figure below 311 would indicate unfavourable condition. The appropriate management is currently taking place in the forests carried out by the Forestry Commission (FC). The FC's Design Plan for the Breckland Forest area indicates that there has not been a change in the extent of the habitat and therefore a programme of research and experimental management is underway to determine the cause of the population changes with a commitment from FC to adopt management practices to meet population target.

Collecting of eggs of stone-curlew, and to some extent night jar and woodlark, is believed to be a serious threat to individual birds and to population size. The loss of eggs to this illegal activity is unknown. There is a police-based alert system in place in Breckland to try and reduce this type of crime, and landowners are vigilant.

Current condition of Breckland farmland

The report compiled by Natural England in November 2011 showed that 100% of the PSA target is being met for the numerous units that make up the Breckland Farmland SSSI – all are in a favourable condition.

The condition of the units making up the Breckland Forest SSSI area also is meeting 100% of the PSA target although the condition is described as unfavourable recovering due to the reduction in the number of stone curlews and nightjars found in the 2010 survey.

Annex C: Screening Assessment

Eversden and Wimpole Wood SAC		
Nature of potential impact	Potential of the Local Plan (alone or in combination with other plans) to affect the European site	Commentary on likelihood and significance
Land Take by Development	<p>The Local Plan does not propose development that will take land from Wimpole and Eversden Woods, and will not result in the direct fragmentation of habitats.</p> <p>No other plans propose development that would use land from this site.</p>	<p>There are no site allocations which directly impact on land within the woods. Any developments which are not allocated in the plan which come forward will be subject to separate Habitats Regulations Assessment at the planning application stage.</p>
Impact on protected species outside the protected sites	<p>Eversden and Wimpole Woods are designated because of the presence of a colony of Barbastelle Bat. The bats can forage up to 20 km from their roosts but more typically venture around 6-8 km. Barbastelle bats require minimal disturbance within 2 km of their roost. The main 'area of importance' for the bats was examined in the South Cambridgeshire Biodiversity Strategy (and identified in the sustainability appraisal scoping report).</p> <p>Policy H/1 Allocations for Residential Development at Villages makes an allocation of 90 dwellings (H/1h) on Land at Bennell Farm Comberton (in Toft Parish) which falls at the outer edges of this area.</p> <p>Policy SS/8 Cambourne West allocates land which lies 6km from the woods, and outside the main area of importance. Land south of the A428, northwest of lower Cambourne, including an area within the current business park is allocated for the development of a sustainable, fourth linked village to Cambourne of approximately</p>	<p>The woods are relatively isolated, and not located near to any of the locations for major development allocations. The woods are some distance from any villages where small-scale windfall development could take place under village development frameworks policies.</p> <p>Due to the distance from the woods of the majority of development proposed within the Local Plan (with the exception of the allocation H/1h), and the scale of development identified, the potential impacts are not considered to be significant. Any development at Comberton will be subject to Policy NH/4 Biodiversity at the planning application stage which, alongside the Habitats Regulations, will require protected species surveys and appropriate mitigation.</p>

	<p>1,200 dwellings by 2031. The policy requires the retention of existing woods, hedges, unimproved grassland areas and water features and that these are managed to enhance their ecological value and linked together by areas of open space to provide a network of accessible green infrastructure. This would contribute to ensuring habitat fragmentation in the landscape surrounding the main area of importance would be maintained.</p> <p>The closest major developments to these woods are on the fringes of Cambridge (the Southern Fringe and North West of Cambridge) both these are over 8km from the woods and are outside the main area of importance. An Area Action Plan has been adopted for the Southern Fringe and an Area Action Plan has been produced for the North West Cambridge site.</p> <p>The North West Cambridge AAP was subject to HRA and concluded that the preferred options draft had no Likely Significant Effects either alone or in combination with other parts of the development plan.</p>	
<p>Recreational Pressure and Disturbance</p>	<p>The level of proposed growth in housing in the district could also lead to an increase in demand for countryside recreation.</p> <p>Notwithstanding this, Wimpole Woods, and even more so Eversden Woods, does not attract a large number of visitors, and are relatively far from centres of population. Nearby car parking is also limited.</p> <p>The Local Plan policy SC/1 proposes allocations for open space. All developments are required to contribute to or provide open space with Policy SC/8 Open Space Standards setting the minimum levels of provision. These policies should ensure that there is no local deficiency in Accessible Natural Green Space (ANGS). The policies relating to the new communities specifically require the provision of open space for recreation within the development. A number of larger site proposals specifically reference the potential to deliver significant open space beyond the minimum required by policy.</p> <p>New strategic open spaces are already planned, and the</p>	<p>No major allocations in the Local Plan are within 5 km.</p> <p>Notwithstanding, according to the Natura 2000 Data, the current use of the woods, including public access, is considered compatible with the barbastelle bats' interest and should not affect the barbastelle population or their roosts.</p> <p>The existing rights of way through the woods allow for some limited access. The bats roost in the trees, foraging at sunset/night so are not generally disturbed by daytime visitors and visitor numbers will continue to be limited owing to the woods' relative inaccessibility from centres of population and from car parking close to the woods.</p> <p>There are other countryside access opportunities, existing or proposed, available in more accessible locations to the major centres of population. The new settlements proposed in the Local Plan must include</p>

	<p>Cambridgeshire Green Infrastructure Strategy (2011) proposes new countryside recreation opportunities, to support growth in Cambridgeshire.</p> <p>It is not considered that the level of public use of the woods will increase significantly as a result of the Local Plan.</p>	<p>natural green space for recreation.</p> <p>In view of the limited additional recreational use of the woods that will occur, there are not considered to be any likely significant effects.</p>
Water Quantity and Quality	Not relevant for the conservation objectives of this site.	Not relevant.
Changes in Pollution Levels	<p>The level of growth in the Local Plan could lead to increased levels of atmospheric pollution, through static emissions created by development, or from the car journeys generated.</p> <p>Whilst the actual impact of the Local Plan on air quality alone or in combination with other plans is difficult to quantify, the location of the site is not in close proximity to any major developments allocations or major transport routes.</p>	<p>As the site is not in close proximity to any developments proposed or major transport routes, it is not considered that there is likely to be any significant impact on its nature conservation objectives. The Local Plan also seeks to reduce the need to travel through the location of services and facilities close to dwellings.</p>

Devil's Dyke SAC		
Nature of potential impact	Potential of the Local Plan (alone or in combination with other plans) to affect the European site	Commentary on likelihood and significance
Land Take by Development	There are no allocations in the Local Plan that will take land from Devil's Dyke, and will not result in the direct land take or fragmentation of habitats.	There are no allocations in the Local Plan which will impact directly on the Devil's Dyke.
Impact on protected species outside the protected sites	The qualifying features of the site relate solely to the semi-natural dry grasslands and scrub habitats. No animal species are qualifying features of the site. Therefore there are no species of European importance will be affected.	No likely significant effects are possible as there are no qualifying species.
Recreational Pressure and	Increasing the dwelling stock in the district dwellings could increase demand for countryside recreation. However, no allocations are	No major allocations in the Local Plan are within 5 kilometres.

Disturbance	<p>within 5 km of the site.</p> <p>Devils Dyke is accessed via a long distance footpath which is a public right of way, running the length of the dyke. Parking is available at the July Race course, Newmarket. The site is over 10 km from the development proposed at Cambridge East. It is not considered that the level of public use of the Devil's Dyke footpaths will increase greatly as a result of the Local Plan's proposed allocations.</p>	<p>Impacts from recreation are not listed as site vulnerability. Therefore the current public access is not causing significant effects. In view of the limited additional recreational use it is not considered that there is a likelihood of significant effects.</p>
Water Quantity and Quality	<p>Not relevant to the site's vulnerabilities and conservation objectives.</p>	<p>Not relevant.</p>
Changes in Pollution Levels	<p>The level of development proposed by the local plan could result in increased levels of atmospheric pollution, through the emissions created by development, or from the car journeys generated. Whilst the actual impact of the Local Plan on air quality alone or in combination with other plans is difficult to quantify, the location of the site is not in close proximity to any development allocations.</p>	<p>As the site is not in close proximity to proposed allocations, it is not considered that there is likely to be any significant impact on their nature conservation objectives.</p> <p>Policy NH/4 Biodiversity in the Local Plan requires that development does not harm the identified European Sites and the Local Plan has a general air policy to address air quality from developments.</p>

Wicken Fen - SAC and Ramsar site		
Nature of potential impact	Potential of the Local Plan (alone or in combination with other plans) to affect the European site	Commentary on likelihood and significance
Land Take by Development	<p>The Local Plan does not propose any development that will take land from Wicken Fen, and will not result in the direct fragmentation of habitats.</p>	<p>There are no allocations which directly impact on Wicken Fen.</p>
Impact on protected species outside the protected sites	<p>The conservation objectives relate to species of plant within the fen, and species of invertebrates which are not found in the wider countryside. The allocations identified in the Local Plan will not have a significant impact on species listed as important to the</p>	<p>Due to the distance of the site from the District it is not considered that there is likely to be a significant effect from the allocations identified in the Local Plan.</p>

	<p>integrity of the site.</p>	
<p>Recreational Pressure and Disturbance</p>	<p>Increasing the dwelling stock in the district could increase demand for countryside recreation. However, no allocations identified are within 5 km of the site. It is not considered that the level of public use of Wicken Fen will increase greatly as a result of allocations identified in the Local Plan.</p> <p>There are other countryside access opportunities, existing or proposed, available in more accessible locations to the major centres of population. New strategic open spaces are already planned, and the Green Infrastructure Strategy proposes new countryside recreation opportunities, to support growth in the area.</p>	<p>No allocations identified are within 5km of the site. Notwithstanding, public access to Wicken Fen is managed by the National Trust. There is a visitor centre and shop, nature trails, three hides and 16km of walking routes. Entry is by permit only to help control visitor numbers and visitors are also managed by ‘zoning’ parts of the Fen near the entrance, leaving the more remote parts of the site relatively undisturbed.</p> <p>The impact of public access is not listed in the vulnerabilities relating to the site.</p>
<p>Water Quantity and Quality</p>	<p>Development could theoretically have an impact on water quantity, through run off from development sites, or water use. It could also have an impact on water quality, through additional waste products produced.</p> <p>The water level problems identified as a vulnerability of the site primarily relate to its relationship with the River Cam and issues caused by flood protection measures local to the site introduced in the 1960's.</p>	<p>The Cambridge Water Cycle Strategy 2011 states that analysis of hydrology indicates that Wicken Fen is topographically higher than the Cam and drains via Wicken Lode then Burwell Lode towards it. As the Cam does not feed it, there are no associated risks, which could arise from additional sewage effluent discharge at Cambridge irrespective of any changes in effluent flow or quality from that site.</p> <p>Policies are included in the Local Plan to ensure that developments protect water quality, and ensure that the appropriate waste water infrastructure is confirmed as being available prior to development being given consent. Policies also require that appropriate pollution control measures are included on sites. Development at all the proposed new communities must exceed the Building Regulations and meet Code for Sustainable Homes Level 4. This will ensure that stringent water efficiency measures are implemented as an integral part of development.</p> <p>The Council is working with Anglian Water and Cambridge water to explore infrastructure requirements of site allocations, and ensure developments can be appropriately serviced</p>

<p>Changes in Pollution Levels</p>	<p>The level of development proposed by the Local Plan could result in increased levels of atmospheric pollution, through the emissions created by development, or from the car journeys generated.</p> <p>Whilst the actual impact of the Local Plan on air quality alone or in combination with other plans is difficult to quantify, the location of the site is not in close proximity to any development allocations.</p>	<p>As the site is not in close proximity to site options proposed, there are likely to be no significant impacts on their nature conservation objectives.</p> <p>The Local Plan proposes general policy requirements that development does not harm the identified European Sites and to address air quality</p>
---	--	--

<p>Chippenham Fen - SAC and Ramsar site</p>		
<p>Nature of potential impact</p>	<p>Potential of the Local Plan (alone or in combination with other plans) to affect the European site</p>	<p>Commentary on likelihood and significance</p>
<p>Land Take by Development</p>	<p>The Local Plan does not identify any Allocations that will take land from Chippenham Fen, and will not result in the direct fragmentation of habitats.</p>	<p>There are no Allocations which directly impact on Chippenham Fen.</p>
<p>Impact on protected species outside the protected sites</p>	<p>The conservation objectives relate to species of plant within the fen, and species of invertebrates. Due to the distance of the site from the District there is likely to be no effect</p>	<p>Due to the distance and the nature of locations proposed for development, it is also not considered there will be any impact on breeding bird species associated with the fen. Therefore, the development of land in locations identified by the Local Plan alone or in combination with other plans is not likely to have a significant impact on species listed as important to the integrity of the site.</p>
<p>Recreational Pressure and Disturbance</p>	<p>Increasing the dwelling stock in the district could increase demand for countryside recreation. However, no Allocations identified are within 5 km of the site.</p> <p>Access to the wider site away from rights of way is limited. The site is a significant distance from development Allocations identified in the Local Plan.</p> <p>There are other countryside access opportunities, existing or proposed, available in more accessible locations to the major centres of population. New strategic open spaces are already planned, and the Green Infrastructure Strategy proposes new</p>	<p>It is not considered that the level of public use of Chippenham Fen will increase greatly as a result of Allocations in the Local Plan alone or in combination with other plans and that there will therefore be no likely significant effects on the site.</p>

	countryside recreation opportunities, to support growth in the area.	
Water Quantity and Quality	Development could theoretically have an impact on water quantity, through run off from development sites, or water use. It could also have an impact on water quality, through additional waste products produced. However, the fen is some distance from Allocations proposed, and is not located on a watercourse utilised to drain the District.	<p>Policies are included in the Local Plan to ensure that developments protect water quality, and ensure that the appropriate waste water infrastructure is confirmed as being available prior to development being given consent. Policies also require that appropriate pollution control measures are included on sites. Development at all the proposed new communities must exceed the Building Regulations and meet Code for Sustainable Homes Level 4. This will ensure that stringent water efficiency measures are implemented as an integral part of development.</p> <p>The Council is working with Anglian Water and Cambridge water to explore infrastructure requirements of site Allocations, and ensure developments can be appropriately serviced.</p>
Changes in Pollution Levels	The level of development proposed by the Local Plan could result in increased levels of atmospheric pollution, through the emissions created by development, or from the car journeys generated.	<p>As the site is not in close proximity to the Allocations proposed, it is not considered that there is likely to be any significant impact on their nature conservation objectives.</p> <p>Local Plan proposes general policy requirements that development does not harm the identified European Sites and to address air quality.</p>

Woodwalton Fen – SAC and Ramsar site		
Nature of potential impact	Potential of the Local Plan (alone or in combination with other plans) to affect the European site	Commentary on likelihood and significance
Land Take by Development	The Local Plan does not propose any allocations that will take land from Woodwalton Fen, and will not result in the direct fragmentation of habitats.	There are no allocations in the Local Plan which directly impact on Woodwalton Fen.
Impact on protected	The conservation objectives relate to species of plant within the	The allocations identified in the Local Plan alone or in

<p>species outside the protected sites</p>	<p>fen. Due to the distance of the site from the District it is likely that there will be no effect.</p>	<p>combination with other plans will not be likely to have a significant impact on species listed as important to the integrity of the site.</p>
<p>Recreational Pressure and Disturbance</p>	<p>Increasing the dwelling stock in the district could increase demand for countryside recreation. However, the site is a significant distance from the District.</p> <p>Parking is limited at this site – some being available alongside the Great Raveley Drain. There are three marked trails around the fen following the rides. There are no public rights of way across the reserve but visitors are allowed access after obtaining a permit from English Nature.</p> <p>There are other countryside access opportunities, existing or proposed, available in more accessible locations to the major centres of population. New strategic open spaces are already planned, and the Green Infrastructure Strategy proposes new countryside recreation opportunities, to support growth in the area.</p>	<p>The impact of public access is not listed in the vulnerabilities relating to the site.</p> <p>It is considered that the level of public use of Woodwalton Fen will not increase greatly as a result of allocations identified in the Local Plan. The site is also already subject to visitor restrictions on the most sensitive areas of the site.</p>
<p>Water Quantity and Quality</p>	<p>Development could theoretically have an impact on water quantity, through run off from development sites, or water use. It could also have an impact on water quality, through additional waste products produced. However, the fen is a considerable distance from the district, and is not located on a watercourse utilised to drain the District.</p>	<p>Policies are included in the Local Plan to ensure that developments protect water quality, and ensure that the appropriate waste water infrastructure is confirmed as being available prior to development being given consent. Policies also require that appropriate pollution control measures are included on sites. Development at all the proposed new communities must exceed the Building Regulations and meet Code for Sustainable Homes Level 4. This will ensure that stringent water efficiency measures are implemented as an integral part of development.</p> <p>The Council is continuing to work with Anglian Water and Cambridge water to explore infrastructure requirements of site allocations, and ensure developments can be appropriately serviced.</p> <p>With these safeguards in place it is not considered likely that there will be effects on water quality and quantity.</p>

<p>Changes in Pollution Levels</p>	<p>The level of development proposed by the Local Plan could result in increased levels of atmospheric pollution, through the emissions created by development, or from the car journeys generated.</p>	<p>As the site is not in close proximity to the allocations proposed, it is not considered that there is likely to be any significant impact on their nature conservation objectives.</p> <p>Policy NH/4 Biodiversity also requires that development does not harm the identified European Sites and there is a further policy which requires any development to address air quality impacts.</p>
---	---	---

Ouse Washes SAC, SPA and RAMSAR site		
Nature of potential impact	Potential of the Local Plan (alone or in combination with other plans) to affect the European site	Commentary on likelihood and significance
<p>Land Take by Development</p>	<p>The Local Plan does not propose any allocations that will take land from the Ouse Washes, and will not result in the direct fragmentation of habitats.</p>	<p>The Local Plan does not propose any allocations that will take land from the Ouse Washes, and will not result in the direct fragmentation of habitats.</p>
<p>Impact on protected species outside the protected sites</p>	<p>The nature of the allocations identified in the Local Plan, and their location relative to the washes, means that land take is not likely to have a significant impact on species associated with the integrity of the Ouse Washes.</p>	<p>The allocations identified alone or in combination with other plans will not be likely to have a significant impact on species listed as important to the integrity of the site.</p>
<p>Recreational Pressure and Disturbance</p>	<p>Increasing the dwelling stock in the district could increase demand for countryside recreation. However, the site is some distance from the District.</p> <p>There is a network of public rights of way in the Washes.</p> <p>The RSPB manage a nature reserve at Welches Dam where there is a visitor centre and a number of bird hides. The WWT manage a nature reserve at Welney, Norfolk also with a centre and hides.</p> <p>The nearest point on the Washes is over 7km from the development planned at Northstowe.</p> <p>There are other countryside access opportunities, existing or proposed, available in more accessible locations to the major</p>	<p>Policies relating to new major settlements proposed in the Local Plan require the provision of open space which should include on site publically accessible natural green space for recreation. All development is required either to provide open space on site or contributions, to meet the open space standards in the Local Plan.</p> <p>It is not considered that the level of public use of the Ouse Washes will increase significantly as a result of allocations in the Local Plan. Notwithstanding, the impact of public access is not listed in the vulnerabilities relating to the site.</p>

	<p>centres of population. This includes the Fen Drayton Lakes, near Northstowe, in Strategic Area 3 Great Ouse propose in The Cambridgeshire Green Infrastructure Strategy (2011) proposes new countryside recreation opportunities in the Northstowe area to support growth in the area.</p>	
<p>Water Quantity and Quality</p>	<p>Development could potentially have an impact on water quantity, through run off from the sites, or water use. It could also have an impact on water quality, through additional waste products produced.</p> <p>The majority of the District of South Cambridgeshire drains into the River Great Ouse catchment. The Ouse Washes (SAC and Ramsar) form part of this river system. The Swavesey Drain tributary, which drains the northwest part of the District, joins the Great Ouse upstream of the washes.</p> <p>This drain is also utilised by the Uttons Drove wastewater treatment works (WwTW), which is planned to be utilised to serve Northstowe, as well as Cambourne. The Local Plan has allocated a new site in Cambourne (Policy SS/8) and includes Policy SS/7 allocating an extension to Northstowe.</p> <p>The majority of additional water supply in Cambridgeshire is anticipated to come from existing licences. (Source: Maintaining Water Supply; Environment Agency, July 2004)</p> <p>It is noted that seasonal flooding plays an important role in the integrity of the Ouse Washes. The Great Ouse, including the Ouse washes, has been identified as a Eutrophic Sensitive Area (Eutrophication occurs where the nutrient richness of the water causes excess growth and decay of algae and other plants, leading to a lack of oxygen. This can be detrimental to aquatic wildlife).</p>	<p>Policies are included in the Local Plan to ensure that developments protect water quality, and ensure that the appropriate waste water infrastructure is confirmed as being available prior to development being given consent. Policies also require that appropriate pollution control measures are included on sites. Development at all the proposed new communities must exceed the Building Regulations and meet Code for Sustainable Homes Level 4 for water efficiency. This will ensure that stringent water efficiency measures are implemented as an integral part of development.</p> <p>The Cambridge Water Cycle Strategy explored the impacts of existing planned development at Northstowe and Cambourne being served by Uttons Drove, and concluded no significant effects.</p> <p>In particular:</p> <ul style="list-style-type: none"> <input type="checkbox"/>The WwTW can make only a very minor contribution to total flow at Ouse Washes. <input type="checkbox"/>The distance from Uttons Drove WwTW to Ouse Washes is greater than 10 km by river, providing for considerable dilution and dispersal of any contamination between this potential source at Northstowe or Cambourne and the potential receptor. <p>The requirement for HRA associated with additional sewage discharge rests with Anglian Water Services as the statutory undertaker applying for the change in consented discharge and the Environment Agency as the competent authority considering that revised consent.</p>

		<p>The Council will continue to work with Anglian Water, Cambridge water, and the environment Agency to explore infrastructure requirements of sites, and ensure developments can be appropriately serviced particularly those in Northstowe and Cambourne.</p>
<p>Changes in Pollution Levels</p>	<p>The level of development proposed by Local Plan could result in increased levels of atmospheric pollution, through the emissions created by development, or from the car journeys generated.</p> <p>However, the location of the site is not in close proximity to the allocations proposed. Policies for major allocations also seek to promote sustainable forms of travel.</p>	<p>As the site is not in close proximity to the major Allocations proposed, it is not considered that there is likely to be any significant impact on their nature conservation objectives.</p> <p>The Local Plan proposes general policy requirements that development does not harm the identified European Sites and to address air quality</p>

Portholme SAC		
Nature of potential impact	Potential of the Local Plan (alone or in combination with other plans) to affect the European site	Commentary on likelihood and significance
Land Take by Development	The Local Plan does not propose any development that will take land from Portholme, and will not result in the direct fragmentation of habitats.	There are no allocations which directly impact on Portholme.
Impact on protected species outside the protected sites	The conservation objectives relate to species of plant within the fen. Due to the distance of the site from the District there will be no effect.	The allocations s will have no significant impact on insect and birds species integral to the site, due to the distance.
Recreational Pressure and Disturbance	<p>Increasing the dwelling stock in the district could increase demand for countryside recreation. However, the site is at some distance from the District.</p> <p>There are other countryside access opportunities, existing or proposed, available in more accessible locations to the major centres of population. This includes the Fen Drayton Lakes near Northstowe. New strategic open spaces are already planned, and the Green Infrastructure Strategy (2011) proposes new countryside recreation opportunities, to support growth in the area.</p>	<p>It is not considered that the level of public use of Portholme will increase greatly as a result of the Allocations. Also, the impact of public access is not listed in the vulnerabilities relating to the site.</p> <p>Policies relating to new major settlements proposed in the Local Plan require the provision of open space which should include publically accessible natural green space for recreation.</p>
Water Quantity and Quality	Development could theoretically have an impact on water quantity, through run off from the sites, or water use. It could also have an impact on water quality, through additional waste products produced.	<p>The hay meadows are located up stream on the River Ouse catchment.</p> <p>Policies are included in the Local Plan to ensure that developments protect water quality, and ensure that the appropriate waste water infrastructure is confirmed as being available prior to development being given consent. Policies also require that appropriate pollution control measures are included on sites. Development at all the proposed new communities must exceed the Building Regulations and meet Code for Sustainable Homes Level 4. This will ensure that stringent water</p>

		efficiency measures are implemented as an integral part of development. Policy NH/4 Biodiversity seeks to protect designated sites.
Changes in Pollution Levels	<p>The level of development proposed by the Local Plan could result in increased levels of atmospheric pollution, through the emissions created by development, or from the car journeys generated.</p> <p>Whilst the actual impact of the Local Plan allocations on air quality is difficult to quantify, the location of the site is not in close proximity to the site allocations. The development strategy in Policy S/6 seeks to promote sustainable patterns of growth by locating development close to services and facilities which reduces the need to travel.</p>	The Local Plan proposes general policy requirements that development does not harm the identified European Sites and requires development to address air quality.

Breckland SAC		
Nature of potential impact	Potential of the Local Plan (alone or in combination with other plans) to affect the European site	Commentary on likelihood and significance
Land Take by Development	The Local Plan does not propose any development on land in the Breckland SAC, and will not result in the direct fragmentation of habitats.	There are no site allocations which directly impact on Breckland SAC.
Impact on protected species outside the protected sites	The Annex I qualifying features of the site relate to habitats. Great Crested Newts are a qualifying feature (but not a primary reason for selection). Owing to the distance of the site from the District the likelihood of development within the plan area affecting great crested newts is remote.	It is reasonable to conclude that the Local Plan would not be likely to have significant effects on this site. The likelihood of effects on the qualifying features, owing to the distance from the site and absence of impact pathways, is negligible.
Recreational Pressure and Disturbance	<p>The proposed levels of development within the Local Plan could increase demand for countryside recreation. However, the site is located some distance from the District.</p> <p>There are other countryside access opportunities, existing or proposed, available in more accessible locations to the major centres of population. New strategic open spaces are already planned, and the Green Infrastructure Strategy(2011) proposes</p>	It is reasonable to conclude that the Local Plan would not be likely to have significant effects on this site. Recreation is not listed as one of the vulnerabilities for this European site. It is not considered that the level of public use of Breckland will increase greatly as a result of the Local Plan.

	new countryside recreation opportunities, to support growth in the area.	
Water Quantity and Quality	There is the potential for the levels of development proposed in the Local Plan to impact on water quantity, through run-off from the sites, or increased water use. Potential impacts on water quality could occur through increases in waste water requiring treatment, if this could not be accommodated by existing or new waste water treatment works.	<p>Policies are included in the Local Plan to ensure that developments protect water quality, and ensure that the appropriate waste water infrastructure is confirmed as being available prior to development being given consent. Policies also require that appropriate pollution control measures are included on sites. Development at all the proposed new communities must exceed the Building Regulations and meet Code for Sustainable Homes Level 4. This will ensure that stringent water efficiency measures are implemented as an integral part of development.</p> <p>Policy NH/4 Biodiversity seeks to protect designated sites.</p> <p>The impact of water use was explored in the Cambridge Water Cycle Strategy.</p> <p>Cambridge Water Company's strategy to provide additional public water supply to developments at Cambridge would include abstracting the full licensed amount from the boreholes in the Thetford area with no additional abstraction over and above this. Between 2000 and 2010 the Environment Agency reviewed all permissions that were granted before the Habitats Regulations came into force (the 'review of consents'). Thus the abstraction licenses currently in force at Euston and Brettenham are considered to have acceptable levels of risk of groundwater drawdown within the Breckland European sites.</p> <p>Proposed levels of growth in the Local Plan are lower than the level of growth of the East of England Plan which guided Cambridge Water Resource Management Plan.</p>
Changes in Pollution	The level of development proposed by Local Plan could result in	The Air Pollution Information System (APIS) suggests

<p>Levels</p>	<p>increased levels of atmospheric pollution, through the emissions created by development, or from the car journeys generated. The Local Plan's spatial strategy seeks to minimise emissions to air from car journeys by locating development next to the most sustainable settlements to reduce the need to travel.</p>	<p>that the site is not exceeding its critical load for nitrogen deposition to dry heathland habitats, and is well below its acidity critical load. For Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) it is nearing, but has not exceeded its acidity critical load.</p> <p>The Local Plan proposes general policy requirements that development does not harm the identified European Sites and to address air quality.</p> <p>Whilst the actual impact of the Local Plan on air quality is difficult to quantify, the location of the site is not in close proximity to the allocations proposed. Policies and the Local Plan spatial strategy also seek to promote sustainable forms of travel.</p>
----------------------	---	---