Uttlesford Local Plan

Habitat Regulations Assessment
Regulation 19

Uttlesford District Council

June 2024

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Quality information

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1. Introduction

Background

1.1 AECOM was appointed by Uttlesford District Council to produce a report to inform the Council's Habitats Regulations Assessment (HRA) of the potential effects of the Regulation 19 Uttlesford Local Plan (ULP) on the National Site Network of Special Areas of Conservation, Special Protection Areas and Ramsar sites. For simplicity these sites are referred to as Habitat sites throughout this report. The objectives of the assessment are to:

- Identify any aspects of the Local Plan that would cause an adverse effect on the integrity of Habitat sites either alone or in combination with other plans and projects; and
- To advise on appropriate policy mechanisms for delivering mitigation where such effects were identified.

1.2 The HRA of the Uttlesford Local Plan is required to determine if there are any realistic linking pathways present between a Habitats site and the Local Plan and where Likely Significant Effects cannot be screened out, an analysis to inform Appropriate Assessment is undertaken to determine if adverse effects on the integrity of the Habitats sites will occur as a result of the Local Plan alone or in combination.

Legislative Context

1.3 The UK left the European Union (EU) on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 ("the Withdrawal Act"). While the UK is no longer a member of the EU, a requirement for Habitats Regulations Assessment will continue as set out in the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

1.4 The HRA process applies the 'Precautionary Principle' to Habitats sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the Habitat (formally "European") site(s) in question. To ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the Plan or project in question. Figure 1 below sets out the legislative basis for Appropriate Assessment.

1.5 Plans and projects that are associated with potential adverse impacts on Habitats sites may still be permitted if there are no reasonable alternatives and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Regulations state that:

"*A competent authority, before deciding to … give any consent, permission or other authorisation for, a plan or project which – (a) is likely to have a significant effect on a European site … (either alone or in combination with other plans or project)… must make an appropriate assessment of the implications of the plan or project in view of the site's conservation objectives… The competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site*".

Figure 1: The legislative basis for Appropriate Assessment

1.6 Over time the phrase 'Habitats Regulations Assessment' (HRA) has come into wide currency to describe the overall process set out in the Regulations from screening through to IROPI. This has arisen in order to distinguish the process from the individual stage described in the law as an 'Appropriate Assessment'.

1.7 In spring 2018 the 'Sweetman' European Court of Justice ruling[1] clarified that 'mitigation' (i.e., measures that are specifically introduced to avoid or reduce a harmful effect on a Habitats site that would otherwise arise) should **not** be taken into account when forming a view on Likely Significant Effects. Mitigation should instead only be considered at the Appropriate Assessment stage. This HRA is cognisant of that ruling.

Habitats site scope of the project

1.8 There is no pre-defined guidance that dictates the physical scope of an HRA of a Plan document. Current guidance suggests that the following Habitats Sites should be included in the scope of an HRA assessment:

- All Habitats Sites within the boundary of the Uttlesford District;
- Habitats Sites located within 20km of the District boundary; and
- Habitats Sites located outside of the District boundary shown to be linked to development in the ULP through a known 'pathway' (discussed below).

1.9 Generally, it is uncommon for development plans to be deemed to have significant impacts on Habitats Sites situated more than 10km from areas of growth. For example, most core recreational catchments (except for some coastal sites) are under 10km in size and the average vehicle commuting distance of a UK resident is approx. 10km. However, there are exceptions and it should be noted that the presence of a conceivable impact pathway linking a Plan to a Habitats Site does not mean that Likely Significant Effects (LSEs) will occur.

1.10 In particular, development impacts can extend beyond 10km, particularly where hydrological pathways and surface water catchments are involved, which is why the source-pathway-receptor concept is also used to help determine whether there are potential pathways connecting development to Habitats Sites. This takes site-specific sensitivities into account, including issues such as nutrient neutrality or water levels, quantity and flow.

1.11 Briefly defined, impact pathways are routes by which the implementation of a policy within a Local Plan document can lead to an effect upon a Habitats Site. An example of this would be new residential development resulting in an increased population and thus increased recreational pressure, which could affect Habitats Sites through, for example, disturbance of ground-nesting birds. Guidance from the Ministry of Housing, Communities and Local Government (MHCLG, now the Department for Levelling Up, Housing and Communities (DLUHC)) states that the HRA should be '*proportionate to the geographical scope of the* [plan policy]' and that '*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*' (MHCLG, 2006, p.6).

1.12 This basic principle has also been reflected in court rulings. The Court of Appeal[2] has ruled that provided the Council (competent authority) was duly satisfied that proposed mitigation could be 'achieved in practice' to satisfy that the proposed development would have no adverse effect, then this would suffice. This ruling has since been applied to planning permissions (rather than a Plan level document)[3]. In this case the High Court ruled that for '*a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of Reg 61 of the Habitats Regulations'*.

1.13 Habitats Sites identified as falling within the three bullet points in paragraph 1.8 of this HRA:

- Devil's Dyke SAC,
- Epping Forest SAC,
- Essex Estuaries SAC,

[1] People Over Wind and Sweetman v Coillte Teoranta (C-323/17)
[2] No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015
[3] High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

- Eversden & Wimpole Woods SAC,
- Lee Valley SPA,
- Lee Valley Ramsar,
- Wormley-Hoddesdonpark Woods SAC,
- Blackwater Estuary (Mid Essex Coast Phase 4) SPA, and
- Blackwater Estuary (Mid Essex Coast Phase 4) Ramsar.

There are no candidate SACs or proposed SPAs that require consideration in this HRA.

1.14 The distribution of the above Habitats Sites in relation to Uttlesford District is shown in Figure 2. An introduction to the qualifying features (species and habitats), Conservation Objectives, and threats and pressures to the integrity of these Habitats Sites are set out in Chapter 3.

1.15 In order to fully inform the screening for LSEs stage, several studies and online information databases have been consulted. These include:

- HRA of the Draft Uttlesford Local Plan 2021-2040
- Essex Coast Recreational disturbance Avoidance and Mitigation Strategy Supplementary Planning Document
- Anglian Water Drainage and Wastewater plan 2025-2050
- Anglian Water Revised Draft Water Resource Management Plan 2024 Environmental Report Sub-Report A: Habitats Regulations Assessment[4]
- Road traffic statistics from the Department for Transport (https://roadtraffic.dft.gov.uk);
- Journey-to-work data from the Population Census 2011 or 2021 (https://www.nomisweb.co.uk/census/2011/WU03UK);
- Site Improvement Plans and Supplementary Conservation Advice Notes for relevant Habitats Sites published by Natural England;
- The UK Air Pollution Information System (www.apis.ac.uk); and
- Multi Agency Geographic Information for the Countryside (MAGIC) and its links to SSSI citations and the JNCC website (www.magic.gov.uk).

Quality Assurance

1.16 This report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2008 and 14001:2004 and BS OHSAS 18001:2007. In addition, our IMS requires careful selection and monitoring of the performance of all sub-consultants and contractors.

1.17 All AECOM Ecologists working on this project are members (at the appropriate level) of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2019)

[4] https://www.anglianwater.co.uk/siteassets/household/about-us/wrmp/revised-draft-wrmp24-environmental-report-sub-report-a--hra.pdf [Accessed 18/06/2024]

2. Methodology

Introduction

2.1 This section sets out the approach and methodology for undertaking the Habitats Regulations Assessment (HRA).

The Process of HRA

2.1 This HRA has been carried out with reference to the general EC guidance to the general EC guidance on HRA[5] and general guidance on HRA published by government in July 2019[6].

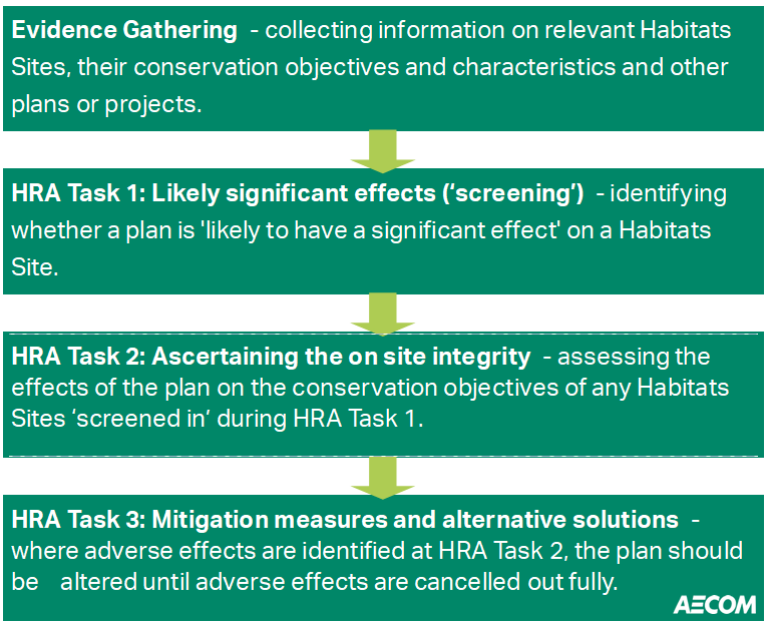

Plate 1. Four Stage Approach to Habitats Regulations Assessment. Source EC, 2001[6].

2.2 Plate 1 above outlines the stages of HRA according to current Department for Levelling Up, Housing & Communities (DLUHC) guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations, and any relevant changes to the Plan until no significant adverse effects remain.

HRA Task One: Test of Likely Significant Effects

2.3 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a Test of Likely Significant Effect (LSEs) - essentially a brief, high-level assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

> "*Is the plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon Habitat sites?*"

2.4 The objective is to 'screen out' those plans and projects that can, without any detailed appraisal, be concluded to be unlikely to result in significant adverse effects upon Habitats sites, usually because there is no mechanism for an adverse interaction.

2.5 The LSEs screening is based on identification of the impact source, its pathway to receptors and an appraisal of the specific Habitat site receptors. These are normally designated features but also include

[5] European Commission (2001): 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.
[6] https://www.gov.uk/guidance/appropriate-assessment

habitats and species fundamental for designated features to achieve favourable conservation status (notably functionally linked habitats outside the Habitat site boundary).

2.6 In the Waddenzee case[7], the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive, including that:

- An effect should be considered 'likely', "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site" (para 44);
- An effect should be considered 'significant', "if it undermines the conservation objectives" (para 48); and
- Where a plan or project has an effect on a site "but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned" (para 47).

2.7 The LSEs screening consists of two parts: Firstly, it should determine whether there are any policies that could result in negative impact pathways and secondly it establishes whether there are any Habitat sites that might be affected. It identifies Habitat sites that are most likely to be impacted by the Plan and the impact pathways that are most likely to require consideration.

2.8 It is important to note that LSEs screening must generally follow the precautionary principle as its main purpose is to determine whether the subsequent stage of AA (i.e., a more detailed investigation) is required

The Geographic Scope

2.9 There is no standard criteria that dictates the ultimate physical scope of an HRA of a Plan in all circumstances. Therefore, in considering the physical scope of the assessment AECOM was guided primarily by the identified impact pathways rather than by arbitrary "zones", i.e. a source-pathway-receptor approach. Current guidance suggests that the following Habitat sites be included in the scope of assessment:

- All sites within the District;
- Habitats Sites located within 20km of the District boundary; and
- Other sites shown to be linked to development within the District through a known "pathway" (discussed below).

2.10 Briefly defined, impact pathways are routes by which a change in activity within the plan area can lead to an effect upon a Habitat site. In terms of the second category of Habitat site listed above, Department for Leveling Up, Housing and Communities (DLUHC) (formerly Ministry of Housing, Communities and Local Government (MHCLG)) guidance states that the AA should be "*proportionate to the geographical scope of the* [plan policy]" and that "*an Appropriate Assessment need not be done in any more detail, or using more resources, than is useful for its purpose*" (MHCLG, 2006, p.6).

2.11 Locations of Habitat sites are illustrated in **Chapter 3, Figure 2** and full details of all Habitat sites discussed in this document can also be found in **Chapter 3** specifying their qualifying features, conservation objectives and pressures and threats to integrity taken from the Site Improvement Plan for each site, although it is noted that the Conservation Objectives and Supplementary Advice on Conservation Objectives take precedence over Site Improvement Plans as they are generally more recent. **Table 1** below lists all those Habitat sites included in this HRA.

Table 1. Physical Scope of the HRA - Habitat Sites of Interest

Habitat Site	Distance from Uttlesford District
Devil's Dyke SAC	16km
Epping Forest SAC	12km
Essex Estuaries SAC	16km

[7] Case C-127/0216

Habitat Site	Distance from Uttlesford District
Eversden & Wimpole Woods SAC	14km
Wormley-Hoddesdonpark SAC	16km
Blackwater Estuary (Mid Essex Coast Phase 4) SPA	16km
Lee Valley SPA	11km
Black Water Estuary (Mid Essex Coast Phase 4) Ramsar	16km
Lee Valley Ramsar	11km

Confirming Other Plans and Projects That May Act 'In Combination'

2.12 It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the Habitat site(s) in question.

2.13 In considering the potential for combined regional housing development to impact on Habitat sites the primary consideration is the impact of visitor numbers – i.e., recreational pressure and urbanisation.

2.14 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e., to ensure that those projects or plans (which in themselves have minor impacts) are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal Waddenzee[8] case.

2.15 For the purposes of this HRA, we have determined that the key other documents with a potential for in-combination effects are the Local Plans of surrounding authorities, notably Braintree, Chelmsford, East Hertfordshire, North Hertfordshire, South Cambridgeshire, Epping Forest District and the other Essex authorities within 22km of the Essex Coast Habitats sites.

2.16 It should be noted that, while the broad potential impacts of these plans will be considered, this document does not carry out a full HRA of these Plans and projects. Instead, it draws upon existing HRAs that have been carried out on the Plans and projects.

3. Background to Habitat Sites

3.1 All Habitats sites in this report are shown along with site allocations on the map in Appendix B.

Devil's Dyke SAC

Introduction[9]

3.2 The Devil's Dyke SAC holds an extensive area of species-rich chalk grassland of a type characteristic to chalklands of south, central and eastern England. The Dyke is an ancient linear earthwork comprising a deep ditch and high bank. It was originally colonised by plants from adjacent grassland (much of which is now arable) and remains as one of the few areas still supporting these vegetation communities. The

[8] Waddenzee case (Case C-127/02, [2004] ECR-I 7405)
[9] https://publications.naturalengland.org.uk/file/5716339436027904 [Accessed 06/03/2024]

species-rich grassland is dominated by upright brome *Bromopsis erecta* and a range of typical chalk herbs are present including salad burnet *Sanguisorba minor*, dropwort *Filipendula vulgaris* and rock-rose *Helianthemum nummularium*. Some uncommon plants such as purple milk-vetch *Astragalus danicus*, bastard toadflax *Thesium humifusum* and the pasque flower *Pulsatilla vulgaris* are also present. It is the only known UK semi-natural dry grassland site for lizard orchid *Himantoglossum hircinum*.

Conservation Objectives[10]

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

3.4 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

Qualifying Features[11]

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

- Semi-natural dry grassland and scrublands facies: on calcareous substrates (*Festuco-Brometalia*) (important orchid sites). (Dry grasslands and scrublands on chalk or limestone, including important orchid sites).

Environmental Vulnerabilities

3.6 With regards to the Site Improvement Plan[12], the following are listed as environmental vulnerabilities;

- Inappropriate scrub control.
- Air Pollution: risk of atmospheric nitrogen deposition.

Epping Forest SAC

Introduction[13]

3.7 Epping Forest SAC (14 km southwest of Uttlesford) is a large ancient wood-pasture with habitats of high nature conservation value including ancient semi-natural woodland, old grassland plains, wet and dry heathland and scattered wetland. The semi-natural woodland is particularly extensive, but the Forest plains are also a major feature and contain a variety of unimproved acid grasslands.

3.8 The semi-natural woodlands of Epping Forest include important beech Fagus sylvatica forests on acid soils, which are important for a range of rare epiphytic species, including the moss *Zygodon forsteri*. The long history of pollarding, and resultant large number of veteran trees, ensures that the site is also rich in fungi and invertebrates associated with decaying timber. Records of stag beetle *Lucanus cervus* are widespread and frequent.

3.9 Areas of acidic grassland transitional with heathland are generally dominated by a mixture of fine-leaved grasses. In marshier areas, purple moor-grass *Molinia caerulea* frequently becomes dominant. Broad-leaved herbs typical of acidic grassland and heathland are frequent, including heather *Calluna vulgaris*. The

[10] https://publications.naturalengland.org.uk/file/5227678148067328 [Accessed 06/03/2024]
[11] https://publications.naturalengland.org.uk/file/5716339436027904 [Accessed 06/03/2024]
[12] https://publications.naturalengland.org.uk/file/4588665047089152 [Accessed 06/03/2024]
[13] https://publications.naturalengland.org.uk/file/5153389482606592 [Accessed 07/03/2024]

site also contains an example of wet dwarf-shrub heath with both heather and cross-leaved heath *Erica tetralix*.

Conservation Objectives[14]

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

3.11 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

Qualifying Features[15]

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

- Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion) (Beech forests on acid soils);
- Gadwall (*Mareca strepera*) (Non-breeding);
- European dry heaths; and,
- North Atlantic wet heaths with *Erica tetrahelix* (Wet heathland with cross-leafed heath).

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

- Stag beetle *Lucanus cervus*.

Environmental Vulnerabilities

3.14 With regards to the Site Improvement Plan[16], the following are listed as environmental vulnerabilities;

- Air Pollution: impact of atmospheric nitrogen deposition;
- Undergrazing;
- Public Access/Disturbance;
- Changes in species distributions;
- Inappropriate water levels;
- Water pollution;
- Invasive species; and,
- Disease.

[14] https://publications.naturalengland.org.uk/file/5442443424301056 [Accessed 07/03/2024]
[15] https://publications.naturalengland.org.uk/file/5153389482606592 [Accessed 07/03/2024]
[16] https://publications.naturalengland.org.uk/file/5732004727881728 [Accessed 07/03/2024]

Essex Estuaries SAC

Introduction

3.15 This is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. The site comprises the major estuaries of the Colne, Blackwater, Crouch and Roach rivers. Essex Estuaries contains a very wide range of characteristic marine and estuarine sediment communities and some diverse and unusual marine communities in the lower reaches, including rich sponge communities on mixed, tide-swept substrates. Subtidal areas have a very rich invertebrate fauna, including the reef-building worm *Sabellaria spinulosa*, the brittlestar *Ophiothrix fragilis*, crustaceans and ascidians.

3.16 There are extensive intertidal mudflats and sandflats in estuaries and at Dengie Flats and Maplin Sands. The area includes a wide range of sediment flat communities, from estuarine muds, sands and muddy sands to fully saline, sandy mudflats with extensive growths of eelgrass *Zostera* spp. on the open coast. Glasswort *Salicornia* spp. saltmarsh forms an integral part of the transition from the extensive and varied intertidal mud and sandflats through to upper salt meadows. The area of pioneer marsh includes gradation into extensive cord-grass *Spartina* spp. swards, including the most extensive remaining stand of the native small cordgrass *Spartina maritima* in the UK and possibly in Europe at Foulness Point. Other smaller stands are found elsewhere in the estuary complex, notably in the Colne estuary, where it forms a major component of the upper marsh areas.

3.17 Extensive upper saltmarshes remain, including Atlantic salt meadows with floristic features typical of this part of the UK. Golden samphire *Inula crithmoides* is a characteristic species of these marshes, occurring both on the lower marsh and on the drift-line. Mediterranean saltmarsh scrub occurs principally as a strandline community or at the foot of sea-walls. The local variant of this vegetation, which features sea-lavenders *Limonium* spp. and sea-heath *Frankenia laevis*, occurs at one location, Colne Point.

Conservation Objectives[17]

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

3.19 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

Qualifying Features[18]

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

- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*);
- Estuaries;
- Mediterranean and thermos-Atlantic halophilous scrubs (*Sarcocornetea fruticose*). (Mediterranean saltmarsh scrub);
- Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats);
- *Salicornia* and other annuals colonising mud and sand. (Glasswort and other annuals colonising mud and sand);
- Sandbanks which are slightly covered by seawater all the time (Subtidal sandbanks); and,

[17] https://publications.naturalengland.org.uk/file/5457156304535552 [Accessed 07/03/2024]
[18] https://publications.naturalengland.org.uk/file/6341545577938944 [Accessed 07/03/2024]

- Spartina swards (*Spartinion maritimae*) (Cord-grass swards).

Environmental Vulnerabilities

3.21 With regards to the Site Improvement Plan[19], the following are listed as environmental vulnerabilities;

- Coastal squeeze
- Public Access/Disturbance
- Planning Permission: general
- Changes in Species Distribution
- Invasive species
- Fisheries: Recreational marine and estuarine
- Fisheries: Commercial marine and estuarine
- Air pollution: Risk of atmospheric nitrogen deposition

Eversden & Wimpole Woods SAC

Introduction

3.22 The site comprises a mixture of ancient coppice woodland (Eversden Wood) and high forest woods likely to be of more recent origin (Wimpole Woods). A colony of barbastelle bats *Barbastella barbastellus* 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 site.

Conservation Objectives[20]

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

3.24 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of the habitats of qualifying species;
- The structure and function of the habitats of qualifying species;
- The supporting processes on which the habitats of qualifying species rely;
- The populations of qualifying species; and,
- The distribution of qualifying species within the site.

Qualifying Features

3.25 With regards to the SAC, the following are reasons for designation:

- *Barbastella barbastellus*: Barbastelle bat

Environmental Vulnerabilities

3.26 With regards to the Site Improvement Plan[21], the following are listed as environmental vulnerabilities;

- Feature location/ extent/ condition unknown;

[19] https://publications.naturalengland.org.uk/file/5891532953485312 [Accessed 07/03/2024]
[20] https://publications.naturalengland.org.uk/file/6307779568730112 [Accessed 02/02/2023]
[21] https://publications.naturalengland.org.uk/file/5195059647479808 [Accessed 02/02/2023]

- Offsite habitat availability/ management;
- Forestry and woodland management; and,
- Air pollution: impact of atmospheric nitrogen deposition.

Lee Valley SPA/Ramsar

Introduction

3.27 The Lee Valley SPA is designated for internationally important numbers of breeding and wintering wildfowl, especially Gadwall (*Mareca strepera*) and Shoveler (*Anas clypteata*) and for wintering Bittern (*Botaurus stellaris*). Special Protection Areas within Lee Valley Regional Park include Amwell Quarry, Rye Meads, Turnford and Cheshunt Pits and Walthamstow Reservoirs SSSIs.

Conservation Objectives[22]

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

3.29 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

Qualifying Features

3.30 With regards to the SPA, the following are reasons for designation:

- *Botaurus stellaris*; bittern (Wintering);
- *Anas clypteata*; shoveler (Wintering); and,
- *Mareca strepera*; gadwall (Wintering).

Environmental Vulnerabilities

3.31 With regards to the Site Improvement Plan[23], the following are listed as environmental vulnerabilities;

- Disease;
- Invasive Species;
- Air Pollution: risk of atmospheric nitrogen deposition;
- Deer;
- Vehicles: Illicit;
- Forestry and Woodland management; and,
- Public Access/Disturbance.

[22] https://publications.naturalengland.org.uk/file/6516586265706496 [Accessed 18/06/2024]
[23] https://publications.naturalengland.org.uk/publication/5864999960444928 [Accessed 18/06/2024]

Wormley – Hoddesdonpark Woods SAC

Introduction

3.32 Wormley Hoddesdonpark Woods has large stands of almost pure hornbeam *Carpinus betulus* (former coppice), with sessile oak *Quercus petraea* standards. Areas dominated by bluebell *Hyacinthoides non-scripta* do occur, but elsewhere there are stands of great wood-rush *Luzula sylvatica* with carpets of the mosses *Dicranum majus* and *Leucobryum glaucum*. Locally, a bryophyte community more typical of continental Europe occurs, including the mosses *Dicranum montanum*, *D. flagellare* and *D. tauricum*.

Conservation Objectives[24]

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

3.34 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

Qualifying Features

3.35 With regards to the SAC, the following are reasons for designation:

- Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*, Oak-hornbeam forests.

Environmental Vulnerabilities

3.36 With regards to the Site Improvement Plan[25], the following are listed as environmental vulnerabilities;

- Disease;
- Invasive Species;
- Air Pollution: risk of atmospheric nitrogen deposition;
- Deer;
- Vehicles: Illicit;
- Forestry and Woodland management; and,
- Public Access/Disturbance.

Blackwater Estuary (Mid Essex Coast Phase 4) SPA and Ramsar

Introduction

3.37 The Mid-Essex Coast comprises an extensive complex of estuaries and intertidal sand and silt flats, including several islands, shingle and shell beaches and extensive areas of saltmarsh. The Blackwater Estuary supports nationally important breeding populations of the little tern (*Sterna albifrons*), important wintering populations of hen harrier (*Circus cyaneus*) and during summer, two regularly appearing migratory

[24] https://publications.naturalengland.org.uk/file/4515961222987776 [Accessed 02/02/2023]
[25] https://publications.naturalengland.org.uk/file/6541134543192064 [Accessed 02/02/2023]

species, pochard (*Aythya farina*) and ringed pover (*Charadrius hiaticula*). The estuary supports internationally important assemblages of waterfowl over winter.

Conservation Objectives[26]

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

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

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

Qualifying Features

3.40 With regards to the SPA, the following are reasons for designation:

- *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding);
- *Aythya ferina*; Common pochard (Breeding);
- *Circus cyaneus*; Hen harrier (Non-breeding);
- *Charadrius hiaticula*; Ringed plover (Breeding);
- *Pluvialis squatarola*; Grey plover (Non-breeding);
- *Calidris alpina alpina*; Dunlin (Non-breeding);
- *Limosa limosa islandica*; Black-tailed godwit (Non-breeding);
- *Sterna albifrons*; Little tern (Breeding); and,
- Waterbird assemblage.

Environmental Vulnerabilities

3.41 With regards to the Site Improvement Plan[27], the following are listed as environmental vulnerabilities;

- Coastal squeeze;
- Public Access/Disturbance;
- Planning Permission: general;
- Changes in Species Distribution;
- Invasive species;
- Fisheries: Recreational marine and estuarine;
- Fisheries: Commercial marine and estuarine; and,
- Air pollution: Risk of atmospheric nitrogen deposition.

[26] https://publications.naturalengland.org.uk/file/4515961222987776 [Accessed 02/02/2023]
[27] https://publications.naturalengland.org.uk/file/5891532953485312 [Accessed 21/06/2024]

4. Background to Impact Pathways

4.1 In carrying out an HRA it is important to avoid confining oneself to effectively arbitrary boundaries (such as Local Authority or parish boundaries), but to use an understanding of the various ways in which Land Use Plans can impact Habitat sites to evaluate whether development is connected with Habitat sites, in some cases many kilometres distant. Briefly defined, impact pathways are routes by which a change in activity associated with a development can lead to an effect upon a Habitat site. As highlighted earlier, it is also important to bear in mind MHCLG guidance which states that the AA should be '*proportionate to the geographical scope of the [plan policy]*' and that '*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*' (CLG, 2006, p.6[28]).

4.2 Based upon Natural England's Site Improvement Plans (SIPs) and professional judgement, the following impact pathways require consideration regarding development proposals within the ULP area and the identified Habitat sites:

- Recreational pressure,
- Atmospheric pollution,
- Water quality, and
- Water quantity, level and flow.

Background to Recreational Pressure

4.3 There is growing concern over the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfil Conservation Objectives while also providing recreational opportunity. Various studies have provided compelling links between increases in housing development and access levels[29], and resulting impacts in Habitat sites[30] [31].

4.4 Recreational use of a site has the potential to:

- Cause disturbance to sensitive species such as ground-nesting birds and wintering wildfowl;
- Prevent appropriate management or exacerbate existing management difficulties;
- Cause damage through erosion, trampling and fragmentation; and
- Cause eutrophication due to dog fouling.

4.5 Different types of Habitat sites (e.g., heathland, freshwater, chalk grassland) have a range of vulnerabilities and are sensitive to different types of recreational pressures. Studies across a range of species have shown that the effects from recreation can be complex.

Bird Disturbance

4.6 Disturbance effects can have negative impacts on qualifying birds in various ways, with reduced chick provisioning and increased nest predation due to adults being flushed from the nest and deterred from returning. A literature review on the effects of human disturbance on breeding birds found that 36 out of 40 studies reported reduced breeding success due to disturbance[32]. The main reasons given for the reduction in breeding success were nest abandonment and increased predation of eggs or young. Studies of other species have shown that birds nest at lower densities in disturbed areas, particularly when there is weekday

[28] Department for Communities and Local Government. 2006. *Planning for the Protection of European Sites: Appropriate Assessment*. http://www.communities.gov.uk/index.asp?id=1502244
[29] Weitowitz D.C., Panter C., Hoskin R. & Liley D. 2019. The effect of urban development on visitor numbers to nearby protected nature conservation sites. *Journal of Urban Ecology* **5**. https://doi.org/10.1093/jue/juz019
[30] Liley D, Clarke R.T., Mallord J.W., Bullock J.M. (2006a). The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. Natural England / Footprint Ecology.
[31] Liley D., Clarke R.T., Underhill-Day J., Tyldesley D.T. (2006b). Evidence to support the appropriate Assessment of development plans and projects in south-east Dorset. Footprint Ecology / Dorset County Council.
[32] Hockin D.M., Oundsted M., Gorman D., Hill V. & Barker M.A. (1992). Examination of the effects of disturbance on birds with reference to its importance in ecological assessments. *Journal of Environmental Management* **36**: 253-286.

as well as weekend pressure[33]. Recreational disturbance effects on ground-nesting birds are particularly severe, with many studies concluding that urban sites support lower densities of key species, such as stone curlew (*Numenius Arquata*) and nightjar (*Caprimulgus europaeus*)[34] [35].

4.7 Furthermore, there are numerous parameters (e.g. seasonality, type of recreational activity) that may reduce or exacerbate the magnitude of bird disturbance. For example, disturbance in winter may be more impactful because food shortages make birds more vulnerable at this time of year. In contrast, this may be counterbalanced by fewer recreational users in the winter months and lower overall sensitivity of birds outside the breeding season. Evidence in the literature suggests that the magnitude of disturbance clearly differs between different types of recreational activities. For example, dog walking leads to a significantly higher reduction in bird diversity and abundance compared to hiking[36]. Scientific evidence also suggests that key disturbance parameters, such as areas of influence and flush distance, are significantly greater for dog walkers than hikers[37]. In addition, dogs, rather than people, tend to be the cause of many management difficulties, notably by worrying grazing animals. A literature review summarised data on the use of semi-natural habitat by dogs38, indicating that the proportion of dog walkers using sensitive sites tends to be high (54%).

4.8 Direct evidence for bird disturbance has been collected in many field studies. For example, observations of bird disturbance were undertaken by Footprint Ecology in North Kent in 2010 / 2011. The study focused on recreational disturbance to wintering waterfowl on intertidal habitats along the North Kent shoreline, stretching between Gravesend and Whitstable, and encompassing three SPAs. From 1,400 events (records of visitors in the bird survey areas) occurring within 200m of the birds, 3,248 species-specific observations were noted, which included no response (74% of observations), major flight (13%), minor flight (5%), short evasive walks away from the stimulus (5%) and alertness (3%).

4.9 Dog walking accounted for 55% of all major flight observations, with a further 15% attributed to walkers without dogs. After controlling for distance, major flights were more likely to occur when activities took place on the intertidal zone (compared to water-based or onshore events), when dogs were present, and a higher number of dogs were present in visitor groups. There were significant differences between species with curlew the species with the highest probability of major flight and teal and black-tailed godwit (*Limosa limosa*) the lowest. Tide state was also significant with major flights more likely at high tide, after controlling for distance. There was a significant interaction between distance and tide, indicating that the way in which birds responded varied according to tide. Inter-species differences in responses to disturbance stimuli are also evident from other studies. For example, one study found that there was a significant negative correlation between the degree of urban development and the number of nightjar territories in Dorset heathland sites, but no such impacts were found for woodlark (*Lullula arborea*) and Dartford warbler (*Curruca undata*)[39].

4.10 However, bird disturbance studies need to be treated with care. For instance, the magnitude of disturbance is not necessarily correlated with the impact of disturbance, i.e., the most easily disturbed species are not necessarily those that will suffer the greatest impacts. For example, it has been shown in some cases, that the most easily disturbed birds simply move to alternative feeding sites, while others remain (likely due to an absence of suitable alternative foraging areas) and thus suffer greater population-level impacts[40]. A recent literature review undertaken for the RSPB[41] also urges caution when extrapolating the results of disturbance studies because responses differ between species and may be impacted by local environmental

[33] Van der Zande A.N., Berkhuizen J.C., van Letesteijn H.C., ter Keurs W.J. & Poppelaars A.J. (1984). Impact of outdoor recreation on the density of a number of breeding bird species in woods adjacent to urban residential areas. *Biological Conservation* **30**: 1-39.
[34] Clarke R.T., Liley D., Sharp J.M. & Green R.E. (2013). Building development and roads: Implications for the distribution of stone curlews across the Brecks. *PLOS ONE*. https://doi:10.1371/journal.pone.0072984.
[35] Liley D. & Clarke R.T. (2003). The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation* **114**: 219-230.
[36] Banks P.B. & Bryant J.Y. (2007). Four-legged friend or foe? Dog walking displaces native birds from natural areas. *Biology Letters* **3**: 14pp.
[37] Miller S.G., Knight R.L. & Miller C.K. (2001). Wildlife responses to pedestrians and dogs. *Wildlife Society Bulletin* **29**: 124-132.
[38] Ibid.
[39] Liley D. & Clarke R.T. (2002). Urban development adjacent to heathland sites in Dorset: The effect on the density and settlement patterns of Annex I bird species. English Nature Research Reports, No 463. English Nature, Peterborough. 33pp.
[40] Gill et al. (2001). Why behavioural responses may not reflect the population consequences of human disturbance. *Biological Conservation* **97**: 265-268.
[41] Woodfield & Langston. (2004). Literature review on the impact on bird population of disturbance due to human access on foot. *RSPB Research Report* No. 9.

conditions. This should be considered when predicting the potential impacts of future recreational pressure on Habitat sites.

4.11 It should also be emphasised that recreational use is not necessarily a problem. Many Habitat sites are also National Nature Reserves or nature reserves managed by Wildlife Trusts and the RSPB. At these sites, access is encouraged, and resources are deployed to ensure that recreational use is managed appropriately. Bird abundances in many of these sites remain stable or, in some cases, are increasing despite high visitor numbers.

Trampling Damage

4.12 Most terrestrial habitats (including heathland, grassland and woodland) can be affected by trampling and other mechanical damage, which dislodges individual plants, leads to soil compaction and erosion. A general effect of trampling on vegetation is reduced species and structural diversity, since only dominant and tolerant plant species persist[42]. However, many parameters (e.g. vegetation type, recreational activity, weather, and ground conditions) can have marked impacts on the degree of trampling damage. The following provides a brief overview of the impacts of trampling associated with different recreational activities in different habitats:

- A study on experimental trampling of different heathland types under varying weather conditions in Brittany (France) showed that dry heath was more resistant to trampling damage than wet heath[43]. Equally, both heathland habitats showed greater resilience to trampling under dry than wet conditions.
- Wilson & Seney)[44] examined the degree of track erosion caused by hikers, motorcyclists, horse riders and cyclists in 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.
- Cole et al[45] conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each trampled between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and a negative correlation with trampling intensity was discovered. This relationship was weaker after one year than two weeks, indicating some vegetation recovery. Differences in plant morphology was found to explain more variation in response than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. The cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were considered least tolerant to regular trampling disturbance.
- Cole [46] conducted a follow-up study (across four vegetation types) in which shoe type (trainers or walking boots) and trampling weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier tramplers caused a greater reduction in vegetation height than lighter tramplers, but there was no differential impact on vegetation cover.
- Cole & Spildie[47] experimentally compared the effects of off-track trampling by hikers and horse riders (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Generally, it was shown that higher

[42] Santoro R. et.al. (2012). Effects of Trampling Limitation on Coastal Dune Plant Communities. Environmental Management DOI 10.1007/s00267-012-9809-6.
[43] Gallet S. & Roze F. (2002). Long-term effects of trampling on Atlantic heathland in Brittany (France): Influence of vegetation type, season and weather conditions. *Biological Conservation* **103**: 267-275.
[44] Wilson, J.P. & J.P. Seney. (1994). Erosional impact of hikers, horses, motorcycles and off-road bicycles on mountain trails in Montana. *Mountain Research and Development* **14**:77-88.
[45] Cole, D.N. (1995a). Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. *Journal of Applied Ecology* **32**: 203-214
Cole, D.N. (1995b). Experimental trampling of vegetation. II. Predictors of resistance and resilience. *Journal of Applied Ecology* **32**: 215-224
[46] Cole, D.N. (1995c). Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.
[47] Cole, D.N., Spildie, D.R. (1998). Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management* **53**: 61-71

trampling intensities caused greater levels of disturbance. Horse trampling resulted in a larger reduction in vegetation cover than hiking. While the forb-dominated vegetation suffered greater disturbance impacts, it recovered rapidly.

4.13 In heathland sites, trampling damage can affect the value of a site to wildlife. For example, heavy use of sandy tracks loosens and continuously disturbs sand particles, reducing the habitat's suitability for invertebrates[48]. Species that burrow into flat surfaces such as the centres of paths, are likely to be particularly vulnerable, as the loose sediment can no longer maintain their burrow. In some instances, nature conservation bodies and local authorities resort to hardening paths to prevent further erosion. However, this is concomitant with the loss of habitat used by wildlife, such as sand lizards (*Lacerta agilis*) and burrowing invertebrates.

Nutrient Enrichment

4.14 A major concern for nutrient-poor terrestrial habitats such as dune systems is nutrient enrichment associated with dog fouling, which has been addressed in various reviews (e.g.,[49]). It is estimated that dogs will defecate within 10 minutes of starting a walk and therefore most nutrient enrichment arising from dog faeces will occur within 400m of a site entrance. In contrast, dogs will urinate at frequent intervals during a walk, resulting in a spread-out distribution of urine. For example, in Burnham Beeches National Nature Reserve it is estimated that 30,000 litres of urine and 60 tonnes of dog faeces are deposited annually[50]. While there is little information on the chemical constituents of dog faeces, nitrogen is one of the main components[51]. Nutrient levels are the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in the shift to plant communities that are more typical of improved grasslands.

4.15 A recent study has published further compelling evidence on the relative impact of nitrogen (N) and phosphorus (P) deposition arising from dogs. Using 487 direct-count censuses from four peri-urban forests and nature reserves, the modelling data suggested that canine fertilisation rates amount to 11 kg N and 5 kg P per hectare per year respectively[52]. These amounts are significant when compared to atmospheric nitrogen deposition rates and the offsetting achievable through traditional habitat management techniques (e.g. cutting and removal of hay). The nitrogen deposition by dogs is particularly significant given the nitrogen Critical Load (CL) of 10-20 kg N/ha/yr provided for European dry heath and Northern Atlantic wet heath (qualifying feature of the Dorset Heaths SAC) on the Air Pollution Information System (APIS). This implies that the minimum CL of a site may be exceeded by N nitrogen deposition from dogs alone, before atmospheric sources are considered. Nutrient availability is the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in a shift towards plant communities that are more typical of improved grasslands.

Summary

4.16 Where increased recreational use is predicted to cause adverse impacts on a site, avoidance and mitigation should be considered. Avoidance of recreational impacts at Habitat sites involves locating new residential development further away (where possible). Strategic plans, such as Local Plans provide the mechanism for this. Where avoidance of impacts is not possible, mitigation will usually involve a mix of access management, habitat management and provision of alternative recreational space.

Background to Atmospheric Pollution

4.17 The main pollutants of concern for Habitats sites are oxides of nitrogen (NOx), ammonia (NH_3) and sulphur dioxide (SO_2) and are summarised in Table 2.

[48] Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.
[49] Taylor K., Anderson P., Taylor R.P., Longden K. & Fisher P. (2005). Dogs, access and nature conservation. English Nature Research Report, Peterborough.
[50] Barnard A. (2003). Getting the facts – Dog walking and visitor number surveys at Burnham Beeches and their implications for the management process. *Countryside Recreation* **11**:16-19.
[51] Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.
[52] De Frenne P., Cougnon M., Janssens G.P.J. & Vangansbeke P. (2022). Nutrient fertilization by dogs in peri-urban ecosystems. *Ecological Solutions and Evidence* **3**, https://doi.org/10.1002/2688-8319.12128

Table 2. Main sources and effects of air pollutants on habitats and species.

Pollutant	Source	Effects on habitats and species
Sulphur dioxide (SO_2)	The main sources of SO_2 are electricity generation, and industrial and domestic fuel combustion. However, total SO_2 emissions in the UK have decreased substantially since the 1980's. Another origin of sulphur dioxide is the shipping industry and high atmospheric concentrations of SO_2 have been documented in busy ports. In future years shipping is likely to become one of the most important contributors to SO_2 emissions in the UK.	Wet and dry deposition of SO_2 acidifies soils and freshwater and may alter the composition of plant and animal communities. The magnitude of effects depends on levels of deposition, the buffering capacity of soils and the sensitivity of impacted species. However, SO_2 background levels have fallen considerably since the 1970's and are now not regarded a threat to plant communities. For example, decreases in Sulphur dioxide concentrations have been linked to returning lichen species and improved tree health in London.
Acid deposition	Leads to acidification of soils and freshwater via atmospheric deposition of SO_2, NOx, ammonia and hydrochloric acid. Acid deposition from rain has declined by 85% in the last 20 years, which most of this contributed by lower sulphate levels. Although future trends in sulphur (S) emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, increased N emissions may cancel out any gains produced by reduced S levels.	Gaseous precursors (e.g., SO_2) can cause direct damage to sensitive vegetation, such as lichen, upon deposition. Can affect habitats and species through both wet (acid rain) and dry deposition. The effects of acidification include lowering of soil pH, leaf chlorosis, reduced decomposition rates, and compromised reproduction in birds / plants. Not all sites are equally susceptible to acidification. This varies depending on soil type, bed rock geology, weathering rate and buffering capacity. For example, sites with an underlying geology of granite, gneiss and quartz rich rocks tend to be more susceptible.
Ammonia (NH_3)	Ammonia is a reactive, soluble alkaline gas that is released following decomposition and volatilisation of animal wastes and from some chemical processes and vehicle exhausts. It is a naturally occurring trace gas, but ammonia concentrations are directly related to the distribution of livestock. Ammonia reacts with acid pollutants such as the products of SO_2 and NO_X emissions to produce fine ammonium (NH_4+) - containing aerosol. Due to its significantly longer lifetime, NH_4+ may be transferred much longer distances (and can therefore be a significant trans-boundary issue). While ammonia deposition may be estimated from its atmospheric concentration, the deposition rates are strongly influenced by meteorology and ecosystem type.	The negative effect of NH_4+ may occur via direct toxicity when uptake exceeds detoxification capacity and via N accumulation. Its main adverse effect is eutrophication, leading to species assemblages that are dominated by fast-growing and tall species. For example, a shift in dominance from heath species (lichens, mosses) to grasses is often seen. As emissions mostly occur at ground level in the rural environment and NH_3 is rapidly deposited, some of the most acute problems of NH_3 deposition are for small relict nature reserves located in intensive agricultural landscapes.

Pollutant	Source	Effects on habitats and species
Nitrogen oxides (NO_x)	Nitrogen oxides are mostly produced in combustion processes. Half of NO_X emissions in the UK derive from motor vehicles, one quarter from power stations and the rest from other industrial and domestic combustion processes.	Direct toxicity effects of gaseous nitrates are likely to be important in areas close to the source (e.g. roadside verges). A critical level of NO_X for all vegetation types has been set to 30 ug/m^3. Deposition of nitrogen compounds (nitrates (NO_3), nitrogen dioxide (NO_2) and nitric acid (HNO_3)) contributes to the total nitrogen deposition and may lead to both soil and freshwater acidification. In addition, NOx contributes to the eutrophication of soils and water, altering the species composition of plant communities at the expense of sensitive species.
Nitrogen deposition	The pollutants that contribute to the total nitrogen deposition derive mainly from oxidized (e.g. NO_X) or reduced (e.g. NH_3) nitrogen emissions (described separately above). While oxidized nitrogen mainly originates from major conurbations or highways, reduced nitrogen mostly derives from farming practices. The N pollutants together are a large contributor to acidification (see above).	All plants require nitrogen compounds to grow, but too much overall N is regarded as the major driver of biodiversity change globally. Species-rich plant communities with high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication. This is because many semi-natural plants cannot assimilate the surplus N as well as many graminoid (grass) species. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O_3)	A secondary pollutant generated by photochemical reactions involving NO_X, volatile organic compounds (VOCs) and sunlight. These precursors are mainly released by the combustion of fossil fuels (as discussed above). Increasing anthropogenic emissions of ozone precursors in the UK have led to an increased number of days when ozone levels rise above 40 parts per billion (ppb) ('episodes' or 'smog'). Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	Concentrations of O_3 above 40 ppb can be toxic to both humans and wildlife and can affect buildings. High O_3 concentrations are widely documented to cause damage to vegetation, including visible leaf damage, reduction in floral biomass, reduction in crop yield (e.g. cereal grains, tomato, potato), reduction in the number of flowers, decrease in forest production and altered species composition in semi-natural plant communities.

Source: Information summarised from the Air Pollution Information System (http://www.apis.ac.uk/)

4.18 SO_2 emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil. As such, it is unlikely that material increases in SO_2 emissions will be associated with the ULP. NH_3 emissions are dominated by agriculture, with some chemical processes also making notable contributions.

4.19 NH3 can have a directly toxic effect upon vegetation, particularly at close distances to the source such as near road verges[53]. NOx can also be toxic at high concentrations (far above the annual average Critical Level) but generally only in the presence of elevated SO_2 which is very rare in the UK.

[53] http://www.apis.ac.uk/overview/pollutants/overview_NOx.htm.

4.20 NO_x emissions, however, are dominated by the output of vehicle exhausts (more than half of all emissions). Within a 'typical' housing development, by far the largest contribution to NO_x (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison[54]. Emissions of NO_x could therefore be reasonably expected to increase as a result of greater vehicle use due to the ULP. High levels of NO_x and NH_3 are likely to increase the total N deposition to soils, potentially leading to deleterious knock-on effects in resident ecosystems. Increases in nitrogen deposition from the atmosphere can, if sufficiently great, enhance soil fertility and lead to eutrophication. This often has adverse effects on community composition and the quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats[55], [56].

4.21 According to the World Health Organisation, the critical NOx concentration (critical threshold) for the protection of vegetation is 30 μgm^{-3}. In addition, ecological studies have determined 'Critical Loads' (CLs)[57] of atmospheric N deposition (that is, NO_x combined with ammonia NH_3) for key habitats within Habitats sites.

4.22 According to the Department of Transport's Transport Analysis Guidance, "Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels *is not significant*"[58] (see Figure 2).

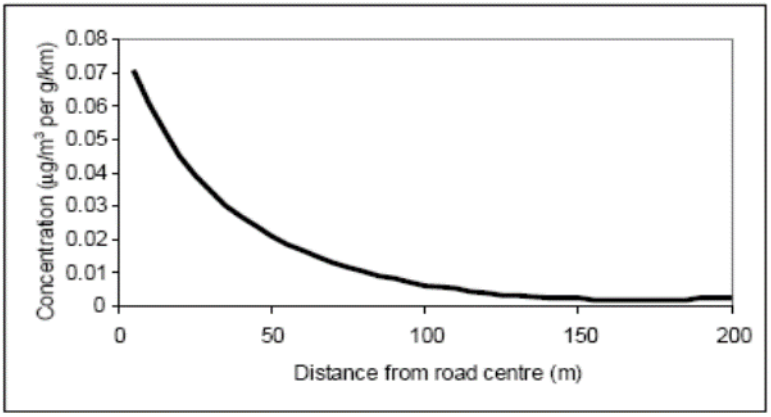


Figure 2: Traffic contribution to concentrations of pollutants at different distances from a road (Source: www.dft.gov.uk/ha/standards/dmrb/vol11/section3/ha20707.pdf)

Background to Water Quality

4.23 The quality of the water that feeds Habitats sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts:

- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour.
- Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes that often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In the marine environment, nitrogen is the limiting plant nutrient and so eutrophication is associated with discharges containing available nitrogen.

[54] Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. http://www.airquality.co.uk/archive/index.php
[55] Wolseley, P. A.; James, P. W.; Theobald, M. R.; Sutton, M. A. **2006.** Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. Lichenologist 38: 161-176
[56] Dijk, N. **2011.** Dry deposition of ammonia gas drives species change faster than wet deposition of ammonium ions: evidence from a long-term field manipulation Global Change Biology 17: 3589-3607
[57] The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur
[58] www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

- Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.

4.24 The main risk associated with the Uttlesford Local Plan is the discharge of treated sewage effluent from Wastewater Treatment Works (WwTWs) serving the Plan area. This could increase the nutrient concentrations in the water feeding Habitats Sites that are hydrologically linked to waterbodies that receive treated wastewater.

Background to Water Quantity, Level and Flow

4.25 The water level, its flow rates and the mixing conditions are important determinants of the condition of Habitats sites and their qualifying features. Hydrological processes are critical in influencing habitat characteristics in wetlands, terrestrial systems that have hydrological associations (e.g. wet heath) and coastal waters, including current velocity, water depth, dissolved oxygen levels, salinity and water temperature. In turn these parameters determine the short- and long-term viability of plant and animal species, as well as overall ecosystem composition.

4.26 A highly cited review paper summarised the ecological effects of reduced flow in rivers and connected water-dependent ecosystems. Droughts (ranging in their magnitude from flow reduction to a complete loss of surface water) have both direct and indirect effects on dependent floral and faunal communities. For example, the unique nature of wetlands combines shallow water and conditions that are ideal for the growth of organisms at the basal level of food webs, which feed many species of birds, mammals, fish and amphibians.

4.27 Maintaining a steady water supply is of critical importance for many hydrologically dependent SPAs, SACs and Ramsars. For example, in many freshwater bodies and wetlands the hydrological regime is essential for sustaining a variety of foraging habitats for SPA / Ramsar waterfowl species. However, different species vary in their requirements for specific water levels. Splash and / or shallow flooding is required to provide suitable feeding areas and roosting sites for ducks and waders. In contrast, deeper flooding is essential to provide foraging and loafing habitats for Bewick's swans and whooper swans.

4.28 Wetland habitats rely on hydrological connections with other surface waters, such as rivers, streams and lakes. A constant supply of water is fundamental to maintaining the ecological integrity of sites. However, while the natural fluctuation of water levels within narrow limits is desirable, excess or too little water supply might cause the water level to be outside of the required range of qualifying birds, invertebrate or plant species. This might lead to the loss of the structure and functioning of wetland habitats. There are two mechanisms through which urban development might negatively affect the water level in Habitats Sites:

- The supply of new housing with potable water will require increased abstraction of water from surface water and groundwater bodies. Depending on the level of water stress in the geographic region, this may reduce the water levels in Habitats Sites sharing the same catchment.
- The proliferation of impermeable surfaces in urban areas increases the volume and speed of surface water runoff. As traditional drainage systems often cannot cope with the volume of stormwater, sewer overflows are designed to discharge excess water directly into watercourses. Often this pluvial flooding results in downstream inundation of watercourses and the potential flooding of wetland habitats.

Summary of Impact Pathways to be Taken Forward

4.29 Having considered the impact pathways identified in this chapter, those listed in Table 3 will be taken to the next stage in the HRA process, the LSEs screening. These are the only Habitats sites with a potential connection to development in Uttlesford.

Table 3. Impact pathways and relevant Habitats sites.

Impact pathway	Habitats site(s) potentially affected
Recreational pressure	Epping Forest SAC Essex Estuaries SAC Wormley-Hoddesdonpark Woods SAC

Impact pathway	Habitats site(s) potentially affected
	Lee Valley SPA & Ramsar Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar
Air pollution	Devil's Dyke SAC Epping Forest SAC Essex Estuaries SAC Eversden & Wimpole Woods SAC Wormley-Hoddesdonpark Woods SAC Lee Valley SPA & Ramsar Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar
Water quality	Epping Forest SAC Essex Estuaries SAC Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar
Water Quantity, Level and Flow	Essex Estuaries SAC Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar

5. Test of Likely Significant Effects

Introduction

5.1 When seeking to identify relevant Habitat sites, consideration has been given primarily to identified impact pathways and the source-pathway-receptor approach, rather than adopting purely a 'zones'-based approach. The source-pathway-receptor approach is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place, whereas the absence of one or more of the elements means there is no possibility for an effect. Furthermore, even where an impact is predicted to occur, it may not result in significant effects (i.e., those which undermine the Conservation Objectives of a Habitat site).

5.2 The likely zone of impact (also referred to as the likely Zone of Influence, ZoI) of a plan or project is the geographic extent over which significant ecological effects are likely to occur. The ZoI of a plan or project will vary depending on the specifics of a particular proposal and must be determined on a case-by-case basis with reference to a variety of criteria, including:

- the nature, size / scale and location of the plan;
- the connectivity between the plan and Habitat sites, for example through hydrological connections or because of the natural movement of qualifying species;
- the sensitivity of ecological features under consideration; and,
- the potential for in-combination effects.

Approach to Uttlesford Local Plan Policy Screening

5.3 Given the distance of the ULP from the identified Habitats Sites and the nature of the impact pathways, all assessments are both "alone" and "in-combination" assessments.

5.4 There are 75 core policies and 9 development policies within the Uttlesford Local Plan. Policies were screened out of having LSEs on a Habitat site where any of the following reasons applied:

- they are environmentally positive;
- they will not themselves lead to any development or other change;
- they make provision for change but could have no conceivable effect on a Habitat site. This can be because there is no pathway between the policy and the qualifying features or a Habitat site, or because any effect would be positive;

- they make provision for change but could have no significant effect on a Habitat site (i.e., the effect would not undermine the conservation objectives of a Habitat site); or,
- the effects of a policy on any particular Habitat site cannot be ascertained because the policy is too general. For example, a policy may be screened out if, based on absence of detail in the policy, it is not possible to identify where, when, or how the policy may be implemented, where effects may occur, or which sites, if any, may be affected.

5.5 Any 'criteria-based' policy (i.e., those that simply list criteria with which development needs to comply) or other general policy statements that have no spatial element were also screened out. Likewise, policies that simply 'safeguard' an existing resource (e.g., existing green infrastructure or mineral resources) by preventing other incompatible development, were also screened out.

5.6 The appraisal therefore focussed on those policies with a definable spatial component. Having established which policies required scrutiny by virtue of being spatially defined, consideration was given as to whether LSEs could be dismissed due to a lack of connectivity to any Habitat site for one of the following reasons:

- a potentially damaging activity may occur as a result of the policy but there is no pathway connecting it to a Habitat site (due to distance, for example);
- there are no Habitat sites vulnerable to any of the activities that the policy will deliver; or,
- the policy will not result in any damaging activities.

Results of Policy Screening

5.7 The results of the LSEs screening of policies included in the Uttlesford LP are presented in Table 4, Appendix A.1. Where a policy is shaded green, there are no linking impact pathways to Habitat sites and LSEs can be excluded. Where the screening outcome is shaded orange, LSEs cannot be excluded, and the policy is screened in for AA.

5.8 Of the 75 ULP core policies, nine are considered to have the potential to result in LSEs, alone and therefore or in combination with other plans and projects, as such an Appropriate Assessment is required. These are:

- **Core Policy 2: Meeting Our Housing Needs**
- **Core Policy 4: Meeting Business and Employment Needs**
- **Core Policy 6: North Uttlesford Area Strategy**
- **Core Policy 6a: Housing Requirement Figures for Newport**
- **Core Policy 10a: South Uttlesford Area Strategy**
- **Core Policy X: Stansted and Elsenham Area Strategy**
- **Core Policy 19: Rural Area Housing Requirement Figures**
- **Core Policy 60: The Travelling Community**

5.9 Of the 9 ULP development policies, none are considered to have the potential to result in LSEs, either alone and therefore or in combination with other plans and projects.

5.10 The test of likely significant effects will focus on these policies with regards to the vulnerabilities of the Habitat sites within Table 1. Uttlesford is too remote from Habitats sites to result in likely significant effects alone. Therefore, this HRA is entirely concerned with 'in combination' effects. The impact pathways relating to the Habitat sites' vulnerabilities are listed below and will each be discussed:

- Recreational pressure;
- Air pollution;
- Water quality, and;
- Water resources;

Recreational Pressure

5.11 The Regulation 19 ULP allocates approx. 14,937 residential units in the Uttlesford District. This increase in the local population will be associated with an enhanced pressure on nearby recreational resources. Each Habitat site which is vulnerable to recreational pressure is discussed in this context in the following section.

Epping Forest SAC

5.12 The Epping Forest Visitor Survey 2019 conducted by Footprint Ecology[59] assessed the starting location of visitors to this Habitats site.

5.13 The 75th percentile value for the distance from interviewee postcodes to survey location is often used to define a zone of influence. In this survey this figure is 6.81 km (rounded to 7 km).

5.14 Epping Forest SAC is 12 km from the Uttlesford District Boundary at its closest point and site allocations within the ULP are further still.

5.15 All site allocations are therefore outside the Zone of Influence for the Epping Forest SAC.

5.16 Overall, it is therefore concluded that LSEs of the ULP on the Epping Forest SAC regarding recreational pressure can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Essex Estuaries SAC

5.17 The Essex Coast RAMS SPD (2020)[60] indicates that the zone of influence for the Essex Estuaries SAC overlaps with a number of other Habitats Sites, the most relevant of which is the Blackwater Estuary SPA and Ramsar.

5.18 The Blackwater Estuary SPA and Ramsar has a zone of influence of 22.0 km which is larger than any of the other Habitat sites with which the Essex Coast SAC overlaps.

5.19 The ULP provides for 900 non-strategic residential units and 1,540 windfall residential units, which are not specifically allocated and therefore may fall within the Zone of Influence of the SAC as part of Uttlesford District lies within 22km of the SAC.

5.20 Overall, it is therefore concluded that LSEs of the ULP on the Essex Estuaries SAC regarding recreational pressure cannot be excluded, either alone or in-combination. The site is screened in for Appropriate Assessment regarding this impact pathway.

5.21 The following policy is brought forward:

- Core Policy 2: Meeting our Housing Needs

Wormley-Hoddesdonpark Woods SAC

5.22 Wormley-HoddesdonPark Woods SAC is located 16 km from the boundary of Uttlesford District. The SAC is a large, attractive area of ancient woodland with extensive public access and close to large urban centres. The majority of the woods in the complex are in sympathetic ownership, with no direct threat (Wormley-Hoddesdonpark Wood, for example, is managed by The Woodland Trust). No visitor survey data that identifies the recreational catchment could be sourced for Wormley-Hoddesdonpark Woods. However, data does exist for other large woodland Habitats sites, such as Ashdown Forest[61] and Epping Forest SAC. These indicate that core visitor catchments (i.e. the zone within which the majority (c. 75%) of regular, frequent visitors are concentrated) tend to lie between c. 5km (Epping Forest) and 6-7km (Ashdown Forest) from the site. If the more precautionary figure of 7km is used for Wormley Hoddesdonpark Woods in the

[59] Liley, D., (2020). Epping Forest Visitor Survey (2019). Unpublished report by Footprint Ecology for Epping Forest District Council.
[60] Available at: https://www.uttlesford.gov.uk/media/10475/Essex-Coast-Recreational-disturbance-Avoidance-and-Mitigation-Strategy-September-2020/pdf/Essex_Coast_RAMS_SPD_June_2020_final.pdf?m=1599844496320 [Accessed 21 June 2024].
[61] Clarke RT, Sharp J & Liley D. 2010. Ashdown Forest Visitor Survey Data Analysis (Natural England Commissioned Reports, Number 048) and subsequent analyses
UE Associates and University of Brighton. 2009. Visitor Access Patterns on the Ashdown Forest: Recreational Use and Nature Conservation

absence of bespoke visitor data for this site, the Uttlesford District is 16 km distant (more than double the expected zone of influence).

5.23 Overall, it is therefore concluded that LSEs of the ULP on the Wormley-Hoddesdonpark Woods SAC regarding recreational pressure can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Lee Valley SPA and Ramsar

5.24 The Site Improvement Plan (SIP) for the Lee Valley SPA identifies that 'Areas of the SPA are subject to a range of recreational pressures including watersports, angling and dog walking. This has the potential to affect SPA populations directly or indirectly'. It does not conclude that current recreational activity on the site is unsustainable; rather it identifies a project to first 'Investigate whether there is a need for change to access management'.

5.25 It should be emphasised that recreational use is not inevitably a problem. Many internationally designated sites are also nature reserves managed for conservation and public appreciation of nature. The Lee Valley Regional Park that encompasses the SPA and Ramsar sites is such an example. At these sites, access is encouraged, and resources are available to ensure that recreational use is managed appropriately.

5.26 A precautionary zone of Influence of 7 km (as above) is assumed, with the closest point of the Uttlesford District being 11 km away from the Habitats site (site allocations are further still) and therefore outside of a reasonable zone of influence. The following further reasons indicate why growth in Uttlesford is unlikely to result in likely significant effects even 'in combination':

- Amwell Quarry SSSI (Amwell Nature Reserve) and Rye Meads SSSI (Rye Meads Nature Reserve) are both laid out in considerable detail with a network of hides (ten at Rye Meads, three at Amwell) and clearly marked footpaths/boardwalks with screening vegetation that are specifically laid out and designed to route people away from the sensitive areas and minimise disturbance while at the same time accommodating high numbers of visitors. Additionally, no dogs are allowed (except registered assistance dogs) and the wet and marshy/open water nature of the habitats on site inherently limits off-track recreational activity, rendering it difficult to accomplish and unappealing. For these reasons it is considered that the vulnerability of Amwell Nature Reserve and Rye Meads Nature Reserve to the potential adverse effects of recreational activity that can affect other less well-managed sites is very low. In Turnford and Cheshunt Pits SSSI, recreational activity is similarly regulated through zoning of water bodies. The majority of the site is already managed in accordance with agreed management plans in which nature conservation is a high or sole priority.

- Two of the three faunal species for which the SPA and Ramsar site are designated – gadwall and shoveler – are not inherently highly sensitive to disturbance and are readily able to adapt (habituate) to the presence of shore-based human recreational activities without being flushed (as opposed to water-based activities which are potentially highly disturbing).

- Turnford & Cheshunt Pits is located within the Lee Valley Country Park, which is part of the Lee Valley Regional Park. In their response to the Epping Forest Local Plan the Lee Valley Regional Park Authority did not raise any concerns regarding future recreational pressure on the SPA from housing growth.

- Various investigations into the habits of recreational visitors to nationally and internationally important wildlife sites have found that the majority of dog walkers and casual walkers are generally disinclined to walk very far to visit sites for recreation. For example, in one of the most thorough studies visitor surveys were conducted at the Thames Basin Heaths Special Protection Area. The study found that the average distance between the visitor's home postcode and Thames Basin Heaths SPA when arriving by foot was 0.8 km, with 75% of foot-based visitors living within a 0.9 km straight line distance from the visitor survey point. Other surveys show a similar broad pattern, since there is a natural limit as to how far most people are prepared to walk to visit a particular countryside site, even when it is large and appealing. The Thames Basin Heaths is also extensively visited by people travelling by car, who typically live 5km from the SPA. However, that site has an abundance of parking whereas parking in the vicinity of Rye Meads, Turnford & Cheshunt Pits and Amwell Quarry will naturally restrict the number of car-based visitors at any time and informal roadside verge parking is very limited.

5.27 Overall, it is therefore concluded that LSEs of the ULP on the Lee Valley SPA and Ramsar regarding recreational pressure can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar

5.28 The Essex Coast RAMS SPD (2020)62 indicates that the zone of influence for the Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar is 22 km.

5.29 Figure 2 demonstrates that the majority of the Uttlesford District is beyond this zone of influence and that none of the strategic site allocations are within it.

5.30 However, the ULP provides for 900 non-strategic residential units and 1,540 windfall residential units, the latter of which are not specifically allocated and therefore may fall within the Zone of Influence of the SPA and Ramsar

5.31 Overall, it is therefore concluded that LSEs of the ULP on the Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar regarding recreational pressure cannot be excluded, either alone or in-combination. The site is screened in for Appropriate Assessment regarding this impact pathway.

5.32 The following policy is brought forward:

- Core Policy 2: Meeting our Housing Needs

Atmospheric Pollution (Nitrogen Deposition)

5.33 According to the Department of Transport's Transport Analysis Guidance, "*Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant*"[63] (see Figure 2).

5.34 The average UK car journey is approximately 10.6km[64]. At a 10km distance between the development site and any road within 200m of a vulnerable Habitat site, the traffic generated from that development is likely to have dispersed across the network such that it is unlikely to contribute to a statistically significant difference in annual average daily traffic. A 10km buffer is therefore utilised within this report to identify sites which may have a potential likely significant impact. Therefore, a Likely Significant Effect must be considered where:

- A major road connected to a residential allocation is within 200 m of a Habitat Site which is sensitive to atmospheric pollution, and
- The site is within 10 km of a residential allocation.

Devil's Dyke SAC

5.35 This site is 16 km from the Uttlesford District boundary.

5.36 Overall, it is therefore concluded that LSEs of the ULP on the Devil's Dyke SAC regarding atmospheric pollution (Nitrogen deposition) can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Epping Forest SAC

5.37 This site is 12 km from the Uttlesford District boundary.

5.38 The northern end of Epping Forest is within 200m of the M25 as it passes through Bell Common Tunnel. The M25 is a significant arterial route and as such may be connected to commuting distances greater than the national average. Forecast two-way flows on the M25 at Bell Common Tunnel (within 200m of Epping Forest SAC) due to Uttlesford Local Plan are 232 AADT. This is below the 0.15% of baseline AADT threshold

[62] Available at: https://www.uttlesford.gov.uk/media/10475/Essex-Coast-Recreational-disturbance-Avoidance-and-Mitigation-Strategy-September-2020/pdf/Essex_Coast_RAMS_SPD_June_2020_final.pdf?m=1599844496320 [Accessed 21 June 2024].
[63] www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf
[64] GOV.UK 2019. Average number of trips made and distance travelled.
https://www.gov.uk/government/statistical-data-sets/nts01-average-number-of-trips-made-and-distance-travelled

identified as needing modelling in JNCC guidance Main Report: Guidance on Decision-making Thresholds for Air Pollution (jncc.gov.uk), as that threshold would be c. 300 AADT based on baseline flows for the M25.

5.39 Moreover, that same report states (pages 20/21) that: '*The trunk road network forms the core of the national transport system. Trunk roads are central to long distance travel and connectivity across the UK and traffic patterns on trunk roads are a consequence of predicted growth across the UK generally. The effects of development on traffic flows on truck roads are more appropriately taken into account as part of national and regional strategic plan level HRAs.'*

5.40 Overall, it is therefore concluded that LSEs of the ULP on the Epping Forest SAC regarding atmospheric pollution (Nitrogen deposition) can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Essex Estuaries SAC

5.41 This site is 16 km from the Uttlesford District boundary.

5.42 Overall, it is therefore concluded that LSEs of the ULP on the Essex Estuaries SAC regarding atmospheric pollution (Nitrogen deposition) can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Eversden & Wimpole Woods SAC

5.43 This site is 14 km from the Uttlesford District boundary.

5.44 Overall, it is therefore concluded that LSEs of the ULP on the Eversden & Wimpole Woods SAC regarding atmospheric pollution (Nitrogen deposition) can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Wormley-Hoddesdonpark Woods SAC

5.45 This site is 16 km from the Uttlesford District boundary.

5.46 Overall, it is therefore concluded that LSEs of the ULP on the Wormley-Hoddesdonpark Woods SAC regarding atmospheric pollution (Nitrogen deposition) can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Lee Valley SPA & Ramsar

5.47 This site is 11 km from the Uttlesford District boundary.

5.48 Overall, it is therefore concluded that LSEs of the ULP on the Lee Valley SPA & Ramsar regarding atmospheric pollution (Nitrogen deposition) can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar

5.49 This site is 16 km from the Uttlesford District boundary.

5.50 Overall, it is therefore concluded that LSEs of the ULP on the Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar regarding atmospheric pollution (Nitrogen deposition) can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Water Quality

Epping Forest SAC

5.51 The Site Improvement Plan for Epping Forest SAC[65] indicates water quality run-off from roads as an area of concern requiring management.

5.52 The ULP will not have an impact on vehicular traffic in proximity to Epping Forest for the reasons outline in the section relating to atmospheric pollution (nitrogen deposition) and will therefore not cause changes to the run-off from roads in proximity to this Habitat site.

5.53 Overall, it is therefore concluded that LSEs of the ULP on the Epping Forest SAC regarding water quality can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

Essex Estuaries SAC and Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar

5.54 The Uttlesford District Council Water Cycle Study (WCS)[66] (prepared by JBA consulting) assessed the 31 WwTW within the Uttlesford District. Of these 24 are expected to serve growth within the Local Plan Period. Some WwTW in the southern part of Uttlesford discharge to watercourses (notably the Chelmer or its tributaries) that ultimately drain to the Essex Estuaries SAC and Blackwater Estuary SPA/Ramsar. There is thus a hydrological link between these Habitats sites and growth in some parts of Uttlesford district.

5.55 The Anglian Water Drainage and Waste Water Management Plan[67] sets out the plan for wastewater management in the region (including Uttlesford) which includes the catchment for these Habitats sites. The Uttlesford District is therefore hydrologically linked to these Habitats Sites. It is the responsibility of the water companies to meet the needs of the area without adverse effect. The DWMP must be subject to HRA and cannot be adopted with adverse effects on the integrity of Habitats sites unless subsequent derogation tests can be passed. However, since likely significant effects cannot be dismissed without further consideration of the DWMP and other measures, water quality is taken forward to appropriate assessment.

5.56 It is therefore concluded that LSEs of the ULP on the Essex Estuaries SAC and Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar regarding water quality cannot be excluded, either alone and in-combination. The site is screened in for Appropriate Assessment regarding this impact pathway.

Water Quantity, Level and Flow

Essex Estuaries SAC and Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar

5.57 Anglian Water and Affinity Water are responsible for the provision of water resources to homes within Uttlesford. The means by which water resources will be provided are described in:

- Affinity Water: Draft Water Resources Management Plan 2024[68], and
- Anglian Water: Our Water Resources Management Plan 2024[69].

5.58 Both plans are based on robust population projections, describe how water requirements will be met and run well beyond the end of the Local Plan period.

5.59 The East of England is a water-stressed areas and the plans therefore include considerable provision for transfers from other areas. HRAs are a requirement of Water Resource Management Plans and plans can only be approved when the conditions required by the HRA process have been met.

[65] https://publications.naturalengland.org.uk/file/5732004727881728 [Accessed 07/03/2024]
[66] Uttlesford District Council Water Cycle Study – Stage 2 (June 2024) Prepared by JBA Consulting.
[67] Available at: https://www.anglianwater.co.uk/SysSiteAssets/household/about-us/dwmp/dwmp-1.pdf [Accessed 21/06/2024].
[68] Available at: https://affinitywater.uk.engagementhq.com/4398/widgets/28286/documents/33904 [Accessed 21/06/2024].
[69] Available at: https://www.anglianwater.co.uk/siteassets/household/about-us/wrmp/revised-draft-wrmp24-main-report-v2.pdf [Accessed 21/06/2024].

5.60 The HRA of the Anglian Water Draft Water Resource Management Plan 2024[70] concludes that adverse effects can be avoided or fully mitigated through adjustments to the detailed design of the scheme and applications of measures described in the individual assessments of the scheme's elements.

5.61 The HRA of the Affinity WRMP24[71] concluded that four of the 22 proposed options by Affinity Water may result in adverse effects on the integrity of sites including the Essex Estuaries SAC and that further studies are required to assess and detail the potential effects to provide more targeted mitigation measures as the potential impacts are water levels are unknown. The WRSE modelling confirmed that demand management is sufficient to maintain the supply/demand balance in WRZ7 unless a 'high' environmental destination is required. Under the high environmental destination forecast the level of supply available to Affinity Water reduces substantially as a result of sustainability reductions. The investment model therefore selects all the feasible schemes in WRZ7, which includes desalination and effluent reuse schemes after 2040 to maintain the supply-demand balance. Given that all feasible options are selected/ required to meet the high environmental destination in WRZ7, there are no reasonable alternatives at this time.

5.62 It is for Affinity Water to reach agreement with the Environment Agency and Natural England on the means and mitigation by which water resource needs in the East of England parts of their supply area will be delivered. The ULP is not in itself therefore considered to have an LSE on these Habitats sites.

5.63 Overall, it is therefore concluded that LSEs of the ULP on the Essex Estuaries SAC and Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar regarding Quantity, Level and Flow can be excluded, both alone and in-combination. The site is screened out from Appropriate Assessment regarding this impact pathway.

[70] Available at: https://www.anglianwater.co.uk/SysSiteAssets/household/about-us/wrmp/revised-draft-wrmp24-environmental-report-sub-report-a---hra.pdf [Accessed 21/06/2024].

[71] Available at: https://ehq-production-europe.s3.eu-west-1.amazonaws.com/eb32b4b6cf9821cb01c6d04df20cc4f61ea19723/original/1668445008/b1fe022d0148bdc1bac5cb73361bca40_Appendix_7.2.2_-_Habitats_Regulations_Assessment_%28HRA%29_%281%29.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA4KKNQAKICO37GBEP%2F20240621%2Feu-west-1%2Fs3%2Faws4_request&X-Amz-Date=20240621T153307Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=554a35ef20b63615227fee406971374a0ddef54bf7a052181a6988341a55eb66 [Accessed 21/06/2024].

6. Appropriate Assessment

Recreational Pressure

6.1 The following policy is brought forward for appropriate assessment following the identification of Likely Significant Effects on the Blackwater Estuary Spa and Ramsar and the Essex Estuaries SAC:

- Core Policy 2: Meeting our Housing Needs

6.2 The policy was brought forward in relation to allocations with unallocated locations which may fall within the 22 km zone of influence of these Habitats sites. The 22 km zone of influence overlaps the southeast corner of Uttlesford District boundary, any residential development sites which are brought forward in this area have the potential for residential development which may add recreational pressure on the Habitats sites.

6.3 A mitigation strategy is in place – The Essex Coast RAMS SPD (2020)[72] – to protect the sites and this proscribes a tariff to be applied to net additional dwellings within the zone of influence. Monies collected from the tariff are then used to support the mitigation strategy. Mitigation such as this cannot be considered in the Likely Significant Effects stage of HRA and this impact pathway to this Habitats site has therefore been brought forward for Appropriate Assessment. Since no allocations are by definition made for windfall development it is not possible to assess individual development sites at the Local Plan level.

6.4 However, Core Policy 38 (Sites Designated for Biodiversity or Geology) includes the requirement for all net new residential development to provide funding for the Essex Coast RAMS SPD delivery and this will apply to all such development including windfall. Overall, given that ULP includes the requirement to adhere to the East Coast RAMS mitigation strategy, AECOM concludes that there will be no adverse effects of the ULP on the Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar or the Essex Coast Estuaries SAC regarding recreational pressure, both alone and in-combination. No additional policy recommendations are made for inclusion in the Plan.

Atmospheric Pollution (Nitrogen Deposition)

6.1 No policies were brought forward for appropriate assessment in relation to atmospheric pollution.

Water Quality

Essex Estuaries SAC and Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar

6.2 The following policy is brought forward for appropriate assessment following the identification of Likely Significant Effects on the Blackwater Estuary Spa and Ramsar and the Essex Estuaries SAC:

- Core Policy 2: Meeting our Housing Needs
- Core Policy 4: Meeting business and employment needs
- Core Policy 6: North Uttlesford Area Strategy
- Core Policy 6a: Housing Requirement Figures for Newport
- Core Policy 10a: South Uttlesford Area Strategy
- Core Policy 16: Stansted, Mountfitchet and Elsenham Area Strategy
- Core Policy 19: Rural Area Housing Requirement Figures
- Core Policy 60: The Travelling Community

[72] Available at: https://www.uttlesford.gov.uk/media/10475/Essex-Coast-Recreational-disturbance-Avoidance-and-Mitigation-Strategy-September-2020/pdf/Essex_Coast_RAMS_SPD_June_2020_final.pdf?m=1599844496320 [Accessed 21 June 2024].

6.3 The policy was brought forward in relation to the hydrological connectivity of the Uttlesford District to the Essex Estuaries SAC and Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar.

6.4 There are 24 WwTW which are expected to serve growth within the Local Plan Period. Chapter 8 of the Uttlesford District Council Water Cycle Study (WCS)[73] indicates that it is possible to prevent deterioration in water quality by improvements in treatment. Growth alone will not prevent good ecological status being achieved in the future should those improvements be made, with the exception of Takeley where environmental capacity could be a constraint to growth. The feasibility of connecting additional demand from growth in areas otherwise served by Takeley WwTW to Bishops Stortford via an adjustment to the sewer network is being investigated, this needs to be concluded before development proposals in this area are progressed, however see Section 5.55 and 6.5 for the relevant process and responsibilities. However, Takeley does not discharge to a watercourse which drains to Essex Estuaries SAC/Blackwater Estuary SPA/Ramsar, but rather drains to the south west.

6.5 The Anglian Water DWMP[74] must be subject to HRA and cannot be adopted with adverse effects on the integrity of Habitats sites unless subsequent derogation tests can be passed. Subsequent Environmental Agency permitting processes also ensure adherence to the requirement to prevent detrimental impact on Habitats sites.

6.6 Moreover, in 2023 Natural England published detailed information on Habitats sites that were suffering from detrimental nutrient inputs and thus required a 'nutrient neutrality' approach to consenting new development. The Essex Estuaries were not included in that list of Habitats sites.

6.7 Finally, the Local Plan contains policy wording to require delivery of development to keep pace with provision of wastewater treatment infrastructure and to protect Habitats sites:

- Core Policy 5: Providing Supporting Infrastructure and Services requires that all new development provides for the necessary on-site and off-site infrastructure, ensuring there is sufficient capacity to manage wastewater.
- Core policy 38: Sites designated for Biodiversity or Geology prioritises impacts on Habitats sites and states "*Development will not be permitted unless it will not adversely affect the integrity of a European Habitat site either alone or in combination with other development.*"

6.8 AECOM concludes that there will be no adverse effects of the ULP on the Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar or the Essex Coast Estuaries SAC regarding water quality, both alone and in-combination. No additional policy recommendations are made for inclusion in the Plan.

Water Quantity, Level and Flow

6.9 No policies were brought forward for appropriate assessment in relation to water quality.

[73] Uttlesford District Council Water Cycle Study – Stage 2 (June 2024) Prepared by JBA Consulting.
[74] Available at: https://www.anglianwater.co.uk/SysSiteAssets/household/about-us/dwmp/dwmp-1.pdf [Accessed 21/06/2024].

7. Conclusions

7.1 AECOM was appointed by Uttlesford District Council (the Council) to produce a Habitats Regulations Assessment (HRA) of their Regulation 19 Local Plan. This HRA examines the effects of the Local Plan on internationally important wildlife sites. The requirement for HRA is set by the Conservation of Habitats and Species Regulations 2017 (as amended).

7.2 The Habitats sites, considered within the Appropriate Assessment for impact pathways that could not be screened out at the Test of Likely Significant Effects stage were:

- Blackwater Estuary (Mid Essex Coast Phase 4) SPA & Ramsar, and
- Essex Estuaries SAC.

7.3 Impact pathways considered were atmospheric pollution, recreational pressure, water quality, and water quantity, level and flow. Of which recreational pressure and water quality were brought forward for appropriate assessment.

7.4 For recreational pressure it was determined that adherence to the Essex Coast RAMS SPD would be sufficient to prevent adverse effects on the Habitats sites.

7.5 For Water quality it was determined that the measures included in the plan and the requirements of the DWMP planning process were sufficient to prevent adverse effects on Habitats sites.

7.6 Overall AECOM concluded that there are no adverse effects on Habitats sites as a result of the ULP.

Appendix A Policy Screening

A.1 Policy Assessment

Table 4 Screening of ULP policies for Likely Significant Effects requiring Appropriate Assessment

<table>
<tr><th>Policy Name</th><th>Brief Policy Description</th><th>Potential Likely Significant Effect?</th></tr>
<tr><td>Core Policy 1: Addressing Climate Change</td><td>This policy requires that developers demonstrate how they will mitigate, adapt and be resilient to the impacts of climate change and support an overall reduction in greenhouse gas emissions.</td><td>No Likely Significant Effect.

This is a development management policy that sets out key development criteria in relation to climate and does not specifically allocate sites for development.

There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.</td></tr>
<tr><td>Core Policy 2: Meeting Our Housing Needs</td><td>The housing requirement for the Uttlesford District is for 13,500 homes to be delivered in the plan period between 2021 and 2041.

The Plan provides for at least 14,912 dwellings by 2041 in the interest of providing for flexibility and contingency.

3,862 dwellings will be delivered through strategic allocations. 900 dwellings will be delivered through non-strategic allocations at the Larger Villages and at Newport.

The contribution of all sources of housing supply are shown by the following table:

Table 4.2: Uttlesford Housing Requirement and Housing Supply 2021 to 2041

<table><tr><th>Category</th><th></th><th>Number of Dwellings</th></tr><tr><td>Housing requirement for the full plan period (April 2021 to March 2041)</td><td></td><td>13.500</td></tr><tr><td>Housing completions (April 2021 to March 2023)</td><td></td><td>980</td></tr><tr><td rowspan="4">Housing Supply</td><td>Known Commitments (add dates)</td><td>7,630</td></tr><tr><td>Strategic Allocations</td><td>3,862</td></tr><tr><td>Non-Strategic Allocations</td><td>900</td></tr><tr><td>Windfalls</td><td>1,540</td></tr><tr><td>Total Housing Supply</td><td></td><td>14,912</td></tr></table>

Strategic Allocations</td><td>This policy may lead to Likely Significant Effects. It provides a quantum of residential development and the broad locations where that development will occur.

The following impact pathways are present in combination:

• Recreational Pressure
• Atmospheric pollution
• Water quality
• Water, quantity, level and flow

The potential impacts of this policy are discussed in the main body of the report.</td></tr>
</table>

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
	The following tables shows how the level of housing required through strategic development sites will be distributed: **Table 4.3: Strategic Allocations identified for North Uttlesford** **Settlement/ Parish** | **Settlement Type** | **Site Name** | **Number of Dwellings** Saffron Walden | Key Settlement | Land South of Radwinter Road and North and South of Thaxted Road | 879 Total | 879 **Table 4.4: Strategic Allocations identified for Stansted Mountfitchet and Elsenham** **Settlement/ Parish** | **Settlement Type** | **Site Name** | **Number of Dwellings** Stansted Mountfitchet | Key Settlement | Walpole Meadows North, East of Pennington Lane | 270 East of High Lane | 55 Elsenham | Local Rural Centre | ADD | 110 Total | 435 **Table 4.5: Strategic Allocations identified for South Uttlesford** **Settlement/ Parish** | **Settlement Type** | **Site Name** | **Number of Dwellings** Great Dunmow | Key Settlement | NE Great Dunmow | 799 ADD | 203 Takeley | Local Rural Centre | N Takeley | 1,546 Total | 2,545 Non-Strategic Allocations Development will also be supported at non-strategic allocations at the Larger Villages where development is (a) set out within Adopted Neighbourhood Plans, and (b) is in accordance with the Development Plan taken as a whole.	
Core Policy 3: Settlement Hierarchy	This policy describes the settlement hierarchy which will be applied to developments. The Settlement Classifications Are:	No Likely Significant Effect.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?

Classification	Settlement	Type of Development
Key Settlements	Great Dunmow, Saffron Walden, Stansted Mountfitchet (Part GB)	There is a presumption in favour of sustainable development within the existing built area of Key Settlements, Small Towns and Larger Villages. Development outside the existing built areas of these settlements will only be permitted where it is allocated by the Local Plan 2041 or has been allocated within an adopted Neighbourhood Development Plan, or future parts of the Local Plan. Development at washed over GB settlements should be assessed in accordance with National Policy.
Local Rural Centres/ Small Towns (*)	Elsenham, Great Chesterford, Hatfield Heath (GB), Newport, Takeley/ Prior's Green, Thaxted	
Larger Villages	Birchanger (*), Clavering, Debden, Felsted, Hatfield Broad Oak, Henham, , Little Hallingbury (*), Stebbing.	
Smaller Villages	Ashdon, Aythorpe Roding, Barnston, Berden, Broxted, Chrishall, Elder Street, Elmdon, Farnham, Flitch Green, Great Easton, Great Hallingbury, Great Sampford, Hempsted, High Easter, High Roding, Langley, Leadon Roding (Part GB), Lindsell, Little Canfield, Little Dunmow, Little Easton, Littlebury, Manuden, Quendon and Rickling, Radwinter, Sewards End, Wendens Ambo, White Roding (GB/ Part GB), Widdington, Wimbush.	At the Smaller Villages, limited infill development may be appropriate within the existing built areas of these settlements, or if it allocated within an adopted Neighbourhood Development Plan or future parts of the Local Plan. Proposals for limited infill development will be supported where they are: i. in keeping with local character, and ii. proportionate in scale, and iii. meet local housing needs, and/ or provide local employment, services and facilities.
Open Countryside	Those villages not included within the categories described above are considered to form part of the Open Countryside.	Development in open countryside will not be permitted unless specifically supported by other relevant policies as set out in the Development Plan or national policy.

This is a development management policy that sets out the settlement hierarchy for development it does not allocate a quantum of development or a location for any development..

There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.

<table>
<tr><th>Policy Name</th><th>Brief Policy Description</th><th>Potential Likely Significant Effect?</th></tr>
<tr><td>Core Policy 4: Meeting Business and Employment Needs</td><td>Over the Plan period 2021 – 2041 the land requirement for office and R&D development is 21.7 ha and industrial development is 52.2 ha. In order to meet this requirement, a further 14.6 ha is needed for office development and R&D and 30.5 ha is needed for industrial development beyond known completions and commitments.

A total of 58 ha is identified for future development at the following strategic allocations:

Table 4.7: Local Plan 2041 Employment Allocations
<table><tr><th>Site Name</th><th>Type of Site (Uses Class)</th><th>Available Development Land (Hectares)</th></tr><tr><td>Chesterford Research Park</td><td>Research and Development
E (g)(iii)</td><td>13.5</td></tr><tr><td>Land South of Knight Retail Park, Saffron Walden</td><td>General Industrial/ Storage or Distribution/ Office/ Light Industrial
B2/ B8/ E(g)(i)/ E (g)(iii)</td><td>3.0</td></tr><tr><td>North of Taylors Farm, North of Takeley Street</td><td>General Industrial/ Storage or Distribution/ Office/ Light Industrial
B2/ B8/ E(g)(i)/ E (g)(iii)</td><td>18.0</td></tr><tr><td>Land South of Highwood Quarry, West of Great Dunmow</td><td>General Industrial/ Storage or Distribution/ Office/ Light Industrial
B2/ B8/ E(g)(i)/ E (g)(iii)</td><td>18.0</td></tr><tr><td>Water Circle, Guants End, Elsenham</td><td>Office
E(g)(i)</td><td>5.5</td></tr><tr><td>Total</td><td></td><td>58.0</td></tr></table>
Additional development will be supported either through windfall development in accordance with Core policy 48: New Employment Development on Unallocated Sites or where supported by Neighbourhood Plans.

In addition to the sites identified for new employment development, a number of existing strategic employment sites have been identified in the Area Strategies (including some that have existing consents for development). These sites will be safeguarded for employment uses in accordance with Core Policies 45 and 46.</td><td>This policy may lead to Likely Significant Effects. It provides a quantum of commercial development and the location where that development will occur.

The following impact pathways are present in combination:

• Atmospheric pollution
• Water quality

The potential impacts of this policy are discussed in the main body of the report.</td></tr>
<tr><td>Core Policy 5: Providing Supporting Infrastructure and Services</td><td>All new development will be required to provide for the necessary on-site and, where appropriate, off-site infrastructure requirements arising from the proposal.

This policy sets out the detail of this requirement.</td><td>No Likely Significant Effect.

This is a development management policy that sets out the requirements for infrastructure associated with development proposals it does not allocate a quantum of development or a location for any development.</td></tr>
</table>

<table>
<tr><th>Policy Name</th><th>Brief Policy Description</th><th>Potential Likely Significant Effect?</th></tr>
<tr><td></td><td></td><td>There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.</td></tr>
<tr><td>Core Policy 6: North Uttlesford Area Strategy</td><td>This policy sets out that development in the North Uttlesford Area should be in accordance with the Settlement Hierarchy set out in Core Policy 3.

Housing Delivery will be achieved as follows:

Table 5.1: North Uttlesford Area Strategy Housing Allocations
<table><tr><th>Settlement</th><th>Site Name</th><th>Number of Dwellings</th></tr><tr><td>Saffron Walden</td><td>Land south of Radwinter road, north of Thaxted road.</td><td>747</td></tr><tr><td>Saffron Walden</td><td>Land south of Thaxted road</td><td>132</td></tr><tr><td>Total</td><td></td><td>879</td></tr></table>
Employment space delivery will be achieved as follows:

Table 5.2: North Uttlesford Area Strategy Employment Allocations
<table><tr><th>Setttement</th><th>Site Name</th><th>Hectares</th></tr><tr><td>Saffron Walden Chesterford</td><td>Chesterford Research Park</td><td>18.3</td></tr><tr><td>Saffron Walden</td><td>Land west of Thaxted road (Opposite Knight Park)</td><td>3</td></tr><tr><td>Total</td><td></td><td>21.3</td></tr></table></td><td>This policy may lead to Likely Significant Effects. It provides a quantum of residential development and the broad locations where that development will occur.

The following impact pathways are present in combination:

• Recreational Pressure
• Atmospheric pollution
• Water quality
• Water, quantity, level and flow

The potential impacts of this policy are discussed in the main body of the report.</td></tr>
<tr><td>Core Policy 6a: Housing Requirement Figures for Newport</td><td>This policy details the housing requirement identified for Newport.

Table 5.3: Housing requirement figures for Larger Villages and other villages preparing a Neighbourhood Plan.
<table><tr><th>Settlement Hierarchy Tier</th><th>Settlement</th><th>2021-41 Housing Requirement Figure (total)</th><th>Residual requirement to be allocated through non- strategic allocations (at 30 November 2023)</th></tr><tr><td>Local Rural Centre</td><td>Newport</td><td>ADD</td><td>300</td></tr></table></td><td>This policy may lead to Likely Significant Effects. It provides a quantum of residential development and the broad locations where that development will occur.

The following impact pathways are present in combination:

• Recreational Pressure
• Atmospheric pollution
• Water quality
• Water, quantity, level and flow</td></tr>
</table>

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		The potential impacts of this policy are discussed in the main body of the report.
Core Policy 7: Delivery of Transport Schemes within the North Uttlesford Area	To deliver the growth in the North Uttlesford Area, strategic transport and other infrastructure has been identified to mitigate the impact of planned growth, which is important to help secure a viable and sustainable future for the area. Strategic Transport infrastructure in North Uttlesford will be required as follows: i. a multi-modal link road in Saffron Walden linking Radwinter Road and Thaxted Road for all vehicles, cyclists and pedestrians	No Likely Significant Effect. This is a development management policy that sets out the key elements of transport schemes in the North Uttlesford area. The policy includes delivery of active transport routes, e-bike schemes and electric car clubs. The development associated with the proposals is not sufficiently defined to enable an HRA at this stage, HRA assessments will be required at the project level for each scheme. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 8: Safeguarding of Land for Strategic Infrastructure Schemes in the North Uttlesford Area	This policy safeguards the land identified below to support the future delivery of the following schemes as listed: • a future section of the link road between Thaxted Road and Newport Road and the Saffron Walden Orbital Greenway is also safeguarded for future delivery, and • the area for the future delivery of a Country Park for Saffron Walden.	No Likely Significant Effect. This policy safeguards land for future use there are currently no development proposals presented for assessment. Project level HRAs will be required as and when schemes are brought forward. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 9: Green and Blue Infrastructure in the North Uttlesford Area	This policy is to protect and enhance blue and green infrastructure assets in the North Uttlesford Area.	No Likely Significant Effect. This policy is designed to safeguard blue and green infrastructure. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 10a: South Uttlesford Area Strategy	This policy sets out the priorities for development in the South Uttlesford Area to support the strategic roles of the Key Settlement and Local Rural Centre. Development in the South Uttlesford Area should be in accordance with the Settlement Hierarchy set out in Core Policy 3. Non-strategic allocations may also be delivered through Neighbourhood Development Plans. Housing Delivery	This policy may lead to Likely Significant Effects. It provides a quantum of residential development and the broad locations where that development will occur.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
	Around 2,463 dwellings will be delivered through strategic allocations where development meets the requirements set out within the Site Development Frameworks (Appendix 4). The following table shows how the level of planned housing with the South Uttlesford Area through strategic development sites will be distributed. **Table 6.1: South Uttlesford Area Strategy Housing Allocations** **Settlement/ Parish** / **Site Name** / **No. Dwellings** Takeley/Little Canfield / East of Takeley / 1,546 Great Dunmow / Church End East / 714 Great Dunmow / Parsonage Downs / 203 **TOTAL** / / **2463** Employment Existing employment will be protected in accordance with Core Policy 45. New employment land of 36ha will be provided for business and employment growth in accordance with Core Policy 4 on the following strategic employment sites: **Table 6.2: South Uttlesford Area Strategy Employment Allocations** **Settlement/ Parish** / **Site Name** / **Hectares (approximately)** Takeley / Land North of Taylors Farm, North of Takeley Street, off B1256 (adjoining Thremhall Park) / 18 Great Dunmow west / Little Canfield / Land between A120 and Stortford Road B1256 / 18 **TOTAL** / / **36**	The following impact pathways are present in combination: • Recreational Pressure • Atmospheric pollution • Water quality • Water, quantity, level and flow The potential impacts of this policy are discussed in the main body of the report.
Core Policy 10b: Takeley Strategic Allocation Comprehensive Development Framework	This policy requires that all new development at the Takeley Strategic Allocation will be guided by a comprehensive development framework as specified in Core Policy CP52. New housing allocated at the Takeley Strategic Allocation will be provided to an exemplar standard, following Garden Village principles, to ensure that a highly sustainable and accessible development is fully realised.	No Likely Significant Effect. This management policy indicates the overall approach taken to managing development proposals in Takeley, including the protection of key nature sites. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 11: London Stansted Airport	Operation and Development: This policy sets out the Council's support for, and the conditions of the support for the continued use of London-Stansted Airport in relation to the planned expansion to 43 million passengers per annum.	No Likely Significant Effect. This policy expresses overall support for the continued use of Stansted Airport, however no specific proposals for development are included.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 12: Stansted Airport Countryside Protection Zone	This policy sets out the protection from development to conserve and enhance the 'rural' character of the area around the airport.	No Likely Significant Effect. This policy protects the rural character around Stansted Airport, no specific development proposals are brought forward. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 13: Delivery of Transport Schemes within the South Uttlesford Area	This policy sets out the requirements for transport infrastructure which has been identified to mitigate the impact of planned growth.	No Likely Significant Effect. This is a development management policy that sets out the key elements of transport schemes in the North Uttlesford area. The policy includes delivery of active transport routes, e-bike schemes and electric car clubs. The development associated with the proposals is not sufficiently defined to enable an HRA at this stage, HRA assessments will be required at the project level for each scheme. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 14: Safeguarding of Land for Strategic Transport Schemes in the South Uttlesford Area	This policy outlines the land which is safeguarded to support the delivery of the transport schemes identified by Core Policy 13.	No Likely Significant Effect. This policy safeguards land for future use there are currently no development proposals presented for assessment. Project level HRAs will be required as and when schemes are brought forward. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 15: Green and Blue Infrastructure in the South Uttlesford Area	This policy is to protect and enhance blue and green infrastructure assets in the South Uttlesford Area.	No Likely Significant Effect.

<table>
<tr><th>Policy Name</th><th>Brief Policy Description</th><th>Potential Likely Significant Effect?</th></tr>
<tr><td></td><td></td><td>This policy is designed to safeguard blue and green infrastructure.

There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.</td></tr>
<tr><td>Core Policy 16: Stansted, Mountfitchet and Elsenham Area Strategy</td><td>This policy sets out the priorities for development for the Stansted and Elsenham Area is to support the strategic role of the Key Settlement and Local Rural Centre by delivering a balance of housing and a range of infrastructure, whilst protecting the environmental and historic assets and maximising opportunities for sustainable travel choices.

Development in the Stansted and Elsenham Area should be in accordance with the Settlement Hierarchy set out in Core Policy 3.

Housing Delivery

Table 7.1: Stansted and Elsenham Area Housing Allocations
<table><tr><th>Settlement/ Parish</th><th>Site Name</th><th>No. Dwellings</th></tr><tr><td>Stansted Mountfitchet</td><td>Walpole Meadows North, East of Pennington Lane</td><td>270</td></tr><tr><td>Stansted Mountfitchet</td><td>East of High Lane North</td><td>55</td></tr><tr><td>Elsenham, within Henham parish</td><td>Land East of Station Road, Elsenham</td><td>110</td></tr><tr><td>Total</td><td></td><td>435</td></tr></table>
Employment

Table 7.2: Stansted and Elsenham Area Employment Allocation
<table><tr><th>Settlement/Parish</th><th>Site Name</th><th>Hectares</th></tr><tr><td>Elsenham</td><td>Gaunts End, Elsenham</td><td>ADD</td></tr></table></td><td>This policy may lead to Likely Significant Effects. It provides a quantum of residential development and the broad locations where that development will occur.

The following impact pathways are present in combination:

• Recreational Pressure
• Atmospheric pollution
• Water quality
• Water, quantity, level and flow

The potential impacts of this policy are discussed in the main body of the report.</td></tr>
<tr><td>Core Policy 17: Delivery of Transport Infrastructure within the Stansted and Elsenham Area</td><td>This policy identifies the transport and other infrastructure required to mitigate the impact of planned growth in the Stansted and Elsenham Area.</td><td>No Likely Significant Effect.

This is a development management policy that sets out the key elements of transport schemes in the North Uttlesford area. The policy includes delivery of active transport routes, e-bike schemes and electric car clubs. The development associated with the proposals is not sufficiently defined to enable an HRA at this stage, HRA assessments will be required at the project level for each scheme.</td></tr>
</table>

<table>
<tr><th>Policy Name</th><th>Brief Policy Description</th><th>Potential Likely Significant Effect?</th></tr>
<tr><td></td><td></td><td>There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.</td></tr>
<tr><td>Core Policy 18: Safeguarding of Land for Strategic Infrastructure in the Stansted Mountfitchet and Elsenham Area</td><td>This policy safeguards land to support the delivery of named strategic infrastructure schemes.</td><td>No Likely Significant Effect.

This policy safeguards land for future use there are currently no development proposals presented for assessment. Project level HRAs will be required as and when schemes are brought forward.

There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.</td></tr>
<tr><td>Core Policy 19: Rural Area Housing Requirement Figures</td><td>This policy sets out the 650 dwelling non-strategic (sites under 100 dwellings) housing requirement for the Rural Area which will be distributed across the Larger Villages and other settlements within designated neighbourhood areas in accordance with Table 8.2 shown below.

Table 8.2: Housing requirement figures for Larger Villages and other villages preparing a Neighbourhood Plan.

<table>
<tr><th>Settlement Hierarchy Tier</th><th>Settlement</th><th>2021-41 Housing Requirement Figure (total)</th><th>Residual requirement to be allocated through non- strategic allocations (at 30 November 2023)</th></tr>
<tr><td>Larger Villages</td><td>Clavering</td><td>192</td><td>116</td></tr>
<tr><td>Larger Villages</td><td>Henham</td><td>170</td><td>112</td></tr>
<tr><td>Larger Villages</td><td>Birchanger</td><td>3</td><td>0</td></tr>
<tr><td>Larger Villages</td><td>Little Hallingbury</td><td>20</td><td>0</td></tr>
<tr><td>Larger Villages</td><td>Stebbing</td><td>164</td><td>103</td></tr>
<tr><td>Larger Villages</td><td>Felsted</td><td>299</td><td>84</td></tr>
<tr><td>Larger Villages</td><td>Debden</td><td>74</td><td>25</td></tr>
<tr><td>Larger Villages</td><td>Hatfield Broad Oak</td><td>132</td><td>113</td></tr>
<tr><td>Larger Villages</td><td>Manuden</td><td>85</td><td>57</td></tr>
<tr><td>Larger Villages</td><td>Great Easton</td><td>67</td><td>40</td></tr>
<tr><td>Smaller Villages</td><td>Ashdon</td><td>0</td><td>0</td></tr>
<tr><td>Smaller Villages</td><td>Broxted</td><td>0</td><td>0</td></tr>
<tr><td>Smaller Villlages</td><td>Flitch Green</td><td>0</td><td>0</td></tr>
<tr><td>Smaller Villlages</td><td>Lindsell</td><td>0</td><td>0</td></tr>
<tr><td>Smaller Villlages</td><td>Little Dunmow</td><td>0</td><td>0</td></tr>
<tr><td>Smaller Villlages</td><td>Little Easton</td><td>0</td><td>0</td></tr>
</table>
</td><td>This policy may lead to Likely Significant Effects. It provides a quantum of residential development and the broad locations where that development will occur.

The following impact pathways are present in combination:

• Recreational Pressure
• Atmospheric pollution
• Water quality
• Water, quantity, level and flow

The potential impacts of this policy are discussed in the main body of the report.</td></tr>
</table>

Policy Name	Brief Policy Description				Potential Likely Significant Effect?
	Smaller Villlages	Quendon & Rickling	0	0	
	Smaller Villlages	Radwinter	0	0	
	Open Countryside	Cherry Green	0	0	
	Open Countryside	Duton Green	0	0	
	Open Countryside	Little Chesterford	0	0	
	Open Countryside	Tilty	0	0	
		Rural Area Total	1,206	650	
Core Policy 20: Affordable Housing on Rural Exception Sites	This policy sets out the conditions under which development proposals for affordable housing within rural areas, including within the Green Belt, to meet local needs will be permitted.				No Likely Significant Effect. This policy describes criteria to be assessed prior to any development proposals being approved, It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 21: Rural Diversification	This policy describes the conditions under which proposals for economic activities that bring about rural diversification shall normally be permitted.				No Likely Significant Effect. This policy describes criteria to be assessed prior to any development proposals being approved, It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 22: Net Zero Operational Carbon Development	This policy sets out the design requirements for new or extended buildings in relation to Net Zero targets, the requirements covered are for: ▪ Space heating demand ▪ Fossil fuel free ▪ Energy Use Intensity (EUI) limits ▪ On-site renewable energy generation ▪ As-built performance confirmation and in-use monitoring				No Likely Significant Effect. This policy describes criteria to be assessed prior to any development proposals being approved, It does not in itself lead to any development. The policy seeks to reduce the overall environmental impact of any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 23; Overheating	This policy sets out the requirement to demonstrate how the cooling hierarchy has been integrated into design decisions.				No Likely Significant Effect.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		This policy describes criteria to be assessed prior to any development proposals being approved, It does not in itself lead to any development. The policy seeks to reduce the overall environmental impact of any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 24: Embodied Carbon	This policy sets out the requirement to demonstrate the measures have been taken to reduce embodied carbon content as far as possible.	No Likely Significant Effect. This policy describes criteria to be assessed prior to any development proposals being approved, It does not in itself lead to any development. The policy seeks to reduce the overall environmental impact of any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 25: Renewable Energy Infrastructure	This policy describes the conditions under which proposals for renewable and low carbon energy generation and distribution networks will be supported and encouraged.	No Likely Significant Effect. This policy describes broad support for renewable energy infrastructure, It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 26: Providing for Sustainable Transport and Connectivity	This policy describes the conditions under which proposals for sustainable transport and connectivity identified in the Essex Local Transport Plan and the area travel plans will be supported.	No Likely Significant Effect. This policy describes broad support for sustainable transport and connectivity infrastructure, It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 27: Assessing the impact of Development on Transport Infrastructure	This policy is designed to increase the use of walking, cycling and the use of public transport by requiring an impact assessment and proposals to maximise the use of preferred transport methods.	No Likely Significant Effect. This policy describes the requirements for all developments to assess the impact of development on travel infrastructure. It does not in itself lead to any development.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 28: Active Travel- Walking and Cycling	This policy requires that development should be planned around a network of safe and accessible walking and cycling routes where dedicated traffic free links make walking and cycling the preferred choice for day-to-day trips, encourage sustainable travel, and support healthy and active lifestyles.	No Likely Significant Effect. This policy describes the requirements for all developments to plan around active travel transport routes. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 29: Electric and Low Emission Vehicles	This policy requires that development proposals should maximise the opportunity of occupiers and visitors to use electric and low emission vehicles, including electric bicycles and electric cargo cycles.	No Likely Significant Effect. This policy describes the requirements for all development proposals to maximise the opportunity for the use of low emission vehicles. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 30: Public Rights of Way	This policy requires that development proposals for sites that include a Public Right of Way within the site or are for major development proposals adjacent to an existing Right of Way there is a requirement to submit a Rights of Way Scheme that demonstrates how the development will protect, enhance and promote the public Rights of Way network.	No Likely Significant Effect. This policy describes the requirements for development proposals to pay due regard to public rights of way. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 31: Parking Standards	This policy requires that development proposals should take into account the latest Essex Parking Standards and the parking standards and design principles set out the Uttlesford Design Code. Cycle storage and electric cycle charging facilities should be prioritised. Electric car sharing schemes are encouraged.	No Likely Significant Effect. This policy describes the requirements for development proposals to adhere to Essex parking standards. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 32: The Movement and Management of Freight	This policy provides support for development and enhancement of local delivery hubs that help consolidate deliveries, reduce vehicle traffic and enable sustainable last-mile movements in the district, subject to their acceptability on the local and strategic road networks and local communities.	No Likely Significant Effect. This policy describes the conditions under which the development and enhancement of local delivery

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		hubs will be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 33: Managing Waste	This policy provides general support for sustainable waste management facilities as identified in the Essex Minerals Local Plan (2014) and Essex and Southend-on-Sea Waste Local Plan (2017), to help meet waste reduction and recycling targets.	No Likely Significant Effect. This policy describes the conditions under which the proposals for sustainable waste management facilities will be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 34: Water Supply and Protection of Water Resources	This policy requires that development proposals should demonstrate how they contribute positively towards achieving 'good' status under the Water Framework Directive for surface and ground waterbodies. Development must not lead to a reduction in groundwater levels or reduced flows in any water courses including the chalk streams. It provides guidance on ▪ Water supply ▪ Water efficiency ▪ Water Recycling ▪ Contamination ▪ Infrastructure	No Likely Significant Effect. This policy describes the approach to managing water supply and protecting water resources. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 35: Watercourse Protection and Enhancement	This policy describes measures to protect and enhance watercourses by: ▪ Implementing buffer zones. ▪ Managing pollution from proposals in river basins or flood plains. ▪ Ensuring adequate water supply and treatment infrastructure are in place. ▪ Placing no additional burden on chalk aquifer abstraction or ecology.	No Likely Significant Effect. This policy describes the approach to watercourse protection and enhancement. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 36: Flood Risk	This policy requires that development proposals should demonstrate that they will be safe for their lifetime and that they reduce and, where possible, avoid the risk of all forms of flooding to future occupiers, and do not increase the risk of flooding elsewhere.	No Likely Significant Effect.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		This policy describes the approach to managing flood risk. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 37: Sustainable Drainage Systems	This policy requires that all major development will be required to use sustainable drainage systems (SuDS) for the management of surface water run-off, unless there is clear evidence that this would be inappropriate or there would be significant harm to water quality, flood risk or biodiversity.	No Likely Significant Effect. This policy describes the approach to managing SuDS. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 38: Sites Designated for Biodiversity or Geology	This policy requires that development proposals will be supported where they protect and enhance sites internationally, nationally and/ or locally designated for their importance to nature conservation, ecological or geological value as well as non-designated sites of ecological or geological value.	No Likely Significant Effect. This policy describes the approach to protecting nature sites, specifically targeting the protection of Habitats sites. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 39: Green and Blue Infrastructure	This policy states that in planning for major developments, priority will be given to the role of GBI in responding to climate change, managing flood risk, protecting and enhancing heritage assets, supporting sustainable transport options, supporting biodiversity and the natural environment, and ensuring open space for sports and recreation is secured for the community.	No Likely Significant Effect. This policy describes the approach to protecting green and blue infrastructure. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 40: Biodiversity and Nature Recovery	This policy requires that all development proposals must conserve and enhance Nature Recovery Networks, Habitats Sites and Habitats and Species of Principal Importance, increasing their size and connectivity where beneficial, including the promotion of connections outside the immediate site boundary, and as otherwise in accordance with the Green and Blue Infrastructure strategy or the local GBI Plan for the Area Strategy sites.	No Likely Significant Effect. This policy describes the approach to protecting biodiversity and nature recovery. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
Core Policy 41: Landscape Character	This policy requires that development proposals should preserve the character and appearance of the landscape, the nature and physical appearance of ancient landscapes, or geological sites of importance through the restoration, management and enhancement of existing areas, features or habitats and where appropriate the creation of new ones, including the planting of woodlands, trees and hedgerows.	No Likely Significant Effect. This policy describes the approach to protecting landscape character. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 42: Pollution and Contamination	This policy requires that the potential impacts of exposure to pollutants must be considered in locating development, during construction and in use. Development must not cause unacceptable risk to public health or safety, the environment, general amenity or existing uses due to the potential of vibration, odour, light pollution, pollution of surface/ ground water sources or land pollution and to occupiers of surrounding land uses or the historic and natural environment.	No Likely Significant Effect. This policy describes the approach to preventing pollution and contamination. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 43: Air Quality	This policy states that development will not be permitted where it might lead to significant adverse effects on health, the environment or amenity from emissions to air.	No Likely Significant Effect. This policy describes the approach to maintain air quality. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 44: Noise	This policy requires that proposals will not result in an unacceptable risk to public health or safety, the environment, general amenity or existing users due to the potential of noise.	No Likely Significant Effect. This policy describes the approach to manage the impact of noise from developments. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 45: Protection of Existing Employment Space	This policy protects existing employment areas as identified on the Policies Map and in Appendix 14 by safeguarding for offices, warehouses, workshops, industrial and complementary sui generis uses.	No Likely Significant Effect. This policy safeguards identified areas for use as employment space. It does not in itself lead to any development.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 46: Development at Allocated Employment Sites	This policy safeguards strategic employment allocations and the conditions under which alternative uses will be considered.	No Likely Significant Effect. This policy safeguards identified areas for use as employment space. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 47: Ancillary Uses on Existing or Allocated Employment Sites	This policy describes the conditions under which proposals for uses other than E(g), B2 and B8 business uses on existing or allocated employment sites will be permitted.	No Likely Significant Effect. This policy safeguards identified areas for use as employment space. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 48: New Employment Development on Unallocated Sites	This policy describes the conditions under which proposals for new employment (Use Classes E(g), B2 or B8) will be supported on unallocated sites in or on the edge of existing employment sites (as defined in Core Policy 45) and the built-up area of Key Settlements, Local Rural Centres and Larger Villages.	No Likely Significant Effect. This policy sets out the conditions under which new employment development will be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 49: Employment and Training	This policy provides general support for employment and training schemes to maximise local employment opportunities and help address skills deficits in the local population.	No Likely Significant Effect. This policy sets out general support for employment and training schemes. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 50: Retail and Main Town Centre Uses Hierarchy	This policy outlines the council's commitment to promote the continued role and function of its town and local centres to positively contribute towards their viability, vitality, character and public realm.	No Likely Significant Effect.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		This policy sets out general support for the town centre hierarchy. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 51: Tourism and the Visitor Economy	This policy describes the conditions under which the Council will support development to advance tourism and the visitor economy, including leisure uses.	No Likely Significant Effect. This policy sets out general support for the tourism and leisure development. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 52: Good Design Outcomes and Process	This policy outlines the nature of the council's support for proposals which can clearly demonstrate compliance with appropriate design policies.	No Likely Significant Effect. This management policy governs design of developments. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 52a: Good Design Outcomes and Process	This policy outlines the nature of the council's support for strategic allocation proposals which can clearly demonstrate compliance with appropriate design policies.	No Likely Significant Effect. This management policy governs design of developments. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 53: Standards for New Residential Development	This policy sets out the expectations of new major residential development to provide a mix of homes to meet current and future requirements in the interests of meeting housing need and creating socially mixed, vibrant and inclusive communities	No Likely Significant Effect. This management policy lays out standards for residential developments. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
Core Policy 54: Specialist Housing	This policy sets out the expectations of new major residential development to provide at least 5% of the proposed dwellings as extra care or sheltered/retirement housing.	No Likely Significant Effect. This management policy lays out requirements for specialist housing. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 55: Residential Space Standards	This policy outlines the expectations with regard to “residential space standards”.	No Likely Significant Effect. This management policy lays out requirements for space standards. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 56: Affordable Dwellings	This policy sets out the expectation that new residential development (including conversions and changes of use) of 10 or more self-contained units should provide 35% of the total dwellings as affordable dwellings.	No Likely Significant Effect. This management policy lays out requirements for inclusion of affordable dwellings. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 57: Sub-Division of Dwellings and Homes in Multiple Ownership	This policy describes the conditions under which proposals for the subdivision of a dwelling into two or more dwellings or for Houses in Multiple Occupation, will be permitted.	No Likely Significant Effect. This management policy lays out requirements for houses of multiple occupancy. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 58: Custom and Self-Build Housing	This policy describes the conditions under which proposals for self and custom build dwellings, to be built and occupied by the applicant or to be built on behalf of the applicant, and which are consistent with the policies of this Local Plan, will be supported in principle.	No Likely Significant Effect. This management policy lays out requirements for custom and self-build housing. It does not in itself lead to any development.

<table>
<tr><th>Policy Name</th><th>Brief Policy Description</th><th>Potential Likely Significant Effect?</th></tr>
<tr><td></td><td></td><td>There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.</td></tr>
<tr><td>Core Policy 59: The Metropolitan Green Belt</td><td>This policy states the commitments to maintaining the Metropolitan Green Belt boundaries within Uttlesford District.</td><td>No Likely Significant Effect.

This management policy outlines the protection for the metropolitan green belt.

It does not in itself lead to any development.

There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.</td></tr>
<tr><td>Core Policy 60: The Travelling Community</td><td>This policy is to meet the requirement for Gypsy, Traveller and Travelling Show People’s accommodation in Uttlesford District.

Table 11.2 Gypsy and Traveller Site Allocations

<table><tr><th>Settlement</th><th>Site Name</th><th>Number of Pitches</th></tr><tr><td>Birchanger</td><td></td><td>12</td></tr><tr><td>Felsted</td><td></td><td>12</td></tr></table></td><td>This policy may lead to Likely Significant Effects.

It provides a quantum of residential development and the location where that development will occur.

The following impact pathways are present in combination:

• Recreational Pressure
• Atmospheric pollution
• Water quality
• Water, quantity, level and flow

The potential impacts of this policy are discussed in the main body of the report.</td></tr>
<tr><td>Core Policy 61: The Historic Environment</td><td>This policy requires that all development proposals should conserve, and where appropriate enhance, the special character, appearance, and distinctiveness of Uttlesford District's historic environment.</td><td>No Likely Significant Effect.

This management policy provides for the conservation of the historic environment..

It does not in itself lead to any development.

There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.</td></tr>
<tr><td>Core Policy 62: Listed Buildings</td><td>This policy describes the conditions under which proposals for additions or alterations to, or change of use of, a Listed Building (including partial demolition) or for development within the curtilage of, or affecting the setting of, a Listed Building, will be supported.</td><td>No Likely Significant Effect.

This management policy provides guidance for development of listed buildings.</td></tr>
</table>

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 63: Conservation Areas	This policy describes the requirements for proposals for development in a Conservation Area or affecting the setting of a Conservation Area should pay special attention to.	No Likely Significant Effect. This management policy provides guidance for development of conservation areas. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 64: Archaeological Assets	This policy provides for the safeguarding of archaeological assets.	No Likely Significant Effect. This management policy provides guidance for protection of archaeological assets. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 65: Non-Designated Heritage Assets of Local Importance	This policy provides for the safeguarding of heritage assets of local interest, including those present on the Council's Local Heritage List.	No Likely Significant Effect. This management policy provides for the retention of local heritage assets. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 66: Planning for Health	This policy provides general support for proposals that reduce health inequalities, promote healthier lifestyles and improve the health and well-being of our existing and new communities.	No Likely Significant Effect. This policy provides general support for proposals that promote or support positive health outcomes. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.

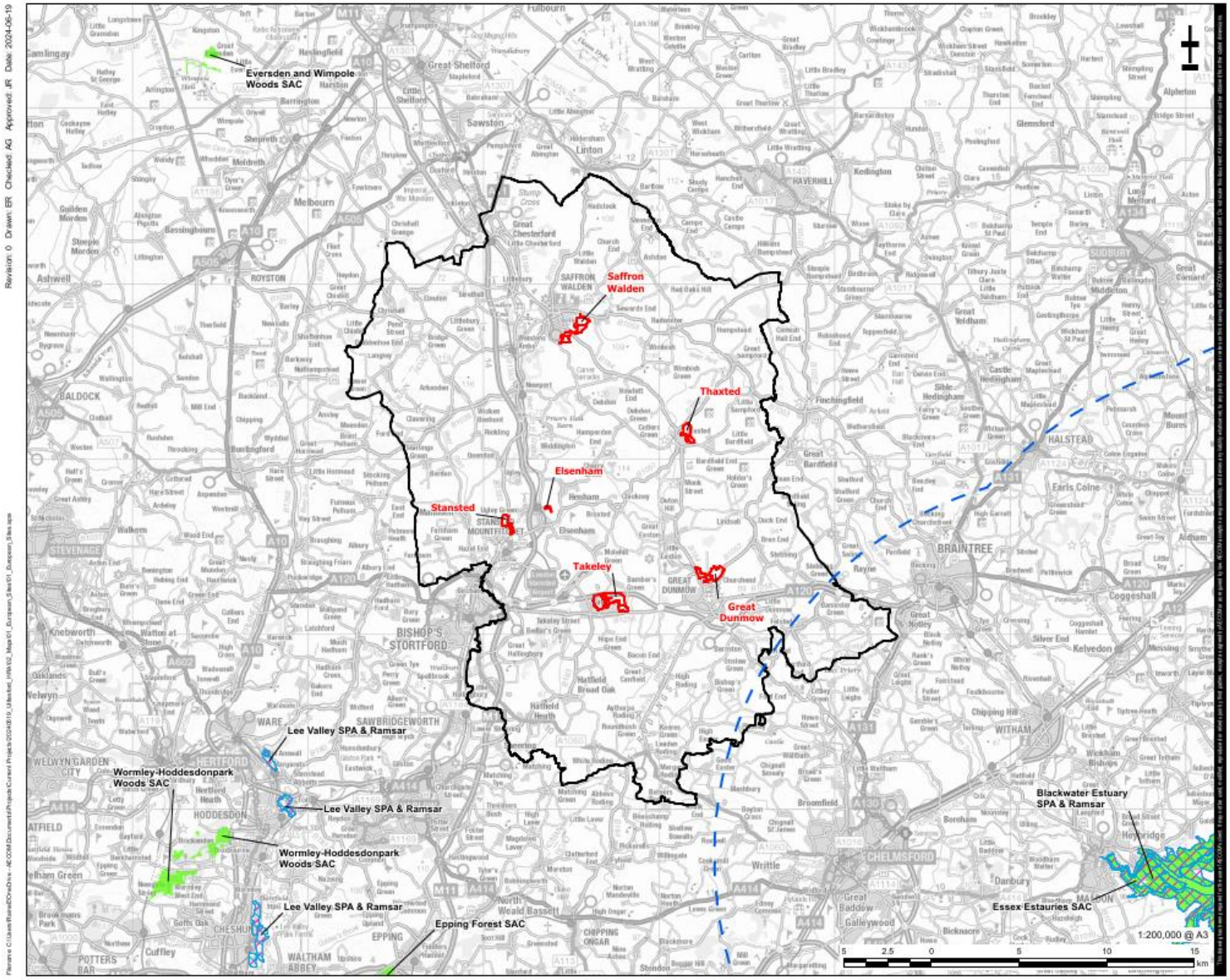
Policy Name	Brief Policy Description	Potential Likely Significant Effect?
Core Policy 67: Open Space, Sport and Recreation	This policy describes the restricted conditions under which proposals including the loss of any open space, sport, and recreation provision, will be permitted.	No Likely Significant Effect. This policy provides for general protection of open space and recreational facilities. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 67a: Open Space, Sport and Recreation	This policy describes the Council's preferred hierarchy of management bodies for public open space following development.	No Likely Significant Effect. This policy provides for general protection of open space and recreational facilities. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 68: Community Uses	This policy describes the conditions under which proposals new community uses will be supported.	No Likely Significant Effect. This policy provides for general support for new community facilities. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 69: New Cemeteries and Burial Space	This policy describes the conditions under which proposals new cemeteries and burial grounds will be supported.	No Likely Significant Effect. This policy provides guidance for proposals for burial grounds. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Core Policy 70: Communications Infrastructure	This policy describes the expectations for major development proposals to demonstrate how high-speed broadband infrastructure, and other communications infrastructure, will be provided in time for occupation of the development.	No Likely Significant Effect. This policy provides requirements for proposals to consider the communications infrastructure. It does not in itself lead to any development.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
CP71 Monitoring and Implementation	This policy relates to the monitoring of progress made against the targets set in the Local Plan, and the contingency measures which may be taken in the event of progress towards a target being insufficient.	No Likely Significant Effect. This policy provides for monitoring of progress against plan. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Development Policy 1: New Dwellings in the Open Countryside	This policy stipulates that new dwellings in the open countryside, which are not agricultural workers dwellings, will only be permitted under the specified conditions.	No Likely Significant Effect. This policy details the conditions under which proposals for new dwellings in open countryside will be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Development Policy 2: Replacement Dwellings in the Open Countryside	This policy describes the conditions under which the replacement of an existing dwelling in the open countryside will be supported.	No Likely Significant Effect. This policy details the conditions under which proposals for replacement dwellings in open countryside will be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Development Policy 3: Rural Workers' Dwellings in the Open Countryside	This policy describes the conditions under which applications for new dwellings that support rural operations will only be acceptable where they are essential to the effective running of existing rural businesses. Applications should be accompanied by evidence of:	No Likely Significant Effect. This policy details the conditions under which proposals for new rural dwellings will be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
Development Policy 4: Extensions to Dwellings in the Countryside	This policy describes the conditions under which extensions to dwellings in the open countryside will be supported.	No Likely Significant Effect. This policy details the conditions under which proposals for extensions to rural dwellings will be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Development Policy 5: Change of Use of Agricultural Land to Domestic Gardens	This policy describes the conditions under which the change of use of agricultural land to a domestic garden will be supported.	No Likely Significant Effect. This policy details the conditions under which a proposal for change of use from agricultural land to domestic gardens will be allowed. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Development Policy 6: Hot Food Takeaways	This policy describes the conditions under which proposals for 'sui generis' hot food takeaways will be permitted.	No Likely Significant Effect. This policy details the conditions which must be met for proposals for hot food takeaways to be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Development Policy 7: New Shops or Cafes in Smaller Settlements	This policy describes the conditions under which the Council will support proposals for new small shops or extensions to existing shops within or adjacent to existing settlements.	No Likely Significant Effect. This policy details the conditions which must be met for proposals for new small shops to be supported. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Development Policy 8: Tourist Accommodation	This policy describes the conditions under which proposals for self-catering accommodation will be permitted.	No Likely Significant Effect. This policy details the conditions which must be met for tourist accommodation to be supported.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.
Development Policy 9: Public Art	This policy sets the expectation that major developments will contribute to a public art fund to be used to deliver public art projects located on or off site with clear benefit for the local community.	No Likely Significant Effect. This policy details the expectations with regard to support for public art projects. It does not in itself lead to any development. There are no linking impact pathways to Habitat sites. The policy is screened out from Appropriate Assessment.

Appendix B Habitats Sites in relation to Uttlesford District Allocations



AECOM

PROJECT

Uttlesford Local Plan Habitats Regulations Assessment

CLIENT

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LEGEND

- Uttlesford District Boundary
- Proposed Strategic Allocation
- Blackwater Estuary SPA - 22km Study Area
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar

NOTES

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60656885

FIGURE TITLE

European Sites

FIGURE NUMBER

Figure 1

Revision: 0 Drawn: ER Checked: AG Approved: JR Date: 2024-06-19

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