Huntingdonshire's Local Plan to 2036 - Habitats Regulations Assessment 2017

Bodsey Ecology Limited

Final Report
22nd May 2017

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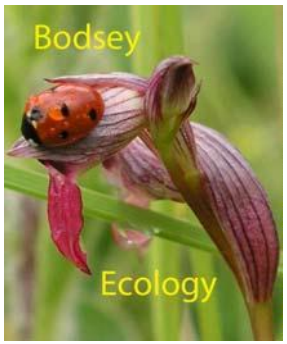

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Contents

Disclaimer

Huntingdonshire 's Local Plan to 2036 – Habitats Regulations Assessment 2017

Final Report

Prepared by: Pete Carey and Bill Butcher

Date: 22nd May 2017

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Director: Bodsey Ecology Limited

Executive Summary

1. Bodsey Ecology Limited was appointed by Huntingdonshire District Council in November 2016 to undertake an Appropriate Assessment (AA) of "Huntingdonshire's Local Plan to 2036: towards submission (HLP2036)".

2. Appropriate Assessment (AA) is required under the EU Habitats Directive (92/43/EEC), as transposed into the Habitats Regulations 2010, for any proposed plan or project which may have a significant effect on one or more European sites and which is not necessary for the management of those sites. The purpose of AA is to determine whether or not significant effects are likely and to suggest ways in which they could be avoided.

3. This report was produced following the recommendations of a Screening Report carried out in 2013 (The Landscape Partnership, 2013) that recommended an AA was necessary as significant effects on European sites of policies from the Huntingdonshire Local Plan as it stood in 2013 could not be screened out. Three European sites are within or partly within the borders of Huntingdonshire and a further six are within15km and the Wash is linked by waterways downstream.

SACs	SPAs	Ramsar sites
Portholme		
Fenland		Woodwalton Fen
Ouse Washes	Ouse Washes	Ouse Washes
	Rutland Water	Rutland Water
Orton Pits		
Nene Washes	Nene Washes	Nene Washes
Eversden and Wimpole Woods		
Barnack Hills and Holes		
	The Wash	The Wash
	Upper Nene Valley Gravel Pits	Upper Nene Valley Gravel Pits

Table 1. European sites previously screened and included in this assessment. The Wash and Upper Nene Valley Gravel Pits are iincluded for the first time in this assessment.

4. AA has assessed potential effects on site integrity of these sites with reference to the qualifying features (habitats and species) for which they were designated and the site conservation objectives.

5. Seven impact pathways were identified that could give rise to significant effects on European sites:

- Development on or adjacent to the European site destroying part or all of the site, or changing the ecological functioning of the site (e.g. disrupting water flows or foraging areas)
- Increased public recreation, causing disturbance to birds, damage to vegetation, increased littering / flytipping or leading to management compromises (e.g. grazing being restricted).
- Air pollution, air-borne pollutants
- Human induced changes in hydraulic conditions (this option was chosen because it includes both drought and flooding)
- Invasive non-native species

- Pollution to groundwater (point sources and diffuse sources)
- Reduction in water quality, from increased discharges of sewage and surface water drainage, or from pollution incidents, either during or after construction.

6. This AA finds that as it stands HLP2036 could have significant effects on two of the sites, Portholme SAC and The Ouse Washes SAC/SPA/Ramsar. Portholme could be affected by increased recreational use and a reduction in the quality of flood water. The Ouse Washes could be affected by increased flooding. The effects could be avoided by rewording and subsequent adherence to policies LP7, LP18, LP19, LP26, LP27 and LP38.

7. The four scenarios presented for HLP2036 do not have an impact on the results of the AA.

8. The AA concludes that, provided the waste water treatment works can prevent further phosphates entering the River Great Ouse, policies identified as key in this report are retained, and/or wording changes recommended for policies highlighted are adopted, the HLP2036 will not have adverse effects on site integrity of any European site and therefore Huntingdonshire District Council can proceed with HLP2036 in the context of Habitats Regulations 2010.

1 Introduction

1.1 Background

1.1.1 Bodsey Ecology Limited was appointed by Huntingdonshire District Council in November 2016 to undertake an Appropriate Assessment (AA) of "Huntingdonshire's Local Plan 2036: towards submission" document issued on 21st November 2016.

1.1.2 'Appropriate Assessment (AA)' is required under the EU Habitats Directive (92/43/EC) for any proposed plan or project which is not for the management of European sites and which may have a significant effect upon them. The purpose of AA is to determine whether or not adverse effects on site integrity will occur and to propose ways in which they could be avoided.

1.1.3 This AA follows the need for Habitats Regulations Assessment (HRA) identified by a Screening Report (The Landscape Partnership, 2013) of earlier drafts of the Huntingdonshire Local Plan and a review of that Screening Report (Bodsey Ecology Limited, 2017).

1.2 This Report

1.2.1 This report summarises the results of the HRA process, undertaken for those European sites which could not be screened out in the Screening Report (The Landscape Partnership, 2013) or its review (Bodsey Ecology Limited, 2017) .

1.2.2 The HLP2036 sets out the Vision, Objectives and Strategy for the District over the coming 20 years. Of particular relevance to this AA the document lists the scale of development and the proposed locations of that development. Currently there are four scenarios of development being considered. This report looks at the plan in its entirety and at the four scenarios.

1.3 The Legislative Context

1.3.1 The Conservation of Habitats and Species Regulations 2010 (as amended 2012) [the Habitats Regulations] require that Habitats Regulation Assessment (HRA) is applied to all Statutory land use plans in England and Wales. Huntingdonshire District Council, as the plan-making authority, must before the plan is given effect, make an Appropriate Assessment of the implications for the site in view of that site's conservation objectives where (a) the plan is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of the site (Paragraph102 of the Habitats Regulations 2010).

1.3.2 The aim of the HRA process is to assess the potential effects arising from a plan against the conservation objectives of any site designated for its nature conservation importance.

1.3.3 The Habitats Regulations transpose the requirements of the European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna [The Habitats Directive which aims to protect the habitats and species of European nature conservation importance. The Directive establishes a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 sites or European Sites, and comprise Special Areas of Conservation (SACs) and Special Protection

Areas (SPAs) which are designated under European Directive (2009/147/EC) on the conservation of wild birds [the Birds Directive].

1.3.4 In addition, Government guidance also requires that Ramsar sites (which support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance [Ramsar Convention]) are included within the HRA process as required by the Regulations.

1.3.5 The process of HRA is based on the precautionary principle and evidence should be presented to allow a determination of whether the impacts of a land-use plan, when considered in combination with the effects of other plans and projects against the conservation objectives of a European Site; would adversely affect the integrity of that site. Where effects are considered uncertain, the potential for adverse impacts should be assumed.

1.3.6 It is important to recognise that this AA deals exclusively with the requirements of the Habitats Regulations 2010, which in turn are concerned only with sites designated for their importance at the European level. It is not a comprehensive review of interactions of HLP2036 with with biodiversity and important components such as SSSIs, Local Wildlife Sites, Green Infrastructure and Protected Species and Habitats of Principal Importance.

2 Methodology

2.1.1 A method was employed to ensure that consideration was made of the possible threats to all the qualifying features of European sites, both direct and indirect, that could arise from HP2036, and any other plans.

2.1.2 The possible threats were identified during the review of the screening report (Bodsey Ecology, 2017). They are a combination of the pressures listed by JNCC for the European sites in question and those identified in the original screening report (The Landscape Partnership, 2013). The threats are:

- Development on or adjacent to the European site destroying part or all of the site, or changing the ecological functioning of the site (e.g. disrupting water flows, foraging areas or migration routes)
- Increased public recreation, causing disturbance to birds, damage to vegetation, increased littering / flytipping or leading to management compromises (e.g. grazing being restricted).
- Air pollution, air-borne pollutants
- Human induced changes in hydraulic conditions
- Invasive non-native species
- Pollution to groundwater (point sources and diffuse sources)
- Reduction in water quality, from increased discharges of sewage and surface water drainage, or from pollution incidents, either during or after construction.

2.1.3 We assumed that all threats could apply to all sites at the beginning of the analysis.

2.2 Analysis

2.2.1 For each threat at each European site and for each qualifying feature within each European site, the following questions were asked:

1. Could HLP2036 increase the threat?
2. Could HLP2036 in combination with any other plan increase the threat?

3. Is there a difference in the magnitude of the threat between the four scenarios presented for HLP2036?
4. Could the threat lead to an impact on the European site?
5. If the threat could impact on the European site, will it affect the qualifying features?

2.2.2 If the answer to the last question was 'yes' then possible avoidance steps were proposed. In cases where avoidance was considered only partly possible mitigation measures were suggested. In no case was avoidance totally impossible.

2.3 Sources of information for the qualifying features

2.3.1 The list of qualifying features for each of the European sites (Appendix 1) was obtained from the appropriate JNCC or Natural England web page for the SAC, SPA and/or RAMSAR in question.

2.3.2 It is important to understand the environmental requirements of each qualifying feature when considering whether a perceived threat is a real threat. For example, increased summer flooding is not a direct threat to a wintering wader that is not present during the summer. Furthermore, the Site Improvement Plan for each of the sites (Appendix 2) was interrogated to understand the threats and current measures to counter them

2.3.3 The environmental requirements of each qualifying feature (species and/or habitat) were collated from appropriate national sources. A very large majority of the qualifying features were birds and Information on these species was obtained from the RSPB website. Information for the remainder of species and habitats was obtained from the JNCC and/or Natural England websites or from the relevant species recording group. In the case of the Barbastelle Bat, the qualifying feature of the Eversden and Wimpole Woods SAC, the area of principal interest as published in the South Cambridgeshire Biodiversity SPD, adopted 2009 (page 23) was used to guide the analysis.

2.4 Sources of information required to answer each question

Could HLP2036 increase the threat?

2.4.1 The information within the document "Huntingdonshire's Local Plan to 2036: towards submission" was vital. That report is outlined in section 3 below. In addition, the Strategic Flood Risk Assessment that is being finalised by JBA consulting was provided along with the "stage 2: detailed water cycle study update" (URS, December 2014). Local insight came from Bodsey Ecology Limited itself and through informal contact with the Environment Agency, The RSPB and Bedfordshire, Cambridgeshire and Northamptonshire Wildlife Trust.

2.4.2 Each policy of HLP2036 was studied in detail to identify any potential likely effects (Appendix 4). Subsequently, individual development allocations were screened for likely significant effects identified in the policy screening (Appendices 5 and 6).

Could HLP2036 in combination with any other plan increase the threat?

2.4.3 The local plans of all the neighbouring district councils were considered along with the background information resources on the council websites (a full list is available in the reference section). The work of the Environment Agency in modelling the impact of climate change and development on the River Great Ouse was also very important to this study. The Great Ouse Catchment Management Plan, summary report 2011 was reviewed and the full plan requested for examination after that. The Environment Agency were contacted for advice on more recent modelling that is underway.

Is there a difference in the magnitude of the threat between the four scenarios presented for HLP2036?

2.4.4 The four scenarios that were reviewed can be briefly described as: Scenario 1 "Full Wyton"; Scenario 2 "Slow Wyton"; Scenario 3 "No Wyton"; and Scenario 4 "Full Wyton with A141 Upgrade". Fundamentally, the difference between the scenarios is to do with scale. Scenario 4 is bigger than Scenario 1 which is bigger than Scenario 2 that is bigger than Scenario 3. The task of this part of the analysis was to determine whether this difference in scale will be translated to the threats on the European sites. The document "Huntingdonshire's Local Plan to 2036: towards submission" was again used along with the relevant water and flooding studies.

Could the threat lead to an impact on the European site?

2.4.5 The information gathered for questions 1 to 3 was used along with the local information on the current state of the European sites to determine whether the threat would have an impact. The precautionary principle was used. If a threat could have an impact (even if unlikely) it was included. This use of the precautionary principle became very relevant when discussing the possible impacts of summer flooding, where the likelihood is small for any particular year but over a longer period there will be a high probability, mainly due to the impacts of climate change (Great Ouse Catchment Management Plan, Summary Report, 2011).

If the threat could impact on the European site, will it affect the qualifying features?

2.4.6 Again, the precautionary principle was used but no further information in addition to that already collected was required at this stage.

3 Huntingdon Local Plan to 2036

3.1.1 This Habitats Regulation Assessment is based on the details provided in the document "Huntingdonshire's Local Plan to 2036: towards submission" that was released on 21st November 2016 specifically for the Habitats Regulations Assessment and it also includes updated policies for viability testing.

3.1.2 HLP2036 has 41 policies that should ensure that development is carried out in the most sustainable way possible. In some cases the policies have been developed as avoidance/mitigation measures for HLP2036. Therefore, the analysis in section 2 ignored the policies already in place unless it was considered that HLP2036 could have an impact on the integrity of a European site. If an impact on European site integrity was identified by the analysis, the policies were checked to determine whether they would avoid the impact (Appendix 4). In some case slight modifications to the policies have been suggested if this will make the policy more relevant to the Habitats Regulations 2010 and ensure avoidance of impacts on European site integrity.

3.1.3 HLP2036 has 68 separate allocations for development (shown in Appendix 3). Each of these was screened against any of the policies where wording was considered to leave the possibility for significant effects on qualifying features of the European sites to occur (Appendices 5 and 6).

4 Other local plans considered

4.1.1 It is normal practice to consider other plans that could have cumulative impacts on a European site when carrying out an Appropriate Assessment. This was particularly pertinent to HLP2036 because the three European sites in Huntingdonshire and also the Nene Washes and The Wash are all dependent on the flow of water through the River

Great Ouse and River Nene catchments. Any plan that could affect the water in one of these catchments will therefore be linked to the effects of HLP2036 on the catchments.

4.1.2 Several districts lie within the catchments of the River Ouse and River Nene (Figure 1). The local plans of Milton Keynes, Bedford District, South Bedfordshire, Central Bedfordshire, South Cambridgeshire, East Cambridgeshire, Cambridge City, Fenland, Forest Heath, St Edmundsbury, Peterborough, North Northamptonshire, Kings Lynn and West Norfolk and South Holland District Council were inspected, along with HRAs and screening for HRAs, to determine the scale of development within the catchments of the major rivers and the mitigation measures those councils have put in place to prevent impacts on river quantity and quality in the coming decades. The full list of documents reviewed for this Appropriate Assessment is given in the list of references. The modelling of the Environment Agency (Great Ouse Catchment Management Plan, 2010) took a whole catchment view of the impacts of climate change and development on water flows and water treatment, which was very useful to our review.

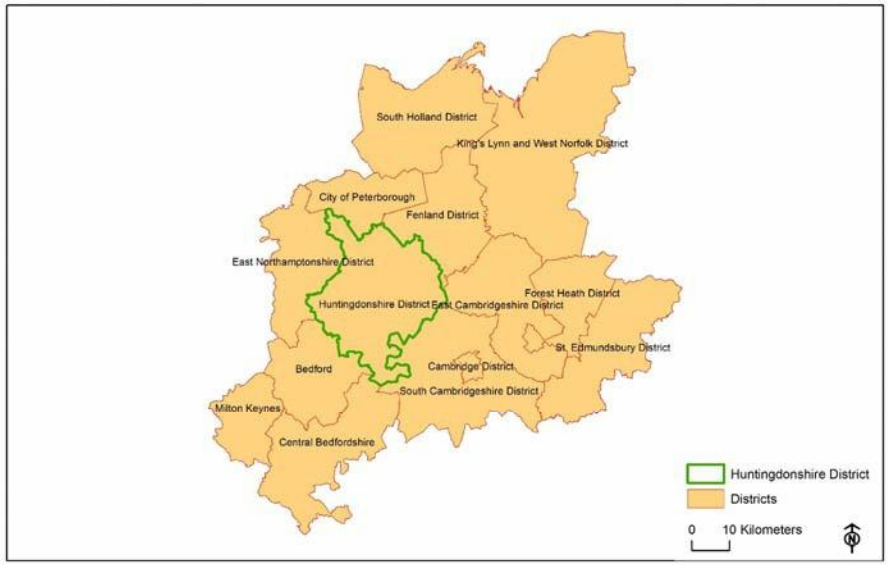

Figure 1. Huntingdonshire and neighbouring districts sharing river catchments

5 The European Sites

5.1 European Sites in this Appropriate Assessment

5.1.1 European sites, often known as Natura 2000 sites across Europe, are those legally registered as Special Protection Areas (for bird sites) and Special Areas of Conservation (for species other than birds, and habitats). These are usually abbreviated as SPA and SAC respectively. Wetlands of International Importance, designated under the Ramsar Convention, are usually abbreviated as Ramsar sites.

5.1.2 There are three European sites in, or partly in, Huntingdonshire (Figure 2): Portholme SAC; The Ouse Washes SAC/SPA; and Woodwalton Fen (Ramsar site) that is part of the Fenland SAC. The official descriptions of these sites can be found on the JNCC website and the Natura 2000 standard data form and/or site objectives are available on the Natural England website. These documents were provided as Appendix 1 of the Screening Report in 2013 (The Landscape Partnership 2013) and are not repeated here as they are unchanged. Below is a brief description of each site and the Qualifying Features that it was designated for. The current web address for the JNCC and Natural England pages are also provided as these may have changed since 2013. The Qualifying Features, and their habitat requirements are given as Appendix 1 of this report. The Site Improvement Plans for the European sites within Huntingdonshire and the Upper Nene Valley Gravel Pits SPA/Ramsar are provided in Appendix 2.

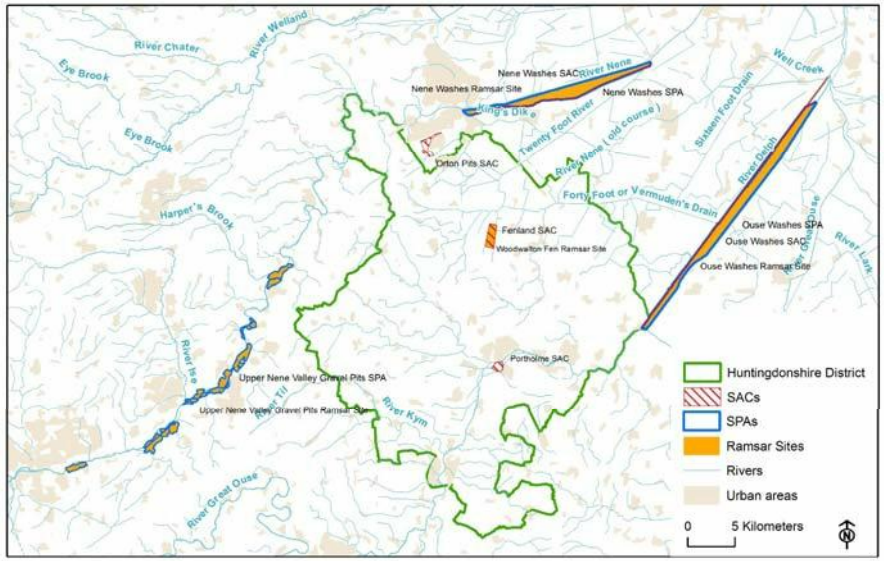

Figure 2. European sites in Huntingdonshire

5.2 Portholme

5.2.1 Portholme SAC represents approximately 7% of the remaining national resource of traditionally managed flood meadow. It lies in between the River Great Ouse and the Alconbury Brook (one of the tributaries of the Great Ouse), immediately south of Huntingdon and West of Godmanchester. It is adjacent to the A14 and the east coast mainline railway. It is grazed by cattle, and it floods regularly but not every year. There are several paths that cross the site. The site is vulnerable to pollution arising from agricultural run-off and urban sources coming downstream from Milton Keynes, Bedford, Bedfordshire, St Neots and Huntingdonshire.

5.2.2 The Qualifying Feature for Portholme SAC is the Annex I habitat 6510 *Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis).* There has been a long history of favourable management and very little of the site has suffered from agricultural improvement, and so it demonstrates good conservation of structure and function. It supports a small population of fritillary Fritillaria meleagris.However, it has suffered from eutrophication.

5.2.3 The conservation objectives for Portholme SAC are listed by Natural England as to maintain or restore:

- 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

5.2.4 The site is part of the Floodplain Meadows Partnership (http://www.floodplainmeadows.org.uk/about-meadows/meadow-map/portholme). The first two conservation objectives will likely be met because of the conservation objectives of the owners and the Floodplain Meadow Partnership. However, the third objective, that supporting processes be maintained is more complicated. The quality of the water flooding the meadows threatens the qualifying feature. The water in the River Great Ouse and Alconbury Brook, probably have higher than optimal levels of nutrients and the majority of this comes from agricultural run-off (Anglian River Basin District Management Plan 2009, Annex D page 103). The updated Anglian River Basin Management Plan (December 2015) states that 47% of all of the waterbodies in the area are affected by agricultural run-off but that report does not mention Portholme specifically. The site management plan (Appendix 2) does state that nutrients from the flood waters of the Ouse are a major contributor to the poor condition of the site.

5.2.5 Currently the site improvement plan for this site consists of measures that consider: inappropriate water levels by reviewing the water level management plan and monitoring flood levels; and water pollution by reviewing the diffuse water pollution plan and monitoring phosphate/sediment levels (Appendix 2).

Source

SAC: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030054

Conservation objectives:
http://publications.naturalengland.org.uk/publication/4802651548024832

5.3 Woodwalton Fen

5.3.1 Woodwalton Fen is part of the Fenland SAC and a Ramsar site in its own right. It is one of the few remaining undrained wetlands in the Fens. It is close to the settlement of Ramsey Heights. Of major interest to this assessment is the water budget of the site. The Great Raveley Drain (a Middle Level Commissioner Main Drain) runs along one side of Woodwalton Fen and the Wheatley Drain along the other. Slightly further to the west is the

Monks Lode. The two major drains (Great Raveley and Monks Lode) are on the boundaries of three of the Internal Drainage Boards of the Middle Level (Sawtry; Ramsey, Upwood and Great Raveley; and Woodwalton) . The water in these drains is normally pumped into the River Great Ouse. Upstream of Woodwalton Fen is Sawtry and the A1 which could be a threat. The Detailed Water Cycle Study (URS, 2014, page 21) states that the Sawtry Waste water treatment works has the capacity to deal with the increased output of any planned developments in that area.

5.3.2 The Fenland SAC has two qualifying species and two Annex I habitats that means it qualifies as a European site. Only one of the habitats is found at Woodwalton Fen, 6410 *Molinia meadows on calcareous peaty or clayey-silt-laden soils (Molinion caeruleon).* The site has suffered historically from flooding by water containing too much nitrate and phosphate that predominantly came from agricultural run-off but, possibly, also wastewater treatment works (WwTW) before phosphate stripping was undertaken. In the future there is a risk from flood water due to agricultural run-off and possibly from riverine sediments that result from the pre-phosphate stripping era at WwTWs. Atmospheric nitrogen deposition (from the A1) and pollution from RAF Alconbury when it was operating as a military airfield could also have been a problem.

5.3.3 The conservation objectives for the whole of the Fenland SAC are to maintain or restore:

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

5.3.4 The site is part of the Great Fen project and is an integral part of the Green Infrastructure project for Huntingdonshire and Cambridgeshire as a whole (https://www.cambridge.gov.uk/cambridgeshire-green-infrastructure-strategy). The site has a classroom and is used for wildlife education. Although public access is encouraged, dogs are not allowed and the site tends to be visited only by naturalists, as access is difficult by car and there is limited parking available.

5.3.5 Woodwalton Fen has been used as an emergency reservoir in times of flooding. A threat to the site has been the nutrients that this floodwater brings with it.

5.3.6 The site improvement plan for Woodwalton Fen considers measures to alleviate threats from water pollution, hydrological changes and air pollution (atmospheric nitrogen deposition (Appendix 2).

Source

SAC: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0014782

RAMSAR: http://jncc.defra.gov.uk/pdf/RIS/UK11078.pdf

Conservation objectives:
http://publications.naturalengland.org.uk/publication/6712672527581184

5.4 Ouse Washes

5.4.1 The Ouse Washes are both a SAC and a SPA/Ramsar. A single field of the Ouse Washes at Earith is within the Huntingdonshire boundaries. The rest of this European site is downstream of Huntingdonshire and is therefore vulnerable to any increased pollution or extra run-off that comes from Huntingdonshire and the districts upstream of it. The Ouse

washes are fields enclosed between the Old Bedford and New Bedford rivers and are within man made embankments. Much of the area is now managed for wildlife by The RSPB and the Wildfowl and Wetlands Trust. The Ouse Washes are flooded in most winters purposefully. Water is then removed in the spring. This management favours wintering water birds and summer breeding birds. Unseasonal flooding has occurred in recent years and is predicted to occur more frequently with climate change. The populations of many of the birds that are qualifying features have been in decline since the 1970s. To mitigate the loss of breeding habitat and wintering grounds for a number of the qualifying features land has been purchased outside of the washes, which is less prone to summer flooding and is being returned to grassland (as noted in the site improvement plan (Appendix 2). This land is not included within the SPA boundary at present, but as it is functionally linked to the Ouse Washes its inclusion within the SPA boundary before the end of the HLP2036 timeframe is thought likely (The RSPB pers. comm.).

5.4.2 The Qualifying Feature for the SAC is the Spined Loach (*Cobita taenia*). The Qualifying Features for the SPA are wintering and breeding wetland birds (listed in Appendix 1).

5.4.3 Predicted sea-level rise over the next 100 years and beyond is considered a large threat to the Ouse Washes, as saline incursion will affect a number of qualifying features (notably the Spined Loach).

Source

SAC: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0013011

SAC Conservation objectives and supplement:
http://publications.naturalengland.org.uk/publication/4894882430713856?category=6490068894089216

SPA: http://jncc.defra.gov.uk/default.aspx?page=2006

RAMSAR: http://jncc.defra.gov.uk/pdf/RIS/UK11051.pdf

SPA Conservation objectives:
http://publications.naturalengland.org.uk/publication/6636062256398336

5.4.4 In addition to the three European sites within the Huntingdonshire boundary several other European sites that are within 15km of the Huntingdonshire boundary were covered by the Screening Report 2013 (The Landscape Partnership, 2013). For the first time in this AA process The Wash SPA/Ramsar and The Upper Nene Valley Gravel Pits SPA/Ramsar are included.

5.5 Barnack Hills and Holes

5.5.1 Barnack Hills and Holes SAC is an area of grassland on old quarry workings immediately adjacent to the village of Barnack north of Peterborough. The Qualifying Feature for the is SAC is the Annex I habitat 6210 *Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia)(important orchid sites).* Barnack has the largest population of the *Orchis anthropophora* (L.) All. (Man Orchid) in the UK. The proximity of the site to the village makes it vulnerable to visitor pressures and possibly airborne pollutants.

Source

SAC: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUcode=UK0030031

Conservation Objectives:
http://publications.naturalengland.org.uk/publication/5111783597539328

5.6 Eversden and Wimpole Woods

5.6.1 The Eversden and Wimpole Woods SAC is in the South Cambridgeshire District to the southeast of St Neots. This site has been designated as a SAC due to the presence of a colony of Barbastelle bats. The woods comprise a mixture of ancient coppice woodland in the Eversden woods and high forest woods likely to be of more recent origin in the Wimpole Woods.

5.6.2 A colony of Barbastelle bats is present at Wimpole Woods, where the trees are used as a summer maternity roost. Most of the roost sites are within tree crevices. The bats also use the site as a foraging area and some of the woodland is used as a flight path when bats forage outside the site. The Barbastelle bat is one of the UK's rarest mammals.

5.6.3 There is public access to the woods.

Source

SAC: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUcode=UK0030331

Conservation Objectives:
http://publications.naturalengland.org.uk/publication/6736081810620416

5.7 Nene Washes

5.7.1 The Nene Washes are both a SAC and a SPA/Ramsar. The Qualifying Feature for the SAC is the Spined Loach (*Cobita taenia*) and the Qualifying Features for the SPA are a suite of wetland bird species (listed in Appendix 1). The Nene Washes are just to the north of Huntingdonshire. Some of the streams and waterways of Huntingdonshire flow into the Nene via the Middle Level, but normally the Middle Level is pumped into the River Great Ouse.

Source

SAC: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030222

SAC Conservation Objectives:
http://publications.naturalengland.org.uk/publication/5559224163631104

SPA: http://jncc.defra.gov.uk/default.aspx?page=2005

RAMSAR: http://jncc.defra.gov.uk/pdf/RIS/UK11046.pdf

SPA Conservation Objectives:
http://publications.naturalengland.org.uk/publication/4894064390438912

5.8 Orton Pits

5.8.1 Orton Pits SAC are lakes that filled old brick clay workings near Peterborough. The Qualifying Features for this SAC are: the Annex I habitat 3140 *Hard oligo-mesotrophic waters and benthic vegetationof Char ssp.; Calcium*-rich nutrient poor lakes, lochs and pools; and the Great Crested Newt (*Triturus cristatus*).

5.8.2 Like any lakes of this type they will be vulnerable to any pollution but they are isolated from watercourses stemming from Huntingdonshire. There is very little public access.

Source

SAC: http://jncc.defra.gov.uk/ProtectedSites/SACSelection/sac.asp?EUCode=UK0030053

Conservation Objectives:
http://publications.naturalengland.org.uk/publication/5289941760212992

5.9 Rutland Water

5.9.1 Rutland Water SPA/Ramsar is a man-made reservoir to the north west of Huntingdonshire. The Qualifying Features for this European site are a suite of wetland birds (listed in Appendix 1). Rutland Water is not downstream of any waterway within Huntingdonshire. It does provide Huntingdonshire with a proportion of its water supply and could be vulnerable to invasive species.

Source

SPA: http://jncc.defra.gov.uk/default.aspx?page=2007

RAMSAR: http://www.rutland.gov.uk/pdf/Rutland%20Water%20ramsar%20citation.pdf

Conservation objectives:
http://publications.naturalengland.org.uk/publication/4978639963684864

5.10 The Wash

5.10.1 In addition to the European sites considered in the Screening Report 2013 we have also reviewed The Wash SPA/Ramsar because, although it is more than 15km from Huntingdonshire, it is downstream of the district for both the River Great Ouse and the River Nene.

5.10.2 The channels and mud/sandbanks between them shift over time and this is partly related to the volume of water coming down the rivers. These flows are predominantly linked to the weather but the impacts of urban areas on flows can be noticeable.

Source

SPA: http://jncc.defra.gov.uk/default.aspx?page=2003

RAMSAR: http://jncc.defra.gov.uk/pdf/RIS/UK11072.pdf

Conservation Objectives:
http://publications.naturalengland.org.uk/publication/5747661105790976

5.11 Upper Nene Valley Gravel Pits

5.11.1 The Upper Nene Valley Gravel Pits SPA and Ramsar site was classified as an SPA in 2011.

5.11.2 The Upper Nene Valley Gravel Pits SPA is situated to the west of Huntingdonshire District in Northamptonshire. The SPA is designated primarily for its wintering bird importance, and in particular for the large number of golden plover using the site in winter. Golden plover is a species sensitive to disturbance by walkers, especially dog walkers, and a decline in bird numbers has been linked to increasing recreational use of the site.

5.11.3 The site improvement plan (SIP) (Appendix 2) seeks to alleviate recreational pressures by managing access and providing advice. The SIP also addresses planning pressures, the development of sustainable freshwater fisheries and changing land use to introduce a grazing regime suitable to waders.

Source

SPA: http://jncc.defra.gov.uk/pdf/SPA/UK9020296.pdf

RAMSAR: http://jncc.defra.gov.uk/pdf/UK11083.pdf

6 Screening of HLP2036 policies and allocations for development

6.1 Screening of the policies of HLP2036

6.1.1 Each of the 40 policies in the document for the Huntingdon Local Plan 2036 (HLP2036) dated 21st November 2016 were screened for their possible significant effects on:

- Development on or adjacent to the European site destroying part or all of the site, or changing the ecological functioning of the site (e.g. disrupting water flows or migration routes)
- Increased public recreation, causing disturbance to birds, damage to vegetation, increased littering / flytipping or leading to management compromises (e.g. grazing being restricted).
- Air pollution, air-borne pollutants
- Human induced changes in hydraulic conditions (this option was chosen because it includes both drought and flooding)
- Invasive non-native species
- Pollution to groundwater (point sources and diffuse sources)
- Reduction in water quality, from increased discharges of sewage and surface water drainage, or from pollution incidents, either during or after construction.

6.1.2 The results of the screening are presented in Appendix 4. In summary, 13 of the 40 policies required further analysis (Table 2). The remaining 27 were screened out as having no likely significant effect.

6.1.3 Five of the 13 policies identified apply to HLP2036 *in toto*, three of the 13 apply to HLP2036 *in toto* but also required an analysis of the individual allocations for development, four of the 13 required an analysis of the individual allocations for development. The remaining policy (LP22 – Amenity) was only relevant to one allocation (HU14) which will be discussed below.

Table 2. Screening of the individual policies of HLP2036

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP1	Strategy for Development	none	possible	possible	possible	possible	possible	possible	further analysis
LP3	Spatial planning areas	none	possible	possible	possible	possible	possible	possible	further analysis
LP4	Service centres	none	minimal	minimal	minimal	minimal	minimal	minimal	see individual allocations in service centres
LP7	Green infrastructure	none	possible	minimal	no	possible	no	no	further analysis because differences between allocations and European sites
LP8	Sustainable development principles	none	provides positive impact if followed with policies below	provides positive impact if followed with policies below	provides positive impact if followed with policies below	provides positive impact if followed with policies below	provides positive impact if followed with policies below	provides positive impact if followed with policies below	inherent in further analysis
LP17	Flood risk	none	n/a	n/a	wording ensures flood assessment carried out for each site	n/a	wording ensures flood assessment carried out for each site	wording ensures flood assessment carried out for each site	further analysis required for individual allocations and sites
LP18	Surface water	none	n/a	n/a	wording ensures flood assessment carried out for each site	n/a	wording ensures flood assessment carried out for each site	wording ensures flood assessment carried out for each site	further analysis required for individual allocations and sites

Table 2 Continued

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP19	Waste water management	none	n/a	n/a	wording ensures waste water assessment carried out for each site	n/a	wording ensures waste water assessment carried out for each site	wording ensures waste water assessment carried out for each site	further analysis required for individual allocations and sites
LP26	Parking provision	none	n/a	helps prevent	could cause increase in surface water if not properly designed	n/a	n/a	surface water could cause reduction in quality	further analysis required for individual allocations and sites
LP27	Established employment areas	none	n/a	wording does not address	wording does not address	n/a	wording does not address	wording does not address	further analysis required for individual allocations and sites
LP28	Rural economy	none	n/a	wording does not address	wording does not address	n/a	wording does not address	wording does not address	any developments will have an Appropriate Assessment if they might affect a European Site. NB Ramsey Heights is very close to Woodwalton Fen, Portholme is close to Godmanchester and Earith is very close to the Ouse Washes.

Table 2. Continued

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP29	Homes for rural workers	none	n/a	wording does not address	wording does not address	n/a	wording does not address	wording does not address	any developments will have an Appropriate Assessment if they might affect a European Site. NB Ramsey Heights is very close to Woodwalton Fen, Portholme is close to Godmanchester and Earith is very close to the Ouse Washes.
LP38	Renewable and low carbon energy	none	n/a	n/a	wording does not consider impacts on surface water	n/a	n/a	wording does not consider impacts on surface water	further analysis required. This policy does specifically address species and habitats but not water.

6.2 Screening of the allocations for development of HLP2036

6.2.1 The screening of the 65 allocations for development against the 7 policies identified above were split into two groups for analysis. The first concerned recreation and the second concerned human induced changes to hydraulic conditions, groundwater pollution and reduction in water quality. The results of screening for the impacts of recreation on the European sites are given in Appendix 5 and for water related impacts in Appendix 6.

6.2.2 Analysis based on the interpretation of extensive research into visits to countryside sites (Monitor of Engagement with the Natural Environment survey) has shown that the distance people are willing to travel varies with the characteristics of the potential sites, such as land cover, and the availability of competing sites that are available close to people's homes (The ORVal Recreation Demand Model, University of Exeter, January 2017, http://leep.exeter.ac.uk/orval/documents.).

6.2.3 In summary there could be a likely significant effect on Portholme SAC and most of this comes from a small development HU14 that is only 20 metres from the SAC and is linked to it by footpaths. Portholme SAC could therefore receive regular dog walking trips from the development. Correct signage should prevent fouling (pollution) and interactions with livestock. This solution also applies to Portholme SAC generally. No likely significant effects are predicted for the other European sites because either they receive very few visitors and are not likely to attract more (Orton Pits SAC), or they are distant from the new developments and/or do not attract medium distance non-specialist visitors (Barnack Hills and Holes, Woodwalton Fen, The Wash). There are no predicted figures for visitors to the Ouse Washes and Nene Washes but it was considered unlikely that many visitors from the major new developments in Huntingdonshire would visit these sites because it would require driving a considerable distance and dogs (the major cause of disturbance to the qualifying features that are birds) are not welcomed. Most extra visitors to the Ouse and Nene Washes would be attracted to visitor centres of the RSPB and WWT and so impacts will also be managed. There may be some extra visitors to the Eversden and Wimpole Woods but they will have no effect on the qualifying feature (Barbastelle Bat) there. The number of extra visitors to Rutland Water is considered unlikely to be significant because the area is specifically designed with visitors and wildlife in mind and already attracts hundreds of thousands per year.

6.2.4 The recreational pressures on the Upper Nene Valley Gravel Pits SPA/Ramsar were highlighted as an issue by Natural England in the consultation for this HRA. Following an assessment of a visitor study (Visitor Access Study of the Upper Nene Valley Gravel Pits SPA, Footprint Ecology, 2014) it is considered that the impacts of HLP2036 on this European site will be insignificant (Appendix 5.2).

6.2.5 The results for the water related potential effects are given in Appendix 6. In summary, all of the allocations have development guidance in the HLP2036 (21/11/16) that addresses the need for vigilance and solutions relating to human induced changes to hydraulic conditions, groundwater pollution and reduction in water quality in areas where the strategic flood risk assessment (October 2016) and/or the detailed water cycle study (December 2014) made recommendations. The addition of terms in each of the policies that relate directly to the Habitat Regulations (2010) will ensure there are no impacts on site integrity of the European sites due to a lack of forethought in the planning process.

6.2.6 Policy LP22 – Amenity states that "the potential is minimised for adverse impacts of: obtrusive light; contamination; air pollution; water pollution; odour; dust and overheating.

As HU14 is only 20 metres from the edge of the Portholme SAC this policy must be followed particularly stringently if the development goes forward.

6.2.7 The screening process highlighted those policies where changes are required to the wording. There were no allocations where mitigation would be required above that required to fulfil the requirements of the Water Framework Directive as already stated in the policies.

6.3 Screening of the plans of other local government authorities

6.3.1 In order to determine whether there will be any likely significant effects from HLP2036 'in combination' with other local plans, the Habitat Regulations Assessments (or the screening for them) of the neighbouring local government authorities were inspected. In most cases screening for a HRA determined that there would be no likely effects (Table 3).

Table 3. The conclusions of HRAs or their screening from Local Government Authorities neighbouring Huntingdonshire.

Local Authority	HRA stage and conclusion	Date
Cambridgeshire County Council Transport Plan	Screening – no effect	2014
Cambridge City Council	Screening – no effect	2013
East Cambridgeshire District Council	Screening – no effect	2017
South Cambridgeshire District Council	Screening – no effect	2014
Fenland District Council	Screening – no effect (but a HRA may follow)	2013
Peterborough City Council	Screening – no effect	2011
Bedford Borough Council	Screening – no effect Update – no effect	2011 2013
Forest Heath and St Edmundsbury	Screening – no effect. States all developments should have HRA	2015
Borough Council of King's Lynn and West Norfolk	Identified likely significant effects to the Wash SPA/Ramsar. Alleviated by modifications to the policies	2015
South Holland/South East Lincolnshire	Currently in progress but has identified recreational pressure on the Wash SPA/Ramsar as a likely significant effect	ongoing
Milton Keynes	Screening-no effect Screening for allocations – no effect	2007 2016
East Northamptonshire District Council (four towns)	HRA identified likely significant effects on Upper Nene Valley Gravel Pits SPA/Ramsar from recreational activity and associated traffic, reduced water quality, increased atmospheric pollution, reduced water levels due to abstraction	2011
South and Central Bedfordshire	Only one document from north Bedfordshire Screening – no effect	2009
Cambridgeshire and Peterborough Minerals and Waste Policies	Screening – no effect	2008

6.3.2 The only HRA with a consequence for this HRA was from East Northamptonshire District Council. That HRA determined that there could be likely significant effects on the Upper Nene Valley Gravel Pits SPA/Ramsar from recreational activity. The analysis of this effect in relation to HLP2036 is described in Appendix 5.2.

6.3.3 The only conclusion that can be made from the inspection of the HRAs in Table 3 is that because there are no likely significant effects identified from any of the local plans of neighbouring local authorities, there will be no 'in combination' effects with HLP2036. The exception is the likely significant effect of recreation on The Upper Nene Valley Gravel Pits SPA/Ramsar identified from East Northamptonshire which is dealt with in Appendix 5.2.

7 Assessment of effects on European site integrity

7.1 Direct impact on European sites

7.1.1 The assessment process for each qualifying feature of each European site is available in Appendices 7-13. The following paragraphs outline the key outcomes of the Habitats Regulations Assessment (HRA) for HLP2036.

7.1.2 None of the proposed developments in any of the scenarios presented for HLP2036 will directly impact the extent or management of the European sites considered in this HRA Figure 1) as they do not coincide. The development of allocation HU14 – Gas Depot, Mill Common must be carefully considered because it is only 20 metres from the boundary of the Portholme SAC.

7.1.3 The foraging area of the Qualifying Feature, Barbastelle Bat, around the Eversden and Wimpole Woods SAC is included in this section even though it is not strictly a direct impact. The 'Area of Principal Importance' for this species has been mapped and published (South Cambridgeshire Biodiversity SPD, adopted 2009). None of the area is within Huntingdonshire and proposed developments are a long way distant from it (Appendix 14). It is concluded HLP2036 will not have a likely significant effect on this species.

7.2 Increased public recreation

7.2.1 Increased public recreation, causing disturbance to birds, damage to vegetation, increased littering / flytipping or leading to management compromises (e.g. grazing being restricted) could occur at Portholme SAC unless measures (such as signage to educate dog walkers) are put in place to prevent damage. Most adverse effects on Portholme would be negated by the provision of suitable alternative natural greenspace in and around the spatial planning areas.

7.2.2 No likely significant effects are predicted for the other European sites from HLP2036 (Appendix 5).

7.3 Increased air pollutants

7.3.1 There is no evidence available that there will be a change in air pollutants caused by HLP2036, by itself or cumulatively with other plans on the European sites considered in this HRA. The larger developments of HLP2036 are distant from the European sites (see Appendes 3 and 5). Further evidence may become available at a later stage from the strategic transport study for HLP2036 and in the meantime a policy needs to be added to trigger an AA for any possible air pollution threats to European sites. The realignment of

the A14 will have a major positive impact on air pollution in the area around Huntingdon and St. Ives that will counteract some of the impacts of the developments in HLP2036.

7.4 Human induced changes in hydraulic conditions

7.4.1 Human induced changes in hydraulic conditions in times of drought due to HLP2036 or cumulatively with other plans should not impact the flow of water in the River Great Ouse or the River Nene and therefore not the European sites. This verdict was reached following the Environment Agency assessment (Great Ouse Catchment Flood Management Plan, July 2010) that all future water needs will be met by the reservoir system and will not require abstraction from the rivers or aquifers (that do nat have the capacity currently to meet needs).

7.4.2 The Great Ouse Catchment Flood Management Plan (CFMP) was signed off with the caveat that significant effects to the Portholme SAC and Ouse Washes SAC/SPA/Ramsar due to flooding or increased pollution could not be discounted as a full assessment was not possible (Environment Agency, 2010, Table B10). Further information about the likelihood of flooding and pollution have come from the strategic flood risk assessments and water cycle studies for the different districts within the catchment and through personal communication with the Environment Agency.

7.4.3 Human induced changes in hydraulic conditions (flooding) due to HLP2036 and cumulatively with other local plans could have an impact on the qualifying feature of Portholme SAC and some of the qualifying features of the Ouse Washes SPA/Ramsar. The qualifying features considered at risk are breeding birds (*Anas strepera,* Gadwal; *Anas querquedula,* Garganey; *Anas clypeata*, Northern Shoveler; *Porzana porzana,* Spotted Crake; *Limosa limosa,* Black-tailed Godwit; Breeding bird assemblage) and also extra winter flooding could negatively impact *Circus cyaneus,* Hen Harrier.

7.4.4 Key to understanding the impacts of flooding is the study of likely increase in peak flow runoff from developed sites, with a higher proportion of surfaces resistant to soil infiltration, compared to the pre-development situation. This increase in peak flow runoff may result in increased flood risk downstream which could adversely affect features of water-dependent sites.

7.4.5 Assessment of the impacts of water quantity are based on catchment modelling of peak river flow undertaken by the Environment Agency. The most current published report on the subject is the Great Ouse CFMP (Environment Agency, 2010) in which models were developed for the catchment to explore the likely effects of climate change, urbanisation and land use change on peak flow through to approximately the end of the century.

7.4.6 Peak flow is taken to be a valid surrogate for likely flood risk, although it is imperfect as, for example, it does not take into account changes of seasonality of flooding, which is believed to be a factor contributing to the decline of the Ouse Washes (SAC/SPA/Ramsar).

7.4.7 The assumptions made in this modelling used the climate change projections published at that time, UKCIP 2005. These projections have changed since publication in the direction of more significant increases in rainfall (Climate Change Allowances, 2016) ; the Agency is undertaking new modelling based on these new projections, but unfortunately the results will not be available in time to inform this HRA.

7.4.8 The assumptions made in the 2010 modelling used urbanisation projections for the catchment. The projections are consistent with the development levels included in the Local Plan, and therefore can be considered to remain valid. The relevant factor here is the total

quantity of development and not its location, as all resulting flows arrive at the Great Ouse as it leaves Huntingdonshire[1].

7.4.9 The 2010 modelling concluded that the effect of climate change on river systems would likely result in an increase in peak river flows by 2110 of 20%. It also concluded that urbanisation would likely result in an increase in peak river flows by 2110 of 2% in each of the Lower Bedford Ouse[2] and Upper Bedford Ouse sub-catchments. The ratio of climate change to urbanisation contributions to the impact was therefore calculated at the time to be approximately 10:1.

7.4.10 Since 2010 two parameters have changed that potentially alter this analysis significantly.

7.4.11 As referred to above the revised Climate Change Allowances for the Anglian river basin provide for a more significant increase in extreme rainfall and consequently peak river flow. The peak river flow allowances for the 2080s range from 25% increase (central projection) to 65% (upper end projection) (Huntingdonshire SFRA, JBA, 2016).

7.4.12 The second change is the requirement introduced nationally for Sustainable Urban Drainage (SUDs) to be used in all major developments. These measures, implemented through the planning system[3], require peak flow runoff at the outflow from the development site normally to be no higher than the pre-development state. Although there are some uncertainties around effectiveness and implementation, and there is comparatively little evidence available so far for these new approaches, the overall effect must be assumed to reduce the impact of urbanisation of peak river flows in the future.

7.4.13 Taking these two changes since 2010 together the likely ratio of contributions to the impact, climate change to urbanisation, is likely to be significantly higher than 10:1, perhaps in excess of 20:1.

7.4.14 There are plans and measures to mitigate against and adapt to the predicted changes in the climate. Some of these are specifically for wildlife. Should these measures be successful the ratio of impacts of climate change to urbanisation would reduce back towards 10:1 but climate will remain the much higher contributor.

7.4.15 It can therefore be concluded that the effect of development included in the Local Plan will not have a significant adverse effect detectable above those of climate change on European sites through the impact pathway of changes in water quantity.

7.5 Invasive non-native species

7.5.1 Invasive non-native species may have an impact on the qualifying features of any of the European sites in the future but this will not be related to HLP2036 or any other plan. Invasive non-native species could arrive anywhere through natural dispersal, accidental dispersal with human vectors (including boats) and deliberate tipping of material. As there are likely to be few extra visitors to vulnerable sites the impact of accidental dispersal by human factors, although still a risk is unmeasurable and cannot be considered any more likely than at present. Fly-tipping is not likely at any site because there is no access point where this could happen. The exception may be garden waste being fly-tipped at Portholme SAC. Extra recreational pressure at Portholme SAC could, in theory, lead to a

[1] This analysis leaves aside the part of Huntingdonshire that outflows to the Nene, with no potential impact on the Ouse Washes sites.
[2] Most of Huntingdonshire falls within the Lower Bedford Ouse sub-catchment; the Upper Bedford Ouse sub-catchment is also relevant here as flows from it will arrive in the Great Ouse flowing through the district.
[3] SUDs policy is covered in the Local Plan in policy LP18.

higher chance that invasive non-native species of plant will be transported accidentally to the site. This will still remain unlikely and unmeasurable and cannot be considered a likely significant effect of HLP2036. In general the HLP2036 should encourage the highest standards of quarantine for plants being used for landscape purposes on new developments to prevent disease and the escape of non-native invasive species. However, there is no legislation available to prevent people planting potential, and as yet unidentified, non-native invasive species in their gardens.

7.6 Pollution to groundwater

7.6.1 Although it may be a significant effect for other reasons, pollution to groundwater (point sources and diffuse sources) is highly unlikely to cause impacts on the qualifying features of any of the European sites.

7.7 Reduction in water quality

7.7.1 Reduction in water quality, from increased discharges of sewage and surface water drainage, or from pollution incidents, either during or after construction arising from HLP2036 and cumulatively with other plans could cause impacts to the qualifying feature at Portholme SAC.

7.7.2 Pollution from all development in the Great Ouse catchment could affect the population of *Cobitis taenia* (Spined Loach) in the Ouse Washes SAC. It is not thought that pollution levels (largely phosphate) would directly impact the qualifying features that are birds on the Ouse Washes SPA/Ramsar. However, conservation objectives for the Ramsar list several plant species and communities, and these are likely to be negatively affected by increased levels of phosphate.

7.7.3 Phosphates are selected as the most critical pollutant and the most likely to have an effect on European sites through eutrophication. Therefore, assessment of the water quality issue explores the potential effects of development on river phosphate levels.

7.7.4 The issue in Huntingdonshire was investigated in depth through the Stage 2 Detailed Water Cycle Study Update commissioned by the District Council in 2014 (URS, 2014). This analysis modelled Local Plan projections for development against capacity of Wastewater Treatment Works (WwTWs) across Huntingdonshire to explore implications of additional growth.

7.7.5 This impact pathway, unlike that of water quantity, is spatially specific, in that outflow from individual developments (Appendix 6) will be treated at different WwTWs, each with a varying current capacity and current level of technology for extraction of pollutants. River phosphate levels downstream of WwTWs will also vary spatially.

7.7.6 The Water Cycle Study concluded that some developments would outflow to WwTWs with limited or no headroom for increased flow, and therefore significant upgrades or even completely new facilities would be needed to accommodate planned growth while avoiding deterioration of water quality. In particular WwTWs at St Neots, Somersham, Ramsey and Oldhurst were assessed at being at their current consent limits.

7.7.7 The crux of this issue from the perspective of potential impacts on European sites lies with the regulatory regime for water quality and the rate of technological improvement in pollutant removal. The regulatory regime comprises the Environment Agency's Review of Consents of discharges to water bodies, specifically from Anglian Water's WwTWs in this case. The Environment Agency has statutory obligations under the Water Framework

Directive and the Habitats Directive, as transposed into UK legislation and therefore must ensure that discharge consents will be compliant with legislation. The Water Company agrees its Asset Management Plan on a five yearly basis with government, including upgrades to WwTWs, and modelling is underway to inform the preparation of the 2020-2025 Asset Management Plan.

7.7.8 As discussed in the water quantity section new requirements will lead to the use of SUDs in major developments. Provided these are full SUDs systems (as outlined in the Cambridgeshire County Council document Cambridgeshire Flood and Water SPD) they should partially mitigate deterioration of water quality in outflow from developed sites.

7.7.9 The provision of new water-related infrastructure is clearly a major issue in the Local Plan that will likely strongly influence the location and phasing of new development in the plan period. From the perspective of the Habitat Regulations the strength of the discharge regulatory regime and the inclusion of a strong policy on SUDs enables a conclusion that the Local Plan will not have a significant adverse effect on European sites through the water quality impact pathway.

7.7.10 The development guidance for Alconbury Weald or for Wyton on the Hill (in HLP2036) states that wastewater will be directed to the Ouse catchment and not the waterways of the Middle Level Commisioners. Should any plans be submitted with waste water flowing to the north then an Appropriate Assessment for Woodwalton Fen Ramsar (Fenland SAC) and the Nene Washes SAC/SPA/Ramsar would be required. The WCS (URS, Dec 2014) states that the capacity of the WwTWs at Ramsey is at or near capacity and the Middle Level Commisioners would object to development that does not take this into consideration. The impacts of development in Ramsey on Woodwalton Fen (which is 'upstream') will therefore be avoided because increased flows will not be sanctioned without mitigation. Indeed, the development guidance for the allocations in Ramsey (RA1-RA6) state clearly that the MLC must be consulted. Note that the reduction in water quality in the River Great Ouse is almost entirely related to the incidence of flooding and that should the SFRA (JBA, 2016) for HLP2036 or further modelling by the Environment Agency and/or Anglian Water demonstrate that flooding can be prevented, then any impacts on the qualifying features should also be negated. Climate change is again a major issue in determining whether this impact takes place or can be attributed to development.

7.8 Assessing different scenarios and summary

7.8.1 The only difference between the four scenarios is in the scale of any impacts that they could have. For many qualifying features in many of the European sites the scenarios are irrelevant. For those where there is an effect, typically, scenario 4 has a greater effect than scenario 1 that has a greater effect than scenario 2 and scenario 3 has the least effect. Column 6 in Appendices 7-13 show those qualifying features where the scenario would have any impact at all.

7.8.2 In summary the impacts on the European sites considered in this Appropriate Assessment were restricted to Portholme SAC and the Ouse Washes SAC/SPA/RAMSAR (Table 4) and the qualifying features that could be impacted are a subset of those possible (Table 5). In all cases avoidance and mitigation is possible (Table 5) assuming the regulatory process is followed.

European Site	Development on site	Airborne Pollution	Public Recreation	Human induced changes in hydraulic conditions	Non-native invasive Species	Pollution of Ground Water	Reduction in water Quality
Portholme SAC	No	?	Yes	<cc	<cc	=	<cc
Ouse Washes SAC/SPA/RAMSAR	No	No	<<	<cc	<cc	=	<cc
Woodwalton Fen (Fenland SAC) RAMSAR	No	?	<<	<cc	<cc	=	<<
Barnack Hills and Holes (SAC)	No	<<	<<	No	No	No	No
Orton Pits (SAC)	No	<<	No	No	No	No	No
Nene Washes (SAC/SPA/RAMSAR)	No	<<	<<	<<	<cc	No	<<
Rutland Water (SPA/RAMSAR)	No	No	<<	No	No	No	No
Eversden and Wimpole Woods (SAC)	No	<<	No	No	No	No	No
The Wash (SPA/RAMSAR)	No	No	No	<cc	No	<<	<<
Upper Nene Valley Gravel Pits (SPA/RAMSAR)	No	No	<<	No	<cc	No	No

Table 4. List of European Sites considered in the HRA for HLP2036. Yes = possible impact; no = no impact; ? = further information on pollution from traffic and construction required; << = any impact of HLP2036 too small to measure above other drivers; <cc = climate change impacts dwarf those of HLP2036; = = same as current situation.

European Site	Qualifying Feature	Impacted by	Suggested Mitigation Measure
Portholme SAC	H6510 Lowland hay Meadow	Increased recreation	Educate public about pollution from animal waste, prevention of livestock disturbance, prevention of fly-tipping. Provide SANG.
		Reduction in water quality	Enhanced use of SUDS and water storage. Include importance of preventing spring/summer flooding to protect European sites to Policy LP18, LP 19 and LP26. Assumes WwTWs upgraded.
Ouse Washes SPA/RAMSAR	A051 *Anas strepera,* Gadwal (breeding)	Increased spring/ summer flooding	Enhanced use of SUDS and water storage. Include importance of preventing spring/summer flooding to protect European sites to Policy LP18, LP 19 and LP26
	A056 *Anas querquedula,* Garganey (breeding)		
	A119 *Porzana porzana,* Spotted Crake (breeding)		
	A156a *Limosa limosa,* Black-tailed Godwit (breeding)		
	Breeding Bird Assemblage (breeding)		
	A082 *Circus cyaneus,* Hen Harrier (non-breeding)	Increased winter flooding	Enhanced use of SUDS and water storage. Include importance of preventing spring/summer flooding to protect European sites to Policy LP18, LP 19 and LP26
Ouse Washes SAC	S1149 *Cobitis taenia* (Spined Loach)	Reduction in water quality	Enhanced use of SUDS and water storage. Include importance of preventing spring/summer flooding to protect European sites to Policy LP18, LP 19 and LP26. Assumes upgrades to WwTWs.

Table 5. Summary of impacts of HLP2036 on qualifying features of European sites

8 Suggested alterations to policies in HLP2036

8.1.1 Impacts of HLP2036 on the European sites considered in this AA can be minimised by the use of the policies in the document "Huntingdonshire's Local Plan to 2036: towards submission". However, in some cases there is no recognition of the importance of the policies in protecting the European sites and biodiversity generally. The policies in question tend to be those primarily to do with the protection of water resources. To ensure the European sites are not overlooked in AA for any of the proposed developments we suggest that some minor changes are made to the following policies that were identified in the review of the screening report (Bodsey Ecology, 2017).

LP7 – Green Infrastructure

8.1.2 The policy LP7 as written on 21st November 2016 is shown in the box below:

> LP7
>
> Green Infrastructure
>
> A proposal will be expected to protect and enhance existing green infrastructure; create new green infrastructure; or create and strengthen links to and between areas of green infrastructure. A proposal will therefore be supported where it demonstrates that it:
>
> a. incorporates sufficient open/ green space in accordance with the Council's Developer Contributions Supplementary Planning Document (2011) (SPD), or successor documents;
>
> b.is consistent with the objectives of the Cambridgeshire Green Infrastructure Strategy (2011) or successor documents;
>
> c. improves the accessibility, naturalness and connectivity of greenspaces, assisting in achieving Natural England's Accessible Natural Green Space Standards (ANGSt);
>
> d. provides replacement provision of equal or greater value than that which will be affected where the proposal would result in harm to or loss of existing green infrastructure;
>
> e. maintains and where appropriate enhances the rights of way network;
>
> f. conserves heritage assets; and
>
> g. contributes to the re-naturalisation of water bodies such as rivers and lakes

8.1.3 Include "designated habitats and species" in clause "f" after "heritage assets".

8.1.4 This would be a minimum addition. Further comments could be made on the need for protecting against fly-tipping and also the need to consider the interaction between livestock and the public.

8.1.5 A sentence could be added to the first paragraph stating: "Suitable alternative natural greenspace that protects European sites from over use will be required", or something similar.

LP18 – Surface Water

8.1.5 The policy LP18 as written on 21st November 2016 is shown in the box below:

8.1.6 Change the first sentence to "A proposal will only be supported where surface water is dealt with such that…"

8.1.7 Include "and the Habitats Directive" to clause "g" after "the Water Directive".

8.1.8 Emphasise the need for SUDS to be designed to prevent late spring/summer flooding to ensure better protection of the Ouse Washes SPA/Ramsar.

8.1.9 Include new clause "e" "Natural England and the Environment Agency are satisfied that European sites designated under European Directive (92/43/EEC) will not be adversely affected by the method of surface water disposal".

LP18

Surface Water

A proposal will be supported where surface water is dealt with such that:

a. the proposal incorporates sustainable drainage systems (SuDS) designed in accordance with the Construction Industry Research and Information Association (CIRIA) guidance, the national technical standards and the Cambridgeshire Floodand Water SPD or successoror updated documents, unless specific site conditions such as soil conditions, engineering feasibility or contamination dictate otherwise;

b. provisions are put in place to ensure that SuDS will be maintained;

c. the disposal of surface water is consistent with the surface water management hierarchy outlined in the Cambridgeshire Flood and Water SPD or successor documents;

d. there is agreement with the Environment Agency if the drainage system would directly or indirectly involve discharge of water to a main river or other watercourse that they have responsibility for;

e. should a road be affected by the drainage system there is agreement with the relevant highway authority;

f. the standing advice of the Middle Level Commissioners or the appropriate internal drainage board has been taken into account and there is agreement with the appropriate internal drainage board, if the drainage system may directly or indirectly involve the discharge of water into an ordinary watercourse (within the meaning of section 72 of the Land Drainage Act 1991) within the board's district;

g. there is no adverse impact on, or unacceptable risk to, the quantity or quality of water resources or on meeting the objectives of the Water Framework Directive.

LP19 – Waste Water

8.1.10 The policy LP19 as written on 21st November 2016 is shown in the box below:

LP19

Waste Water Management Sewer Network

A proposal that would:

a. require a new connection to the sewer network;

b. involve significant increases to flows entering the sewer network; or

c. involve development of a site identified by the Huntingdonshire Stage 2 Detailed Water Cycle Study or updated, successor or equivalent documents, to have potentially limited sewer network capacity (Amber or Red assessment);

will only be supported where a sustainable foul/used water strategy has been prepared and agreed with the sewage undertaker to establish whether any upgrades are necessary so that flows from the proposal can be accommodated. If upgrades are necessary the proposal will need to include a plan for delivery, including phasing as necessary, that has been agreed with the sewage undertaker.

Constrained Water Treatment Capacity

A proposal that would involve waste water flows to the Waste Water Treatment Works (WwTW) with constrained capacity, as identified in the Huntingdonshire Stage 2 Detailed Water Cycle Study or updated, successor or equivalent documents will only be supported if:

d. the Environment Agency and Anglian Water Services have indicated that they are satisfied that waste water flows from the proposal can be accommodated;

e. the Environment Agency are satisfied that the requirements of the Water Framework Directive will not be compromised; and

f. the Middle Level Commissioners will not object on the basis of flood risk in the Middle Level system, as may be applicable. To achieve these requirements interim treatment measures are likely to be required until a permanent treatment solution is put in place. Where temporary measures are not available or would be insufficient it may be necessary for the rate of development for a proposal to be limited.

8.1.11 Include new clause "e" "Natural England and the Environment Agency are satisfied that European sites designated under European Directive (92/43/EEC) will not be adversely affected by increased pollution".

LP26 – Parking Provision

8.1.12 The relevant section of policy LP26 as written on 21st November 2016 is shown in the box below:

> LP26
>
> Parking Provision
>
> A proposal will be supported where it: incorporates appropriate space for vehicle movements, facilitates accessibility for service and emergency vehicles and incorporates adequate parking for vehicles and cycles. These should all comply with design and security guidance set out in the Huntingdonshire Design Guide SPD(2007) or successor documents. Provision of space for vehicles and parking should be an integral part of the design process and any adverse impacts on the surrounding townscape and landscape minimised.
>
> A clear justification for the space for vehicle movements and level of parking proposed will need to be provided taking account of: a. highway safety and access to and from the site;
>
> b. servicing requirements;
>
> c. the accessibility of the development to a wide range of services and facilities and by public transport, cycling and walking;
>
> d. the needs of potential occupiers, users and visitors;
>
> e. the amenity of existing and future occupiers and users of the development and nearby property; and
>
> f. opportunities to share parking facilities, where locations and patterns of use allow this.

8.1.13 Add a clause "g" that emphasises the need to minimise surface water run-off from parking areas.

LP27 – Established Employment Areas

8.1.14 The policy LP27 as written on 21st November 2016 is shown in the box below:

> LP27
>
> Established Employment Areas
>
> Areas of land and buildings that contribute to the local economy and provide on-going employment opportunities have been identified as Established Employment Areas. Within an Established Employment Area a proposal for business development (class 'B') will be supported. A proposal for a use other than business (class'B') within an Established Employment Area will be supported where it demonstrates that:
>
> a. it will be compatible with surrounding employment uses taking account of amenity and public safety issues;
>
> b. it will not adversely affect the role and continuing viability of the Established Employment Area as an attractive and suitable location for employment uses;
>
> c. it will not significantly reduce the range, availability and suitability of land and buildings for employment uses in the nearest Spatial Planning Area or Service Centre; and
>
> d. the sequential approach to site selection, as set out in the National Planning Policy Framework, has been followed if the proposal includes main town centre uses.

8.1.15 Add a clause as follows: "where a development is adjacent (within 500m) to a European site designated under European Directive (92/43/EEC) it can be demonstrated that there will be no adverse impacts on that European site" or a clause that has this meaning.

LP38 – Renewable and Low Carbon Energy

8.1.16 The policy LP38 as written on 21st November 2016 is shown in the box below:

> LP38
>
> Renewable and Low Carbon Energy
>
> A proposal for a renewable or low carbon energy generating scheme will be supported where it is demonstrated that all potential adverse impacts including cumulative impacts are or can be made acceptable.
>
> When identifying and considering the acceptability of potential adverse impacts the level of harm will be weighed against the public benefits of the proposal.
>
> When identifying and considering impacts on heritage assets and/or their settings special regard will be had to the desirability of sustaining and enhancing the significance of such assets.
>
> When identifying and considering impacts on the surrounding landscape regard will be had to the Huntingdonshire Landscape and Townscape Assessment SPD (2007) and the Wind Energy Development in Huntingdonshire SPD (2014) or successor documents as applicable.
>
> When identifying and considering impacts on the natural environment and protected species regard will be had to the relevant advice from Natural England's Information Notes.
>
> Having identified potential adverse impacts the proposal should seek to address them all firstly by seeking to avoid the impact, then to minimise the impact and finally to include alternative enhancement and/ or compensatory measures.
>
> All reasonable efforts to avoid, minimise and compensate will be essential for significant adverse impacts to be considered acceptable.
>
> Provisionwillbemadefortheremovalofapparatusandreinstatementofthesitetoanacceptableconditi on, should the scheme become redundant or at the end of the permitted period for time limited planning permissions.

8.1.17 Change the fourth clause to "When identifying and considering impacts on the natural environment, sufficient objective information should be provided to identify any impacts on European sites designated under European Directive (92/43/EEC) or protected species. Regard will be had to the relevant advice from Natural England's Information Notes."

8.2 Addressing the impacts of airborne pollution

8.2.1 Although likely significant effects arising from added airborne pollution caused by HLP2036 have not been identified the precautionary principle dictates that until the report

on the transport strategy associated with HLP2036 is available an interim policy is required.

8.2.2 Natural England have suggested the following wording:

"Developers will be required to ensure proposals for major new developments are assessed using appropriate methodologies (such as Travel Plans, Transport Assessments, and Transport Statements), for their likely transport impacts in accordance with relevant national and local guidance. Transport impacts close to European sites will require an air quality assessment to demonstrate no adverse impacts on Qualifying Features."

9 Conclusions

9.1.1 This Appropriate Assessment has analysed Huntingdonshire's Local Plan to 2036:towards submission (HLP2036) document of 21st November 2016, in relation to the Habitats Regulations 2010.

9.1.2 The AA has taken account of trends in key background environmental conditions and other reasonably foreseeable plans and projects that could have an adverse effect on European sites in or near Huntingdonshire alone or in combination.

9.1.3 The four different scenarios presented for HLP2036 have no noticeable impact on the results of the AA

9.1.4 Climate change impacts on flows and therefore flooding in the River Great Ouse catchment are predicted to be much larger than impacts from urban developments in the long-term. However, protection from urbanisation should not be omitted because of this as it is still a likely significant effect. It is assumed policies in HLP2036 will be followed and permission will only be given to development by the consenting bodies on the understanding that there will not be increased output of pollutants from wastewater treatment works into the River Great Ouse.

9.1.5 The AA concludes that, if paragraph 9.14 is correct and policies identified as key in this report are retained, and/or the wording changes recommended for policies highlighted are adopted, the HLP2036 will not have adverse effects on site integrity of any European site. Therefore, Huntingdonshire District Council can proceed with HLP2036 in the context of Habitats Regulations 2010.

Glossary

Appropriate Assessment (AA)	An assessment of the effect of a plan or project on the Natura 2000 network. The network comprises Special Protection Areas under the Birds Directive and Special Areas of Conservation under the Habitats Directive (collectively referred to as European sites).
Avoidance	Prevents impacts on European sites from happening in the first place.
Catchment Flood Management Plan	Catchment flood management plans (CFMPs) consider all types of inland flooding, from rivers, groundwater, surface water and tidal flooding. Shoreline management plans consider flooding from the sea. CFMPs also include: the likely impacts of climate change; the effects of how we use and manage the land; and how areas could be developed to meet our present day needs without compromising the ability of future generations to meet their own needs.
Compensation	Off-site offsetting put in place where a significant impact will occur, where there is no alternative, and where the plan is deemed necessary.
Competent authority	The plan-making/decision making authority.
Conservation objectives	A statement of the nature conservation aspirations for a site, expressed in terms of the favourable condition required for the habitats and/or species for which the site was selected.
Environment Agency	An executive non-departmental body sponsored by Defra. It has responsibilities in England for: regulating industry and major waste; treatment of contaminated land; water quality and resources; fisheries; inland river estuary and harbour navigations; conservation and ecology; and managing the risk of flooding from main rivers and estuaries.
European sites	Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). Includes Ramsar sites in this report.
Favourable condition	Designated land is adequately conserved and is meeting its 'conservation objectives', however, there is scope for enhancement.
Habitats Directive	Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna.
Habitats Regulations	Formally known as the Conservation of Habitats and Species Regulations 2010 (Statutory Instrument 2010 No 490). These transpose the requirements of the Habitats Directive into domestic legislation.
Imperative reasons of overriding public interest (IROPI)	The Habitats Regulations require competent authorities to establish that there are no alternative solutions before a plan or project can be considered for imperative reasons of overriding public interest. Judgements involve an assessment of the importance of the proposal and whether it is sufficient to override the nature conservation importance of the site.
In-combination	The cumulative effects caused by the project or plan that is currently under consideration, together with the effects of any existing or proposed projects or plans.
Integrity	The integrity of a site is the coherence of its ecological structure and function, across its whole area that enables it to sustain the habitat, complex of habitatsand/or the levels of populations of the species for which it was classified.
JNCC	Is the advisor to UK government on conservation
Member State	Nation state member of the EU

Middle Level	The Middle Level of the Fens is, as its name suggests, the middle division of the Bedford Level, which occupies the southern half of the great Fenland, and which includes the Isle of Ely and portions of Cambridgeshire, Northamptonshire, Norfolk, and Lincolnshire, as well as several thousand acres in the north-east of Huntingdonshire.
Middle Level Commissioners	The Middle Level Commissioners are a statutory corporation created under the Middle Level Acts 1810-74 and operating also under the Land Drainage Act 1991, the Flood and Water Management Act 2010 and the Nene Navigation Act 1753. The Commissioners' primary functions comprise the provision of flood defence and water level management to the Middle Level area, and as navigation authority for the navigable waters of the Middle Level system. The Commissioners have also certain conservation duties to fulfil when undertaking their functions.
Mitigation	Reduces the impact of the site integrity to the point where it no longer has adverse effects.
Natura 2000	A Europe-wide network of sites of international importance for nature conservation established under the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC;'Habitats Directive').
Natural England (NE)	Natural England works for people, places and nature, to enhance biodiversity, landscape and wildlife in rural, urban, coastal and marine areas; promote access, recreation and public well-being. Natural England was formed by bringing together English Nature, the landscape, access and recreation elements of the Countryside Agency and the environmental land management functions of the Rural Development Service.
Precautionary Principle	Prudent action which avoids the possibility of irreversible environmental damage in situations where the scientific evidence is inconclusive but the potential damage could be significant.
Qualifying (Interest) Feature	The reasons why the European site has been recommended for designation (e.g. the endangered species that occupy a SAC; the rare habitats that occur there; or threatened birds that breed or over-winter in an SPA).
Ramsar sites	Sites designated as internationally important wetland habitats under the International Convention on Wetlands of International Importance (1976) (Ramsar Commission).
River Basin Management Plan	The WFD calls for a management plan to be developed for each river basin district. In England the Environment Agency is the competent authority for the WFD and it published the first river basin management plans in December 2009. Updates were produced in 2015.
Screening	The process of deciding whether or not a plan or project requires an Appropriate Assessment.
Special Area of Conservation (SAC)	Site of European Importance for nature conservation designated under the Conservation of Natural Habitats and Wild Flora and Fauna Directive (92/43/EEC)
Special Protection Area (SPA)	Site of European importance for nature conservation designated under the Conservation of Wild Birds Directive (70/409/EEC)
Water Cycle Study	A voluntary study that helps organisations work together to plan for sustainable growth. It uses water and planning evidence and the expertise of partners to understand environmental and infrastructure capacity. The study provides evidence for Local Plans and sustainability appraisals.

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Consultees

The following organisations were consulted in the formation of this document and their responses and guidance were gratefully received.

Cambridgeshire, Bedfordshire, Cambridgeshire and Northamptonshire Wildlife Trust.

The Environment Agency

The RSPB

Natural England

Appendix 1 – List of Qualifying Features on European Sites and their Habitat Requirements

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Source of information
Portholme	SAC	H6510	Lowland Hay Meadows	This Annex I type comprises species-rich hay meadows on moderately fertile soils of river and tributary floodplains. Most examples are cut annually for hay, with light aftermath grazing. Seasonal flooding maintains an input of nutrients.	Annex I description - JNCC
Ouse Washes	SPA/Ramsar	A037	*Cygnus columbianus* (Bewick's Swan)(non-breeding)	Open, shallow flooded areas, agricultural fields	RSPB
		A038	*Cygnus cygnus* (Whooper Swan)(non-breeding)	Open, shallow flooded areas, agricultural fields	RSPB
		A050	*Anas penelope* (Eurasian Wigeon)(non-breeding)	Open, shallow flooded areas, agricultural fields	RSPB
		A051	*Anas strepera* (Gadwall)(breeding)	Open, shallow flooded areas, vegetated	RSPB
		A051	*Anas strepera* (Gadwall)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		A052	*Anas crecca* (Eurasian Teal)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		A053	*Anas platyrrhynchos* (Mallard)(breeding)	Open, shallow flooded areas, vegetated	RSPB
		A054	*Anas acuta*(Northern Pintail)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		A055	*Anas querquedula* (Garganey)(breeding)	Open, shallow flooded areas, meadows and ditches densely vegetated. Secretive	RSPB

Designated Site	Designation	Qualifying Feature Code	*Species Name*	Habiatat Requirements	Source of information
Ouse Washes	SPA/Ramsar	A056	*Anas clypeata (Northern Shoveler)(breeding)*	Open, shallow flooded areas	RSPB
		A056	*Anas clypeata (Northern Shoveler)(non-breeding)*	Open, shallow flooded areas	RSPB
		A059	*Aythya ferina (Common Pochard)(non-breeding*	Open water	RSPB
		A082	*Circus cyaneus (Hen Harrier)(non-breeding)*	Fenland, river valleys, marshes	RSPB
		A119	*Porzana porzana (Spotted Crake)(breeding)*	shallow water with dense vegetation, secretive	RSPB
		A151	*Philomachus pugnax (Ruff)(breeding)*	Open lagoons, near the coast	RSPB
		A151	*Philomachus pugnax (Ruff)(non-breeding)*	Open lagoons, near the coast	RSPB
		A156a	*Limosa limosa limosa (Black-tailed Godwit)(breeding)*	Wet meadows and marshes	RSPB
		A156a	*Limosa limosa limosa (Black-tailed Godwit)(non-breeding)*	Open lagoons, near the coast	RSPB
			Waterbird assemblage	Open, shallow flooded areas, vegetated and/or flooded meadows or marshes	RSPB

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Source of information
Ouse Washes	SPA/Ramsar		Breeding bird assemblage	Open, shallow flooded areas, vegetated	RSPB
	SAC	S1149	*Cobitis taenia* (Spined Loach)	Optimal habitat is patchy cover of submerged (and possibly emergent) macrophytes, which are important for spawning, and a sandy (also silty) substrate, into which juvenile fish tend to bury themselves.	http://jncc.defra.gov.uk/ProtectedSites/SACselection/species.asp?FeatureIntCode=S1149
Woodwalton Fen	part of Fenland SAC/ Ramsar	H6410	*Molinia* meadows on calcareous, peaty or cleyey-silt-laden soils (*Molinion caeruleae*). Purple Moor Grass meadows	***Molinia* meadows** are found mainly on moist, moderately base-rich, peats and peaty gley soils, often with fluctuating water tables. They usually occur as components of wet pastures or fens, and often form mosaics with dry grassland, heath, mire and scrub communities. This habitat type includes the most species-rich *Molinia* grasslands in the UK, in which purple moor-grass *Molinia caerulea* is accompanied by a wide range of associated species, including rushes, sedges and tall-growing herbs.	JNCC 21/1/14
		H7210	Calcareous fens with *Cladium mariscus* and species of the *Caracion davallianae*; Calcium-rich fen dominated by Great Fen Sedge (Saw Sedge).	This Annex I type comprises the more species-rich examples of great fen-sedge *Cladium mariscus* fen, particularly those stands enriched with elements of the *Caricion davallianae* (i.e. small-sedge fen with open low-growing sedge vegetation). Davall's sedge *Carex davalliana* itself is extinct in the UK. Such stands occur in the following situations:	JNCC 21/1/14
		S1149	*Cobitis taenia* (Spined Loach)	Optimal habitat is patchy cover of submerged (and possibly emergent) macrophytes, which are important for spawning, and a sandy (also silty) substrate, into which juvenile fish tend to bury themselves.	http://jncc.defra.gov.uk/ProtectedSites/SACselection/species.asp?FeatureIntCode=S1149

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Source of information
		S1166	*Triturus cristatus* (Great Crested Newt)	Breeding sites are mainly medium-sized ponds, though ditches and other waterbody types may also be used less frequently. Ponds with ample aquatic vegetation (which is used for egg-laying) seem to be favoured. Great crested newts do not require very high water quality, but are normally found in ponds with a circum-neutral pH. Broad habitat type varies greatly, the most frequent being pastoral and arable farmland, woodland, scrub, and grassland. There are also populations in coastal dunes and shingle structures. Great crested newts can be found in rural, urban and post-industrial settings, with populations less able to thrive where there are high degrees of fragmentation. The connectivity of the landscape is important, since great crested newts often occur in metapopulations that encompass a cluster of several or many ponds. This helps ensure the survival of populations even if sub-populations are affected by, for example, pond desiccation or fish introductions.	http://jncc.defra.gov.uk/ProtectedSites/SACselection/species.asp?FeatureIntCode=S1166
Rutland Water	SPA/ Ramsar	A005	*Podiceps cristatus*(Great Crested Grebe)(non-breeding)	Open water	RSPB
		A036	*Cygnus olor*(Mute Swan)(non-breeding)	Open water, rivers and ditches, short bank vegetation	RSPB
		A050	*Anas penelope* (Eurasian Wigeon)(non-breeding)	Open, shallow flooded areas, agricultural fields	RSPB
		A051	*Anas strepera* (Gadwall)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		A052	*Anas crecca* (Eurasian Teal)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		A056	*Anas clypeata* (Northern Shoveler)(breeding)	Open, shallow flooded areas	RSPB
		A061	*Aythya fuligula*(Tufted Duck)(non-breeding)	Open water	RSPB

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Source of information
Rutland Water	SPA/ Ramsar	A067	*Bucephala clangula*(Common Goldeneye)(non-breeding)	Open water, rivers	RSPB
		A070	*Mergus merganser* (Goosander)(non-breeding)	Open water	RSPB
		A125	*Fulica atra*(Common Coot)(non-breeding) Waterbird assemblage	Open water with dense marginal vegetation	RSPB and personal obs
Orton Pits	SAC	H3140	*Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.. Calcium-rich nutrient-poor lakes, lochs and pools*	Orton Pit's extensive pond system, occupying the disused ridge-and-furrow created as a result of clay extraction for the brick-making industry, contains alkaline water low in nutrients. The site supports a total of ten species of charophyte including the main English population of bearded stonewort *Chara canescens. C. canescens* is an early coloniser of ponds at the site and is rarely found in ponds over 20 years old. It favours brackish conditions, which at Orton Pit are thought to be provided by the release of salts out of the top few millimetres of the clay that becomes oxidised over a period of time. Other nationally scarce stonewort species present include *Chara aspera*, *C. contraria*, *C. pedunculata* and *Tolypella glomerata*. The distribution of *Chara* species across the site varies according to the age and stage of succession of the ponds, with few being found in ponds greater than 25 years old.	http://jncc.defra.gov.uk/protectedsites/sacselection/habitat.asp?FeatureIntCode=H3140

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Source of information
Orton Pits	SAC	S1166	*Triturus cristatus* (Great Crested Newt)	Breeding sites are mainly medium-sized ponds, though ditches and other waterbody types may also be used less frequently. Ponds with ample aquatic vegetation (which is used for egg-laying) seem to be favoured. Great crested newts do not require very high water quality, but are normally found in ponds with a circum-neutral pH. Broad habitat type varies greatly, the most frequent being pastoral and arable farmland, woodland, scrub, and grassland. There are also populations in coastal dunes and shingle structures. Great crested newts can be found in rural, urban and post-industrial settings, with populations less able to thrive where there are high degrees of fragmentation. The connectivity of the landscape is important, since great crested newts often occur in metapopulations that encompass a cluster of several or many ponds. This helps ensure the survival of populations even if sub-populations are affected by, for example, pond desiccation or fish introductions.	http://jncc.defra.gov.uk/ProtectedSites/SACselection/species.asp?FeatureIntCode=S1166
Nene Washes	SPA/ Ramsar	A037	*Cygnus columbianus* (Bewick's Swan)(non-breeding)	Open, shallow flooded areas, agricultural fields	RSPB
		A050	*Anas penelope* (Eurasian Wigeon)(non-breeding)	Open, shallow flooded areas, agricultural fields	RSPB
		A051	*Anas strepera* (Gadwall)(breeding)	Open, shallow flooded areas, vegetated	RSPB
		A051	*Anas strepera* (Gadwall)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		A052	*Anas crecca* (Eurasian Teal)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		A054	*Anas acuta*(Northern Pintail)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		A055	*Anas querquedula* (Garganey)(breeding)	Open, shallow flooded areas, meadows and ditches, densely vegetated. Secretive	RSPB
		A056	*Anas clypeata (Northern Shoveler)(breeding)*	Open, shallow flooded areas	RSPB

Designated Site	Designation	Qualifying Feature Code	*Species Name*	Habiatat Requirements	Source of information
Nene Washes	SPA/ Ramsar	A056	*Anas clypeata (Northern Shoveler)(non-breeding)*	Open, shallow flooded areas	RSPB
		A119	*Porzana porzana (Spotted Crake)(breeding)*	shallow water with dense vegetation, secretive	RSPB
		A151	*Philomachus pugnax (Ruff)(breeding)*	Open lagoons, near the coast	RSPB
		A151	*Philomachus pugnax (Ruff)(non-breeding)*	Open lagoons, near the coast	RSPB
		A156a	*Limosa limosa limosa (Black-tailed Godwit)(breeding)*	Wet meadows and marshes	RSPB
			Waterbird assemblage	Open, shallow flooded areas, vegetated and/or flooded meadows or marshes	RSPB
	SAC	S1149	*Cobitis taenia (Spined Loach)*	Optimal habitat is patchy cover of submerged (and possibly emergent) macrophytes, which are important for spawning, and a sandy (also silty) substrate, into which juvenile fish tend to bury themselves.	http://jncc.defra.gov.uk/ProtectedSites/SACselection/species.asp?FeatureIntCode=S1149

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Source of information
Eversden and Wimpole Woods	SAC	S1308	*Barbastella barbastellus* Barbastelle Bat	In mainland Europe nursery colonies have been found in building crevices but in England roosts have also been located in cracks in trees in areas of high humidity. Once the young can fly it seems that the colony may sometimes divide into smaller units and then reconvene at a single roost in late July – sometimes in one of the roosts used before the young were born. The majority of UK winter records are of single bats in underground sites. Barbastelles are relatively tolerant of the cold, and are found in caves, tunnels, cellars and trees in mainland Europe. They often hibernate in relatively exposed situations. In the UK they are also known to roost in cavities behind joints of timber-framed buildings, between close fitting roof timbers and in hollow tree trunks. Occasionally they can be found behind loose bark on dead trees, and movement between winter roosts is quite frequent they have been known to fly and forage in mild spells all winter.	http://www.bats.org.uk/data/files/Species_Info_sheets/barbastelle_11.02.13.pdf
Barnack Hills and Holes	SAC	H6210	*Semi-natural dry grasslands and scrubland facies:on calcareous substrates (Festuco-Brometalia)(important orchid sites). Dry grasslands and scrublands on chalk or limestone(important orchid sites).*	This priority habitat type comprises *Festuco-Brometalia* calcareous grasslands containing important orchid assemblages and/or rare orchids. Baranck is CG5 grassland with Orchis anthropophorum (Man Orchid)	
The Wash	SPA/ Ramsar	B A054	*Anas acuta*(Northern Pintail)(non-breeding)	Open, shallow flooded areas, vegetated	RSPB
		B A050	*Anas penelope* (Eurasian Wigeon)(non-breeding)	Open, shallow flooded areas, agricultural fields	RSPB
The Wash		B A051	*Anas strepera (Gadwall)(non-breeding)*	Open, shallow flooded areas, vegetated	RSPB

Designated Site	Designation	Qualifying Feature Code	*Species Name*	Habiatat Requirements	Source of information
The Wash	SPA /Ramsar	B A040	*Anser brachyrhynchus (Pink Footed Goose) (non-breeding)*	Open, shallow flooded areas, agricultural fields	RSPB
		B A169	*Arenaria interpres (Ruddy Turnstone)(non-breeding)*	rocky shores as well as sandy and muddy ones. Particularly likes feeding on rocks covered with seaweed, and will feed along seawalls and jetties.	RSPB
		B A675	*Branta bernicla bernicla (Brent Goose) (non-breeding)*	Open, shallow flooded areas, agricultural fields	RSPB
		B A067	*Bucephala clangula(Common Goldeneye)(non-breeding)*	Open water, rivers	RSPB
		B A144	*Calidris alba (Sanderling)(non-breeding)*	Sandy Beeches	RSPB
		B A672	*Calidris alpina alpina (Dunlin)(non-breeding)*	Estuary mud and sand	RSPB
		B A143	*Calidris canutus (Red Knot)(non-breeding)*	Muddy estuaries	RSPB
		B A037	*Cygnus columbianus (Bewick's Swan)(non-breeding)*	agricultural fields (day) lagoons (night)	RSPB

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Source of information
The Wash	SPA/Ramsar	B A037	*Cygnus columbianus* (Bewick's Swan)(non-breeding)	agricultural fields (day) lagoons (night)	RSPB
		B A130	Haematopus ostralegus (Oyster Catcher)(non-breeding)	Estuary mud and sand	RSPB
		B A157	Limosa lapponica (Bar-tailed Godwit)(non-breeding)	Estuary mud and sand	RSPB
		B A616	Limosa limosa islandica (Black-tailed Godwit)(non-breeding)	Estuary mud and sand	RSPB
		B A065	Melanitta nigra (Common Scoter)(non-breeding)	at sea	RSPB
		B A160	Numenius arquata (Eurasian Curlew)(non-breeding)	Estuary mud and sand	RSPB
		B A141	Pluvialis squatarola (Grey Plover)(non-breeding)	Estuary mud and sand	RSPB

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Source of information
The Wash	SPA/Ramsar	B A195	Sterna albifrons (Little Tern) (breeding)	feeding over sand and mud. Sand dunes at Blakeney Point for breeding	RSPB
		B A193	Sterna hirundo (Common Tern) (breeding)	shingle bars	RSPB
		B A048	Tadorna tadorna (Common Shellduck)(non-breeding)	estuaries, reservoirs and gravel pits	RSPB
		B A162	Tringa totanus (Common Redshank)	Estuary mud and sand	RSPB
			Waterfowl Assemblage		

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Sorce of information
Upper Nene Valley Gravel Pits	SPA/Ramsar	A056	*Anas clypeata* (Northern Shoveler)(breeding)	Open, shallow flooded areas	RSPB
		A050	*Anas penelope* (Eurasian Wigeon)(non-breeding)	Open, shallow flooded areas, agricultural fields	RSPB
		A053	*Anas platyrrhynchos* (Mallard)(breeding)	Open, shallow flooded areas, vegetated	RSPB
		A051	*Anas strepera* (Gadwall)(breeding)	Open, shallow flooded areas, vegetated	RSPB
		A059	*Aythya ferina* (Common Pochard)(non-breeding	Open water	RSPB
		A061	*Aythya fuligula*(Tufted Duck)(non-breeding)	Open water	RSPB

Designated Site	Designation	Qualifying Feature Code	Species Name	Habiatat Requirements	Sorce of information
Upper Nene Valley Gravel Pits		A021	*Botaurus stellaris* (Bittern)	Reedbeds	RSPB
		A017	*Phalacrocorax carbo* (Cormorant)	Open water: inland on reservoirs, lakes and gravel pits	RSPB
		A140	*Pluvialis apricaria* (Golden Plover)	Lowland fields (near water)	RSPB
		A005	*Podiceps cristatus*(Great Crested Grebe)(non-breeding)	Open water	RSPB
		A142	*Vanellus vanellus* (Lapwing)	Lowland fields (near water)	RSPB

Appendix 2 - Natural England's Site Improvement Plans

Site Improvement Plans (SIPs) have been developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 sites (IPENS). Natura 2000 sites is the combined term for sites designated as Special Areas of Conservation (SAC) and Special Protected Areas (SPA). This work has been financially supported by LIFE, a financial instrument of the European Community.

The tables show the prioritised issues for the sites, the features they affect, the proposed measures to address the issues and the delivery bodies whose involvement is required to deliver the measures. The list of delivery bodies will include those who have agreed to the actions as well as those where discussions over their role in delivering the actions is on-going.

Portholme SAC

Priority & Issue	Pressure Threat	Feature(s) affected	Measure	Delivery Bodies or
1 Inappropriate water levels	Threat	H6510 Lowland hay meadows	Review the Water Level Management Plan (WLMP) monitor flooding	Environment Agency, Natural England, London Anglers and Association, Thomas Millar Charity (landowners)
2 Water Pollution	Threat	H6510 Lowland hay meadows	Review the Diffuse Water Pollution Plan and monitor phosphate / sediment levels	Environment Agency, Natural England, London Anglers Association, Thomas Millar Charity (landowners)

Fenland SAC

Priority & Issue	Pressure Threat	Feature(s) affected	Measure	Delivery Bodies or
1 Water Pollution	Pressure	H6410 Purple moor-grass meadows, H7210 Calcium-rich fen dominated by great fen sedge (saw sedge), S1166 Great crested newt	Undertake water quality assessment. Multiple collection points over prolonged period.	Environment Agency, Natural England
2 Hydrological changes	Threat	H6410 Purple moor-grass meadows, H7210 Calcium-rich fen dominated by great fen sedge (saw sedge), S1166 Great crested newt	Review the Water Level Management Plan (WLMP). Investigate other flood storage options on Great Fen land	Environment Agency, Huntingdonshire District Council, Natural England, Middle Level Commissioners IDB, Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire
3 Water Pollution	Pressure/ Threat	H6410 Purple moor-grass meadows, H7210 Calcium-rich fen dominated by great fen sedge (saw sedge)	Undertake water quality assessment. Multiple collection points over prolonged period.	Environment Agency, Natural England
4 Hydrological changes	Pressure/ Threat	H6410 Purple moor-grass meadows, H7210 Calcium-rich fen dominated by great fen sedge (saw sedge)	Pilot augmentation scheme. Monitor effects and produce an implementation plan.	Environment Agency
5 Air Pollution: impact of atmospheric nitrogen deposition	Pressure/ Threat	H6410 Purple moor-grass meadows, H7210 Calcium-rich fen dominated by great fen sedge (saw sedge)	Further investigate potential atmospheric nitrogen impact on the site	Natural England

Ouse Washes SAC & SPA

Plan Summary

This table shows the prioritised issues for the site(s), the features they affect, the proposed measures to address the issues and the delivery bodies whose involvement is required to deliver the measures. The list of delivery bodies will include those who have agreed to the actions as well as those where discussions over their role in delivering the actions is on-going.

Priority & Issue	Pressure Threat	Feature(s) affected	Measure	Delivery Bodies or
1 Inappropriate water levels	Pressure	A050(NB) Wigeon, A056(B) Shoveler, A119(B) Spotted Crake, A151(B) Ruff, A156a(B) Black-tailed Godwit	Habitat creation to offset historical decline of wintering and breeding birds and other strategies to alleviate flooding	Defra, Environment Agency, Natural England
2 Water Pollution	Threat	A037(NB) Bewick's Swan, A038(NB) Whooper Swan, A050(NB) Wigeon, A051(B) Gadwall, A051(NB) Gadwall, A052(NB) Eurasian teal, A053(B) Mallard, A054(NB) Pintail, A055(B) Garganey, A056(B) Shoveler, A056(NB) Shoveler, A059(NB) Common pochard, A082(NB) Hen Harrier, A119(B) Spotted Crake, A151(B) Ruff, A151(NB) Ruff, A156a(B) Black- tailed Godwit, A156a(NB) Black-tailed Godwit, Breeding bird assemblage, S1149 Spined loach, Waterbird assemblage	Implementation of Diffuse Water Pollution plan to tackle inappropriate levels of nutrients from flooding	Environment Agency, Natural England

Upper Nene Valley Gravel Pits SPA

Priority & Issue	Pressure or Threat	Feature(s) affected	Measure	Delivery Bodies
1 Public Access/Disturbance	Threat	A021(NB) Bittern, A051(NB) Gadwall, A140(NB) Golden Plover, Waterbird assemblage	Manage recreational impacts through access and habitat management and advice.	East Northamptonshire District Council, Natural England, Nene Valley NIA, Northampton Borough Council, Northamptonshire LEP, Northamptonshire County Council, RSPB, South Northamptonshire District Council, The Wildlife Trust for Beds, Cambs, Northants and Peterboro, Volunteers, Wellingborough Borough Council, British Trust for Ornithology (BTO), Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire, River Nene Regional Park, Rockingham Forest Trust, West Northamptonshire Joint Planning Unit, North Northamptonshire Joint Planning Unit, Local nature partnership

2 Planning Permission: general	Threat	A021(NB) Bittern, A051(NB) Gadwall, A140(NB) Golden Plover, Waterbird assemblage	Provide clear guidance to District developers and local planning England, officers Council,	East Northamptonshire Council, Natural Northampton Borough Northamptonshire County Council, RSPB, South Northamptonshire District Council, Wellingborough Borough Council, West Northamptonshire Joint Planning Unit, North Northamptonshire Joint
3 Fisheries: Freshwater	Threat	A021(NB) Bittern, A051(NB) Gadwall, A140(NB) Golden Plover, Waterbird assemblage	Maintain and develop Natural sustainable freshwater Angling fisheries, by developing individual Fisheries Plans	Environment Agency, England, Fisheries, Trust(s)
4 Change in land management	Threat	A021(NB) Bittern, A051(NB) Gadwall, A140(NB) Golden Plover, Waterbird assemblage	Establish appropriate grazing and scrub management	Natural England, Landowner(s)

Appendix 3 - Maps of Huntingdon Local Plan Allocations Listed in Appendices 5 and 6

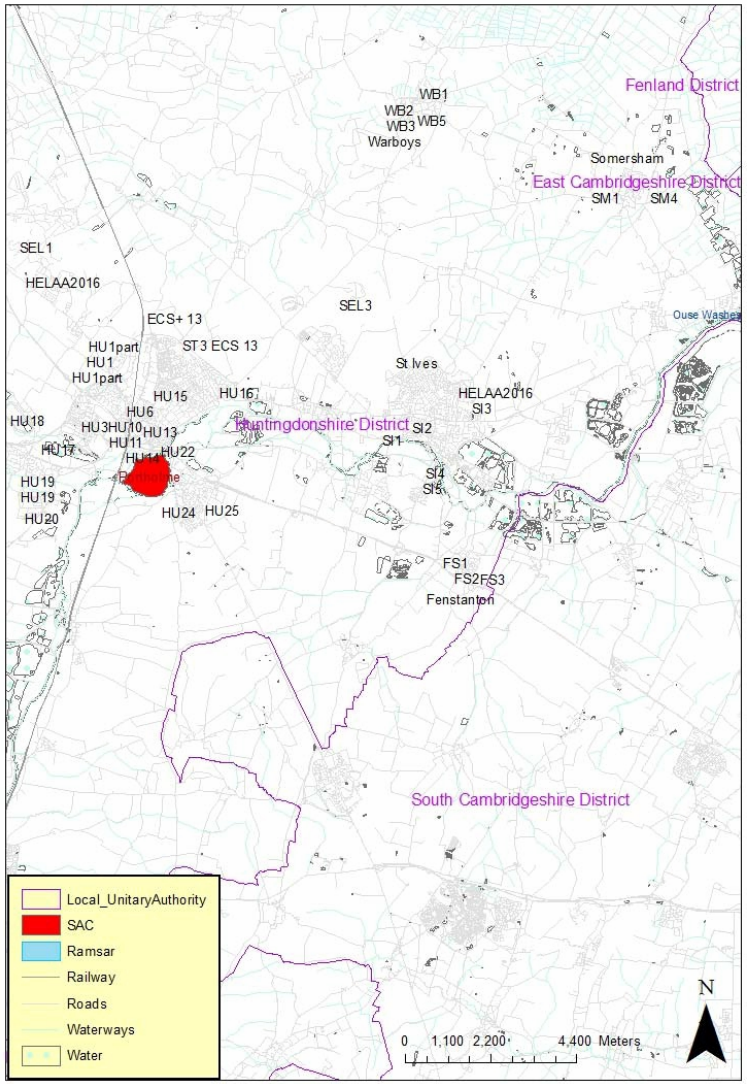

Figure A3.1. HLP2036 allocations in and around Huntingdon and St Ives

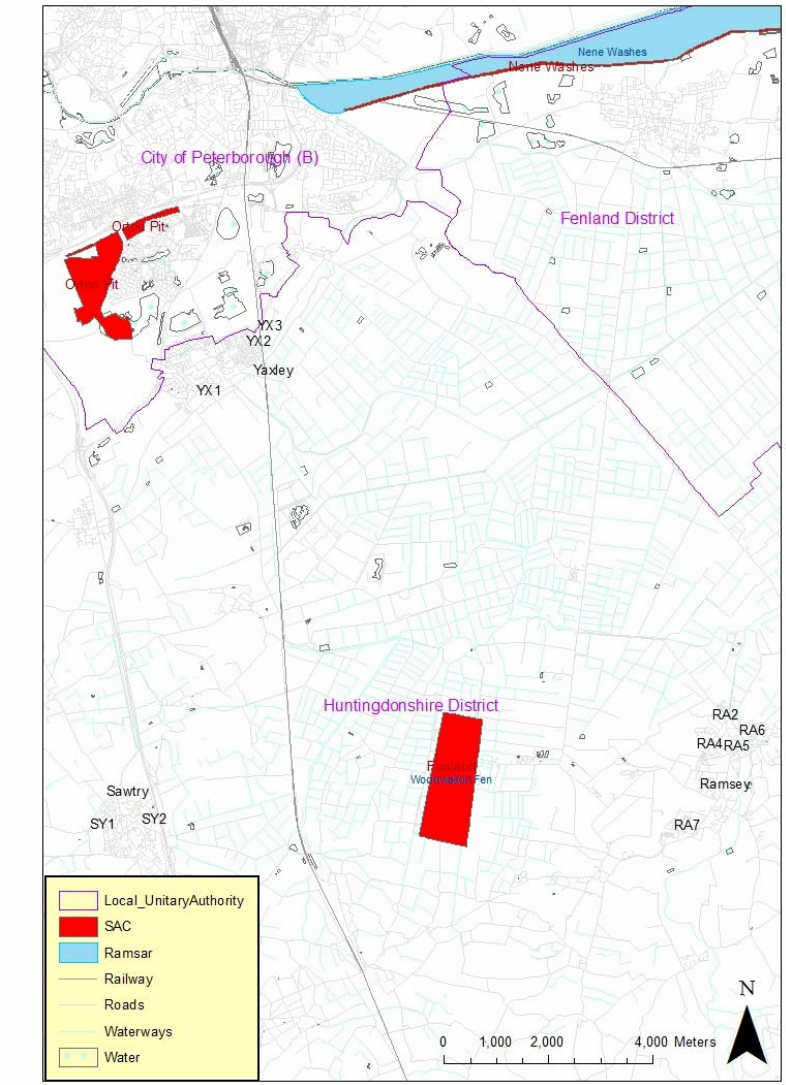

Figure A3.2. HLP2036 allocations in the north of Huntingdonshire

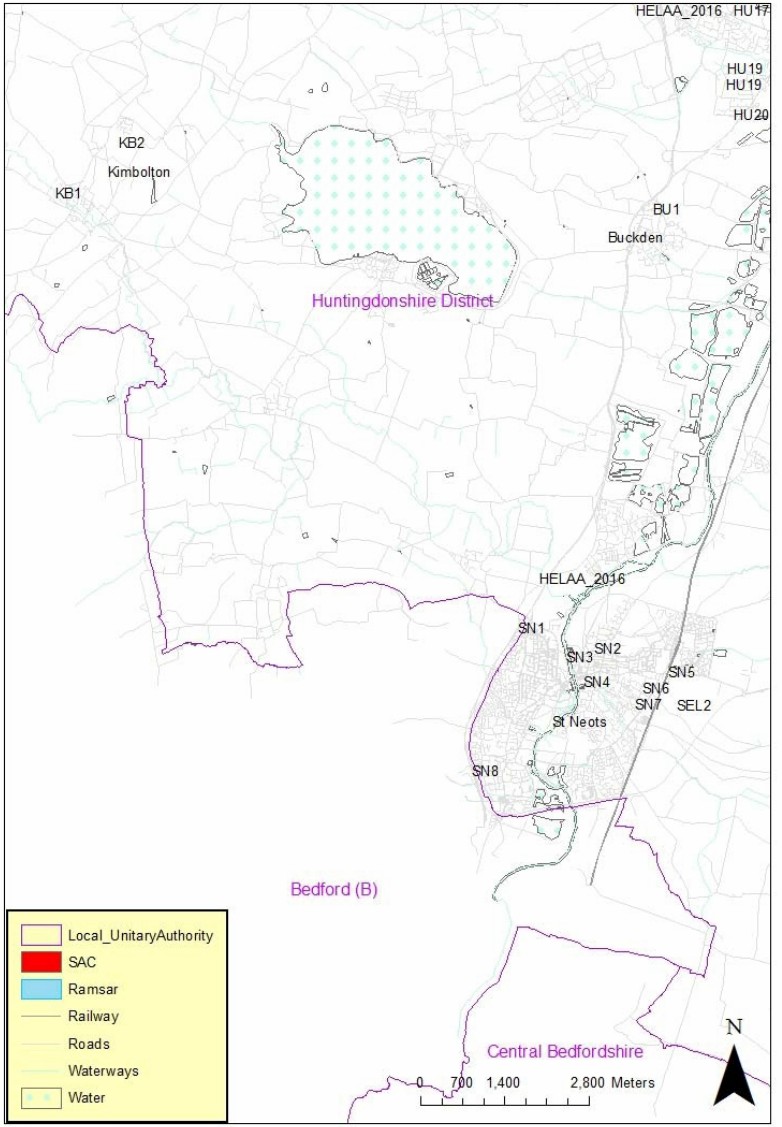

Figure A3.3. HLP2036 allocations in St Neots and the south of Huntingdonshire

Appendix 4 - Screening of Individual Policies of HJP2036

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP1	Strategy for Development	none	possible	possible	possible	possible	possible	possible	Further analysis
LP2	The relationship between built-up areas and the countryside	n/a	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP3	Spatial planning areas	none	possible	possible	possible	possible	possible	possible	Further analysis
LP4	Service centres	none	minimal	minimal	minimal	minimal	minimal	minimal	see individual allocations in service centres
LP5	Small settlements	none	no allocations	no allocations	no allocations	no allocations	no allocations	no allocations	screened out
LP6	The countryside	none	no	only possible if sustainable in relation to policies below	only possible if sustainable in relation to policies below	only possible if sustainable in relation to policies below	only possible if sustainable in relation to policies below	only possible if sustainable in relation to policies below	screened out
LP7	Green infrastructure	none	possible	minimal	no	possible	no	no	further analysis because differences between allocations and European sites
LP8	Sustainable development principles	none	provides positive impact if followed with policies below	provides positive impact if followed with policies below	provides positive impact if followed with policies below	provides positive impact if followed with policies below	provides positive impact if followed with policies below	provides positive impact if followed with policies below	inherent in further analysis

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP9	Design strategy	none	n/a	ensures master plan and/or design code for large projects (50+ homes)	ensures master plan and/or design code for large projects (50+ homes)	n/a	ensures master plan and/or design code for large projects (50+ homes)	ensures master plan and/or design code for large projects (50+ homes)	screened out as inherent in further analysis of individual allocations
LP10	Community planning proposals	none	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	screened out as inherent in further analysis of individual allocations
LP11	Health impact assessment	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP12	Affordable housing provision	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP13	Exceptions housing	none	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	screened out
LP14	Gypsies, travellers and travelling showpeople	none	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	wording ensures AA for any sites close to European sites	screened out

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP15	Heritage strategy	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP16	Contributing to infrastructure delivery	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP17	Flood risk	none	n/a	n/a	wording ensures flood assessment carried out for each site	n/a	wording ensures flood assessment carried out for each site	wording ensures flood assessment carried out for each site	further analysis required for individual allocations and sites
LP18	Surface water	none	n/a	n/a	wording ensures flood assessment carried out for each site	n/a	wording ensures flood assessment carried out for each site	wording ensures flood assessment carried out for each site	further analysis required for individual allocations and sites
LP19	Waste water management	none	n/a	n/a	wording ensures waste water assessment carried out for each site	n/a	wording ensures waste water assessment carried out for each site	wording ensures waste water assessment carried out for each site	further analysis required for individual allocations and sites
LP20	Design implementation	none	n/a	should help prevent	should help prevent	should help prevent	should help prevent	should help prevent	screened out
LP21	Advertising	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP22	Amenity	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out with exception of HU14 (see main text)
LP23	Housing mix	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP24	Specialist housing	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP25	Sustainable travel	none	not close to any sites	not close to any sites	not close to any sites	not close to any sites	not close to any sites	not close to any sites	screened out
LP26	Parking provision	none	n/a	helps prevent	could cause increase in surface water if not properly designed	n/a	n/a	surface water could cause reduction in quality	further analysis required for individual allocations and sites
LP27	Established employment areas	none	n/a	wording does not address	wording does not address	n/a	wording does not address	wording does not address	further analysis required for individual allocations and sites
LP28	Rural economy	none	n/a	wording does not address	wording does not address	n/a	wording does not address	wording does not address	Any developments will have an Appropriate Assessment if they might affect a European Site. NB Ramsey Heights is very close to Woodwalton Fen, Portholme is close to Godmanchester and Earith is very close to the Ouse Washes.

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP29	Homes for rural workers	none	n/a	wording does not address	wording does not address	n/a	wording does not address	wording does not address	Any developments will have an Appropriate Assessment if they might affect a European Site. NB Ramsey Heights is very close to Woodwalton Fen, Portholme is close to Godmanchester and Earith is very close to the Ouse Washes.
LP30	Town centre vitality and viability	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP31	Local services and facilities	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP32	Tourism and recreation	none	wording specifically protects sites from increase	n/a	n/a	linked to recreation	n/a	n/a	screened out
LP33	Biodiversity and geodiversity	none	should prevent	should prevent	should prevent	should prevent	should prevent	should prevent	screened out as positive
LP34	Trees, woodland, hedges and hedgerows	none	should prevent	should prevent	should prevent	should prevent	should prevent	should prevent	screened out as positive
LP35	Protection of open spaces	none	should prevent	should prevent	should prevent	should prevent	should prevent	should prevent	screened out as positive
LP36	Rural buildings	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out

Policy code	Policy	Direct effect on designated site	Increased Recreation	Increased Atmospheric Pollution	Human induced changes in hydraulic conditions	Invasive non-native species	Groundwater pollution	Reduction in water quality	Result of screening
LP37	Heritage assets and their settings	none	n/a	n/a	n/a	n/a	n/a	n/a	screened out
LP38	Renewable and low carbon energy	none	n/a	n/a	wording does not consider impacts on surface water	n/a	n/a	wording does not consider impacts on surface water	further analysis required. This policy does specifically address species and habitats but not water.
LP39	Ground contamination and pollution	none	n/a	n/a	should prevent	n/a	should prevent	should prevent	screened out
LP40	Water related development	none	n/a	n/a	should prevent	n/a	should prevent	should prevent	screened out

Appendix 5 – Screening Allocations for Recreational Threats

For this screening it was possible to use the ORVAL visitor estimates to gauge the size of the issue facing some of the European Sites, although some are not included in ORVAL. At the beginning of the entries for each European Site in the tables below the figures obtained are given (shaded grey).

Orton Pits has almost no access. Woodwalton Fen is not easily accessible and tends to be visited only by naturalists with their families (sometimes). The Ouse washes have visitor centres but most of the area is fairly inaccessible and the same is true of the Nene Washes. Paths along the banks of both sites do exist. Rutland Water has a large tourist economy and the number of extra visitors from Huntingdonshire will not be a high percentage of the total. Although there may be more visitors to the Eversden and Wimpole Woods they will not affect the Qualifying Feature. Barnack Hills and Holes is too far away from any allocations for regular visits, there are likely to be a small number of new visits from naturalists but these will not have a significant impact.

A very simplistic metric was developed by Bodsey Ecology in the absence of visitor surveys from other sources. The metric divides the number of dwellings by the square of the distance from the nearest edge of the European site to the nearest edge of the development. Hence very close, large sites will have a large effect and very small distant sites will have almost no effect. This metric emphasises distance (possibly over emphasises it) as it is known that most visitors will not travel long distances for casual recreational activity such as walking the dog. As dogs cause more disturbance to animals than non-motorised humans this is particularly pertinent. The metric was applied to Portholme SAC, Ouse Washes SAC/SPA/Ramsar, and Woodwalton Fen SAC as these are the three sites within Huntingdonshire. The "% visitor metric" (Column 6) for Portholme, Woodwalton Fen and Ouse Washes tables was calculated by dividing the metric for an allocation by the sum of the metric for all allocations and multiplying by 100. In Column 7 of the table for Portholme SAC the impact on the site is given in terms of the % of visits from the allocation. An allocation providing less than 1% of visits will have no measurable impact, an allocation providing between 1 and 10% of the visitors was deemed to have minimal impact. Allocations providing higher percentages of the visitors are highlighted.

Sites within easy walking distance of a new development are likely to be visited far more regularly than those that are not. For example the nearest greenspace to site HU14 will be the Portholme SAC. The national average is that 1 in 4 households have a dog so that development of 11 dwellings could easily have three or more dogs that will be walked on Portholme SAC twice a day, more than 300 days a year. This represents a very high number of new visits to the Portholme SAC.

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Portholme (km)	% visitor metric	Impact on Portholme (SAC)
ORVAL annual visitor estimate					**not available**	
SEL1	Alconbury Weald	5000	0.24	3	1.58	1.6% of visitors from this allocation so could have minimal impact
SEL2	St Neots East	3820	0.19	9.5	0.12	<1% of visitors: no impact
SEL3	Wyton Airfield	4500	0.22	5	0.51	<1% of visitors: no impact
SEL3	Wyton Airfield	2880	**0.15**	**5**	**0.33**	**<1% of visitors: no impact**
SEL3	Wyton Airfield	4500	0.22	5	0.51	<1% of visitors: no impact
HU1	Ermine Street	1450	0.07	2.1	0.93	<1% of visitors: no impact
HU2	Forensic Science Lab	105	0.01	1.4	0.15	<1% of visitors: no impact
HU3	Hinchingbrooke Health Campus	882	0.04	0.76	4.34	4.3 % of visitors although Hinchingbrooke Park will be closer: minimal impact
HU4	West of Railway, Brampton Road	0	0.00	0.5	0.00	no visitors: no impact
HU6	Ermine St/Edison Bell Way	47	0.00	0.9	0.16	<1% of visitors: no impact
HU7	North of Edison Bell Way	0	0.00	0.8	0.00	no visitors: no impact
HU8	South of Edison Bell Way	74	0.00	0.8	0.33	<1% of visitors: no impact
HU9	Ferrars Road	0	0.00	0.7	0.00	no visitors: no impact
HU11	George Street	300	0.01	0.5	3.41	3% of visitors so minimal impact
HU12	George St/Edison Bell Way	40	0.00	0.5	0.45	<1% of visitors: no impact
HU13	Chequers Court	0	0.00	0.5	0.00	no visitors: no impact

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Portholme (km)	% visitor metric	Impact on Portholme (SAC)
HU14	Gas Depot	11	0.00	0.02	78.17	78% of visitors due to very close proximity. However only 11 households. Dog walking from these houses likely to have largest impact
HU15	California Rd	54	0.00	1.4	0.08	<1% of visitors: no impact
HU16	Main St	32	0.00	2.4	0.02	<1% of visitors: no impact
HU18	Huntingdon racecourse	0	0.00	2.3	0.00	no visitors: no impact
HU19	Brampton Park	600	0.03	1.6	0.67	<1% of visitors: no impact
HU20	Park View Garage		0.00	2.2	0.00	no visitors: no impact
HU21	Tyrells Marina	14	0.00	0.1	3.98	4% of visitors: minimal impact
HU22	RGE Engineering	80	0.00	0.3	2.53	2.5 % of vistors: minimal impact
HU24	Wigmore Farm Buildings	13	0.00	0.6	0.10	<1% of visitors: no impact
HU25	Bearscroft Farm	753	0.04	1.2	1.49	1.4% of vistors: minimal impact
SN1	Eaton Court	29	0.00	11	0.00	<1% of visitors: no impact
SN2	Huntingdon St	64	0.00	10.5	0.00	<1% of visitors: no impact
SN3	Former Youth Centre	14	0.00	11	0.00	<1% of visitors: no impact
SN4	St Mary's Urban Village	38	0.00	11	0.00	<1% of visitors: no impact
SN5	Loves Farm Reserved Site	41	0.00	10.5	0.00	<1% of visitors: no impact
SN6	Cromwell Rd North	80	0.00	11	0.00	<1% of visitors: no impact
SN7	Cromwell Rd Car Park	21	0.00	11	0.00	<1% of visitors: no impact
SN8	Nelson Rd	40	0.00	13.5	0.00	<1% of visitors: no impact
SI1	St Ives West	506	0.02	5.3	0.05	<1% of visitors: no impact

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Portholme (km)	% visitor metric	Impact on Portholme (SAC)
SI2	St Ives Football Club	30	0.00	6.5	0.00	<1% of visitors: no impact
SI3	Giffords Farm	0	0.00	8	0.00	no visitors: no impact
SI4	Former Car Showroom	46	0.00	6.8	0.00	<1% of visitors: no impact
SI5	Vindis	56	0.00	6.7	0.00	<1% of visitors: no impact
RA1	Ramsey Gateway (High Lode)	110	0.01	14.5	0.00	<1% of visitors: no impact
RA2	Ramsey Gateway	45	0.00	14.5	0.00	<1% of visitors: no impact
RA3	West Station Yard & Northern Mill	34	0.00	14.5	0.00	<1% of visitors: no impact
RA4	Field Rd	90	0.00	14.5	0.00	<1% of visitors: no impact
RA5	Whytefield Rd	40	0.00	14.5	0.00	<1% of visitors: no impact
RA6	94 Great Whyte	32	0.00	14.5	0.00	<1% of visitors: no impact
RA7	RAF Upwood	450	0.02	12.5	0.01	<1% of visitors: no impact
BU1	East of Silver St	14	0.00	4.3	0.00	<1% of visitors: no impact
FS1	Former Dairy Crest	88	0.00	7.7	0.00	<1% of visitors: no impact
FS2	Cambridge Rd	120	0.01	7.7	0.01	<1% of visitors: no impact
FS3	Ivy Nursery	34	0.00	8.5	0.00	<1% of visitors: no impact
KB1	West of Station Rd	20	0.00	13.5	0.00	<1% of visitors: no impact
KB2	South of Bicton Industrial Estate	0	0.00	12.5	0.00	no visitors: no impact
SY1	East of Glebe Farm	80	0.00	14.5	0.00	<1% of visitors: no impact
SY2	West of St Andrews Way	43	0.00	14	0.00	<1% of visitors: no impact
SM1	Newlands	45	0.00	13	0.00	<1% of visitors: no impact

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Portholme (km)	% visitor metric	Impact on Portholme (SAC)
SM2	The Pasture	19	0.00	13	0.00	<1% of visitors: no impact
SM3	Somersham Town FC	47	0.00	13	0.00	<1% of visitors: no impact
SM4	North of The Bank	55	0.00	14.5	0.00	<1% of visitors: no impact
WB1	West of Station Rd	120	0.01	11.5	0.00	<1% of visitors: no impact
WB2	West of Ramsey Rd	45	0.00	10.5	0.00	<1% of visitors: no impact
WB3	Manor Farm Buildings	10	0.00	10.5	0.00	<1% of visitors: no impact
WB5	South of Farriers Way	74	0.00	11	0.00	<1% of visitors: no impact
WB6	Fenton Field Farm	10	0.00	11	0.00	<1% of visitors: no impact
YX1	Askew's Lane	12	0.00	21	0.00	<1% of visitors: no impact
YX2	Snowcap Mushrooms	78	0.00	22	0.00	<1% of visitors: no impact
YX3	Yax Pak	0	0.00	22	0.00	no visitors: no impact

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Ouse Washes	% visitor metric	Impact on Ouse Washes (SPA, Ramsar)
ORVAL annual visitor estimate					not available	
SEL1	Alconbury Weald	5000	0.24	15	15.71	long distance makes number of visitors small but high proportion of any increase
SEL2	St Neots East	3820	0.19	22.5	5.33	long distance makes increase in number of visitors small
SEL3	Wyton Airfield	4500	0.22	8.4	45.09	
SEL3	Wyton Airfield	2880	**0.15**	8.4	28.86	long distance to any attractions makes number of visitors small but high proportion of any increase
SEL3	Wyton Airfield	4500	0.22	8.4	45.09	
HU1	Ermine Street	1450	0.07	16	4.00	
HU2	Forensic Science Lab	105	0.01	17	0.26	
HU3	Hinchingbrooke Health Campus	882	0.04	16.5	2.29	
HU4	West of Railway, Brampton Road	0	0.00	15.5	0.00	long distance makes increase in number of visitors small
HU6	Ermine St/Edison Bell Way	47	0.00	15.5	0.14	
HU7	North of Edison Bell Way	0	0.00	15.5	0.00	
HU8	South of Edison Bell Way	74	0.00	15.5	0.22	
HU9	Ferrars Road	0	0.00	15.5	0.00	
HU11	George Street	300	0.01	15.5	0.88	
HU12	George St/Edison Bell Way	40	0.00	15.5	0.12	
HU13	Chequers Court	0	0.00	15.5	0.00	

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Ouse Washes	% visitor metric	Impact on Ouse Washes (SPA, Ramsar)
HU14	Gas Depot	11	0.00	15.5	0.03	
HU15	California Rd	54	0.00	14.5	0.18	
HU16	Main St	32	0.00	13	0.13	
HU18	Huntingdon racecourse	0	0.00	13	0.00	
HU19	Brampton Park	600	0.03	18	1.31	
HU20	Park View Garage		0.00	18.5	0.00	
HU21	Tyrells Marina	14	0.00	15	0.04	
HU22	RGE Engineering	80	0.00	14.5	0.27	long distance makes increase in number of visitors small. HU21 may lead to an increase in boat traffic.
HU24	Wigmore Farm Buildings	13	0.00	15	0.04	
HU25	Bearscroft Farm	753	0.04	13.5	2.92	
SN1	Eaton Court	29	0.00	25.5	0.03	
SN2	Huntingdon St	64	0.00	25	0.07	
SN3	Former Youth Centre	14	0.00	25	0.02	
SN4	St Mary's Urban Village	38	0.00	25	0.04	
SN5	Loves Farm Reserved Site	41	0.00	24	0.05	
SN6	Cromwell Rd North	80	0.00	24.5	0.09	
SN7	Cromwell Rd Car Park	21	0.00	25	0.02	
SN8	Nelson Rd	40	0.00	27.5	0.04	
SI1	St Ives West	506	0.02	8.7	4.73	

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Ouse Washes	% visitor metric	Impact on Ouse Washes (SPA, Ramsar)
SI2	St Ives Football Club	30	0.00	8.5	0.29	
SI3	Giffords Farm	0	0.00	6.8	0.00	increase in number of visitors small because relatively small developments
SI4	Former Car Showroom	46	0.00	8.7	0.43	
SI5	Vindis	56	0.00	8.9	0.50	
RA1	Ramsey Gateway (High Lode)	110	0.01	15	0.35	
RA2	Ramsey Gateway	45	0.00	15	0.14	
RA3	West Station Yard & Northern Mill	34	0.00	15	0.11	
RA4	Field Rd	90	0.00	15	0.28	
RA5	Whytefield Rd	40	0.00	15	0.13	
RA6	94 Great Whyte	32	0.00	15	0.10	
RA7	RAF Upwood	450	0.02	14	1.62	long distance makes increase in number of visitors small
BU1	East of Silver St	14	0.00	20	0.02	
FS1	Former Dairy Crest	88	0.00	9.7	0.66	increase in number of visitors small because relatively small developments
FS2	Cambridge Rd	120	0.01	9.6	0.92	
FS3	Ivy Nursery	34	0.00	9.2	0.28	
KB1	West of Station Rd	20	0.00	30	0.02	
KB2	South of Bicton Industrial Estate	0	0.00	29	0.00	long distance makes increase in number of visitors small
SY1	East of Glebe Farm	80	0.00	25	0.09	
SY2	West of St Andrews Way	43	0.00	23	0.06	
SM1	Newlands	45	0.00	4.5	1.57	increase in number of visitors small because relatively small developments

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Ouse Washes	% visitor metric	Impact on Ouse Washes (SPA, Ramsar)
SM2	The Pasture	19	0.00	4.4	0.69	
SM3	Somersham Town FC	47	0.00	4.1	1.98	
SM4	North of The Bank	55	0.00	3.3	3.57	
WB1	West of Station Rd	120	0.01	9.5	0.94	increase in number of visitors small because relatively small developments
WB2	West of Ramsey Rd	45	0.00	10	0.32	
WB3	Manor Farm Buildings	10	0.00	10	0.07	
WB5	South of Farriers Way	74	0.00	9.2	0.62	
WB6	Fenton Field Farm	10	0.00	9.2	0.08	
YX1	Askew's Lane	12	0.00	27	0.01	
YX2	Snowcap Mushrooms	78	0.00	27	0.08	long distance makes increase in number of visitors small
YX3	Yax Pak	0	0.00	27	0.00	

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Woodwalton Fen	% visitor metric	Impact on Woodwalton Fen (Ramsar, SAC (part))
ORVAL annual visitor estimate					56238 visitors per year	
SEL1	Alconbury Weald	5000	0.24	5.2	52.75142128	high proportion of any new visitors but no dog walking rule will make number small
SEL2	St Neots East	3820	0.19	22	2.251587607	no dog walking rule will make number of extra visitors small
SEL3	Wyton Airfield	4500	0.22	9	15.84887146	
SEL3	Wyton Airfield	2880	**0.15**	9	11.01570194	high proportion of any new visitors but no dog walking rule will make number small
SEL3	Wyton Airfield	4500	0.22	9	15.84887146	
HU1	Ermine Street	1450	0.07	9.2	4.887234701	
HU2	Forensic Science Lab	105	0.01	11	0.247556753	
HU3	Hinchingbrooke Health Campus	882	0.04	10.5	2.28223749	
HU4	West of Railway, Brampton Road	0	0.00	11	0	
HU6	Ermine St/Edison Bell Way	47	0.00	11	0.110811118	
HU7	North of Edison Bell Way	0	0.00	11	0	
HU8	South of Edison Bell Way	74	0.00	11	0.174468568	
HU9	Ferrars Road	0	0.00	11	0	
HU11	George Street	300	0.01	11	0.707305007	
HU12	George St/Edison Bell Way	40	0.00	11	0.094307334	
HU13	Chequers Court	0	0.00	11	0	

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Woodwalton Fen	% visitor metric	Impact on Woodwalton Fen (Ramsar, SAC (part))
HU14	Gas Depot	11	0.00	12	0.021792198	
HU15	California Rd	54	0.00	10.5	0.139728826	
HU16	Main St	32	0.00	10.5	0.082802267	
HU18	Huntingdon racecourse	0	0.00	11	0	
HU19	Brampton Park	600	0.03	13	1.012827289	
HU20	Park View Garage		0.00	13.5	0	
HU21	Tyrells Marina	14	0.00	12	0.027735525	
HU22	RGE Engineering	80	0.00	12	0.158488715	
HU24	Wigmore Farm Buildings	13	0.00	13.5	0.020349168	no dog walking rule will make number of extra visitors small
HU25	Bearscroft Farm	753	0.04	13	1.271098247	
SN1	Eaton Court	29	0.00	23	0.015639151	
SN2	Huntingdon St	64	0.00	23	0.034513989	
SN3	Former Youth Centre	14	0.00	23	0.007549935	
SN4	St Mary's Urban Village	38	0.00	23	0.020492681	
SN5	Loves Farm Reserved Site	41	0.00	23	0.022110524	
SN6	Cromwell Rd North	80	0.00	23	0.043142486	
SN7	Cromwell Rd Car Park	21	0.00	24	0.010400822	
SN8	Nelson Rd	40	0.00	25.5	0.017548923	
SI1	St Ives West	506	0.02	12.5	0.923849736	

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Woodwalton Fen	% visitor metric	Impact on Woodwalton Fen (Ramsar, SAC (part))
SI2	St Ives Football Club	30	0.00	13.5	0.046959619	
SI3	Giffords Farm	0	0.00	14	0	no dog walking rule will make number of extra visitors small
SI4	Former Car Showroom	46	0.00	15	0.058323847	
SI5	Vindis	56	0.00	15	0.071002944	
RA1	Ramsey Gateway (High Lode)	110	0.01	4.5	1.549667432	
RA2	Ramsey Gateway	45	0.00	4.5	0.633954858	
RA3	West Station Yard & Northern Mill	34	0.00	4.5	0.478988115	Most extra visitors to Great Fen will go to Holme Fen where the new Visitor Centre will be. The no dog walking rule at Woodwalton will restrict the number of casual local visitors to Woodwalton
RA4	Field Rd	90	0.00	4.7	1.162298405	
RA5	Whytefield Rd	40	0.00	5.3	0.406236648	
RA6	94 Great Whyte	32	0.00	4.8	0.396221787	
RA7	RAF Upwood	450	0.02	3.8	8.890294933	
BU1	East of Silver St	14	0.00	15.5	0.016623998	
FS1	Former Dairy Crest	88	0.00	17	0.086867171	
FS2	Cambridge Rd	120	0.01	17	0.118455233	no dog walking rule will make number of extra visitors small
FS3	Ivy Nursery	34	0.00	17	0.033562316	
KB1	West of Station Rd	20	0.00	20	0.014263984	
KB2	South of Bicton Industrial Estate	0	0.00	18.5	0	
SY1	East of Glebe Farm	80	0.00	6.2	0.593714227	
SY2	West of St Andrews Way	43	0.00	5.1	0.471627317	See response for Ramsey
SM1	Newlands	45	0.00	14	0.065497887	few extra visitors

Allocation code	Allocation Name	Number of dwellings	Proportion of dwellings	Distance to Woodwalton Fen	% visitor metric	Impact on Woodwalton Fen (Ramsar, SAC (part))
SM2	The Pasture	19	0.00	14	0.027654663	no dog walking rule will make number of extra visitors small
SM3	Somersham Town FC	47	0.00	14	0.068408904	
SM4	North of The Bank	55	0.00	14.5	0.074627266	
WB1	West of Station Rd	120	0.01	8.1	0.521773546	Most extra visitors to Great Fen will go to Holme Fen where the new Visitor Centre will be. The no dog walking rule at Woodwalton will restrict the number of casual local visitors to Woodwalton
WB2	West of Ramsey Rd	45	0.00	7.5	0.228223749	
WB3	Manor Farm Buildings	10	0.00	7.5	0.050716389	
WB5	South of Farriers Way	74	0.00	8.4	0.29918788	
WB6	Fenton Field Farm	10	0.00	8.4	0.040430795	
YX1	Askew's Lane	12	0.00	7.5	0.060859666	
YX2	Snowcap Mushrooms	78	0.00	8	0.347684618	
YX3	Yax Pak	0	0.00	8	0	

Allocation code	Allocation Name	Number of dwellings	Distance to Barnack	Barnack Hills and Holes (SAC)	Orton Pits (SAC)	Nene Washes (SAC,SPA, Ramsar)	Rutland Water (SPA, Ramsar)	Eversden and Wimpole Woods (SAC)	The Wash (SPA, Ramsar)
ORVAL annual visitor estimate				21176 = low number of visitors per year	not relevant	not available	196291 = minimum number as from only one part of tourist centre	not relevant	see visitor study from Kings Lynn and West Norfolk
SEL1	Alconbury Weald	5000	29	long distance makes likely number of extra visitors very small	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SEL2	St Neots East	3820	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SEL3	Wyton Airfield	4500	35		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SEL3	Wyton Airfield	2880	35		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SEL3	Wyton Airfield	4500	35		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU1	Ermine Street	1450	34		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU2	Forensic Science Lab	105	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU3	Hinchingbrooke Health Campus	882	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU4	West of Railway, Brampton Road	0	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact

Allocation code	Allocation Name	Number of dwellings	Distance to Barnack	Barnack Hills and Holes (SAC)	Orton Pits (SAC)	Nene Washes (SAC,SPA, Ramsar)	Rutland Water (SPA, Ramsar)	Eversden and Wimpole Woods (SAC)	The Wash (SPA, Ramsar)
HU6	Ermine St/Edison Bell Way	47	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU7	North of Edison Bell Way	0	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU8	South of Edison Bell Way	74	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU9	Ferrars Road	0	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU11	George Street	300	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU12	George St/Edison Bell Way	40	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU13	Chequers Court	0	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU14	Gas Depot	11	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU15	California Rd	54	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU16	Main St	32	36		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU18	Huntingdon racecourse	0	35		no access	no impact	no impact on tourist site	no impact on interest feature	no impact

Allocation code	Allocation Name	Number of dwellings	Distance to Barnack	Barnack Hills and Holes (SAC)	Orton Pits (SAC)	Nene Washes (SAC,SPA, Ramsar)	Rutland Water (SPA, Ramsar)	Eversden and Wimpole Woods (SAC)	The Wash (SPA, Ramsar)
HU19	Brampton Park	600	37		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU20	Park View Garage		37		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU21	Tyrells Marina	14	37		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU22	RGE Engineering	80	35		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU24	Wigmore Farm Buildings	13	35		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
HU25	Bearscroft Farm	753	39		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SN1	Eaton Court	29	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SN2	Huntingdon St	64	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SN3	Former Youth Centre	14	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SN4	St Mary's Urban Village	38	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SN5	Loves Farm Reserved Site	41	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact

Allocation code	Allocation Name	Number of dwellings	Distance to Barnack	Barnack Hills and Holes (SAC)	Orton Pits (SAC)	Nene Washes (SAC,SPA, Ramsar)	Rutland Water (SPA, Ramsar)	Eversden and Wimpole Woods (SAC)	The Wash (SPA, Ramsar)
SN6	Cromwell Rd North	80	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SN7	Cromwell Rd Car Park	21	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SN8	Nelson Rd	40	45		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SI1	St Ives West	506	39		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SI2	St Ives Football Club	30	40		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SI3	Giffords Farm	0	40		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SI4	Former Car Showroom	46	40		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SI5	Vindis	56	41		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
RA1	Ramsey Gateway (High Lode)	110	28		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
RA2	Ramsey Gateway	45	28		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
RA3	West Station Yard & Northern Mill	34	28		no access	no impact	no impact on tourist site	no impact on interest feature	no impact

Allocation code	Allocation Name	Number of dwellings	Distance to Barnack	Barnack Hills and Holes (SAC)	Orton Pits (SAC)	Nene Washes (SAC,SPA, Ramsar)	Rutland Water (SPA, Ramsar)	Eversden and Wimpole Woods (SAC)	The Wash (SPA, Ramsar)
RA4	Field Rd	90	28		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
RA5	Whytefield Rd	40	28		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
RA6	94 Great Whyte	32	28		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
RA7	RAF Upwood	450	28		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
BU1	East of Silver St	14	38		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
FS1	Former Dairy Crest	88	43		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
FS2	Cambridge Rd	120	43		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
FS3	Ivy Nursery	34	43		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
KB1	West of Station Rd	20	35		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
KB2	South of Bicton Industrial Estate	0	35		no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SY1	East of Glebe Farm	80	22		no access	no impact	no impact on tourist site	no impact on interest feature	no impact

Allocation code	Allocation Name	Distance to Barnack	Barnack Hills and Holes (SAC)	Orton Pits (SAC)	Nene Washes (SAC,SPA, Ramsar)	Rutland Water (SPA, Ramsar)	Eversden and Wimpole Woods (SAC)	The Wash (SPA, Ramsar)
SY2	West of St Andrews Way	22	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SM1	Newlands	38	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SM2	The Pasture	38	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SM3	Somersham Town FC	38	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
SM4	North of The Bank	38	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
WB1	West of Station Rd	33	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
WB2	West of Ramsey Rd	33	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
WB3	Manor Farm Buildings	33	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
WB5	South of Farriers Way	33	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
WB6	Fenton Field Farm	33	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
YX1	Askew's Lane	16	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
YX2	Snowcap Mushrooms	16	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact
YX3	Yax Pak	16	long distance	no access	no impact	no impact on tourist site	no impact on interest feature	no impact

Appendix 5.2 – Recreational impacts on the Upper Nene Valley Gravel Pits

To inform this priority issue Natural England commissioned a detailed survey of visitor access to the SPA through 2012-2013, conducted through face-to-face interview with visitors at several locations.. The interviews included a question on the postcode of the home origin of visitors; these were mapped at Map 14 of the report, as reproduced below. Statistical analysis of the distance travelled to reach the SPA is included in the report text.

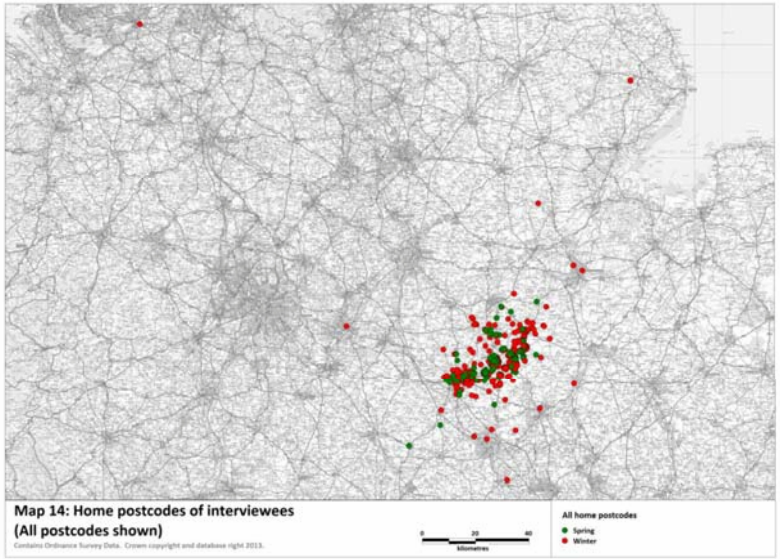

Figure 1 Distribution of home origins of visitors to the Upper Nene Valley Gravel Pits SPA, 2012-13 survey (Footprint Ecology, 2014)

The survey results clearly show that almost all visitors to the SPA live within 20km of the site, and that very few of these visitors live in Huntingdonshire. The nearest housing or mixed development site proposal in the Huntingdonshire Local Plan lies 12.6 km from the nearest point of the Upper Nene Valley Gravel Pits SPA and this is the small development at Kimbolton. Since there is no known reason why the new residents of the proposed housing will show any behaviours different from those of current Huntingdonshire and Northamptonshire residents, it can be concluded that few of them will visit the SPA to add to the recreational pressures on the site.

Appendix 6 – Screening for Development Allocations in HLP2036 for Water Related Threats

Allocation code	Allocation Name	Number of dwellings	Wastewater Treatment Works	Comment from Development Guidance in HLP2036 dated 21/11/2016	Amendment required to protect Ouse Washes and/or Portholme
SEL1	Alconbury Weald	5000	Huntingdon	The policy requires agreement with the Environment Agency and Anglian Water Services that the waste water flows from proposed development can be accommodated and that meeting the requirements of the Water Framework Directive would not be compromised. It is expected that the Huntingdon Waste water Treatment Works (WwTW) will serve this Strategic Expansion Location, although alternative solutions may be available. The WwTW has available flow headroom in its existing discharge consent and can accept proposed growth in its catchment up until approximately 2021/22 or 5,100 homes, based on estimated growth trajectories from 2013. After this unless additional headroom becomes available an increased discharge consent and process upgrades at the WwTW will be necessary. Interim treatment solutions may be necessary until a permanent treatment solution is put in place.	add "and the Habitat Regulations (2010)" after "Water Framework Directive" in sentence 1. Note that HU21 is a site on the river and there is a threat from recreational river traffic that must be protected against.
SEL3	Wyton Airfield	4500	Huntingdon		
SEL3	Wyton Airfield	2880	Huntingdon		
SEL3	Wyton Airfield	4500	Huntingdon		
HU1	Ermine Street	1450	Huntingdon		
HU2	Forensic Science Lab	105	Huntingdon		
HU3	Hinchingbrooke Health Campus	882	Huntingdon		
HU4	West of Railway, Brampton Road	0	Huntingdon		
HU6	Ermine St/Edison Bell Way	47	Huntingdon		
HU7	North of Edison Bell Way	0	Huntingdon		
HU8	South of Edison Bell Way	74	Huntingdon		
HU9	Ferrars Road	0	Huntingdon		
HU11	George Street	300	Huntingdon		
HU12	George St/Edison Bell Way	40	Huntingdon		
HU13	Chequers Court	0	Huntingdon		
HU14	Gas Depot	11	Huntingdon		
HU15	California Rd	54	Huntingdon		
HU16	Main St	32	Huntingdon		
HU18	Huntingdon racecourse	0	Huntingdon		
HU19	Brampton Park	600	Huntingdon		
HU20	Park View Garage		Huntingdon		
HU21	Tyrells Marina	14	Huntingdon		
HU22	RGE Engineering	80	Huntingdon		
HU24	Wigmore Farm Buildings	13	Huntingdon		
HU25	Bearscroft Farm	753	Huntingdon		

Allocation code	Allocation Name	Number of dwellings	Wastewater Treatment Works	Comment from Development Guidance in HLP2036 dated 21/11/2016	Amendment required to protect Ouse Washes and/or Portholme
SEL2	St Neots East	3820	St Neots	The policy requires agreement with the Environment Agency (EA) and Anglian Water Services (AWS) to ensure that the waste water flows from proposed development can be accommodated and that meeting the requirements of the Water Framework Directive would not be compromised. St Neots Waste Water Treatment Works(WwTW) will serve this site and currently has no available headroom. Unless additional headroom becomes available a change indischarge consent and process upgrades at the WwTW will be required.This would be achievable within the limits of conventional treatment and hence would not impact on attainment of future WFD water quality objectives. Interim treatment solutions will be necessary until a permanent treatment solution is put in place. Should temporary measures prove not to be viable or would be insufficien tit may be necessary to place limits on the amount of development that can take place. Anglian Water has identified further investment at St Neots Water Recycling Centre as outlined in their current Asset Management Plan (which covers the period 2015 to 2020).	add "and the Habitat Regulations (2010)" after "Water Framework Directive" in sentence 1.
SN1	Eaton Court	29	St Neots		
SN2	Huntingdon St	64	St Neots		
SN3	Former Youth Centre	14	St Neots		
SN4	St Mary's Urban Village	38	St Neots		
SN5	Loves Farm Reserved Site	41	St Neots		
SN6	Cromwell Rd North	80	St Neots		
SN7	Cromwell Rd Car Park	21	St Neots		
SN8	Nelson Rd	40	St Neots		

Allocation code	Allocation Name	Number of dwellings	Wastewater Treatment Works	Comment from Development Guidance in HLP2036 dated 21/11/2016	Amendment required to protect Ouse Washes and/or Portholme
SI1	St Ives West	506	St Ives		
SI2	St Ives Football Club	30	St Ives		
SI3	Giffords Farm	0	St Ives	Approximately half of this site is considered to be at risk of flooding,being within either flood zone3a (with climate change) or flood zone 3a. The extent of flood risk will need to be established through a detailed flood risk assessment and development will need to address any risk through incorporation of suitable flood protection/ mitigation measures.	need to include statement about likellihood of impact of flooding on Ouse Washes
SI4	Former Car Showroom	46	St Ives	The whole site sits within the rapid inundation zone and the majority also falls within flood zone 3a with climate change allowance, although it is protected by modern flood defences. A flood risk assessment would be required as well as the incorporation of flood mitigation measures as necessary such as limiting site coverage or raising levels above the known flood levels. It is therefore considered that the sustainable location of the site and identified need for supported housing, outweigh the risks posed by potential flooding. Mitigation work will need to be appropriate to standards set by the Environment Agency.	need to include statement about likellihood of impact of flooding on Ouse Washes
SI5	Vindis	56	St Ives	The site is identified as being at risk of flooding within the flood zone 3a with climate change. However, in all other respects the site performs well in the sustainability appraisal. Approximately half of the site is previously developed and redevelopment should present opportunities to positively address flood risk. A flood risk assessment will be needed to establish the extent of risk and offer possible ways to address the risk. The floor levels of the proposed dwellings should be raised above the maximum 1 in 100 year plus climate change flood level. A detailed explanation of flood risk management and mitigation measures will be required which should include provision of flood resilient structures. A flood response emergency plan would also be welcomed.	need to include statement about likellihood of impact of flooding on Ouse Washes

Allocation code	Allocation Name	Number of dwellings	Wastewater Treatment Works	Comment from Development Guidance in HLP2036 dated 21/11/2016	Amendment required to protect Ouse Washes and/or Portholme
RA1	Ramsey Gateway (High Lode)	110	Ramsey	The policy requires consultation with the Environment Agency and Anglian Water Services (AWS) to ensure that the waste water flows from proposed development can be accommodated and that meeting the requirements of the Water Framework Directive would not be compromised. Ramsey WwTW will serves this site. The WwTW currently has no available headroom and so unless additional headroom becomes available a change in discharge consent and process upgrades at the WwTW will be required for the projected growth. This would be achievable within the limits of conventional treatmentand hence would not impact on attainment of future WFD water quality objectives. Interim treatment solutions will be necessary until a permanent treatment solution is put in place. Should temporary measures prove not to be viable or would be insufficient it may be necessary to place limits on the amount of development that can take place. Additionally the water level/flood risk management system is sensitive to increased surface water/treated effluent discharges and the Ramsey High Lode drains into the Middle Level catchment, managed by the MLC. The MLC have advised that their default position is no increase in flow volume will be accepted. Therefore, if sufficient headroom does not become available, triggering an increase in the flow consent required,consultation will be needed with AWS and the MLC to determine whether additional flow volumes will result in an increase in flood risk before the additional flow can be discharged. Discussion is ongoing between MLC and AWS regarding discharges from existing outlets into MLC's system, and this may have implications for development proposals. The MLC's position of not accepting additional water to enter their system will also present issues for drainage. The use of soakaways or other infiltration devices is unlikely to provide an efficient means of surface water disposal at the site. A flood risk assessment and drainage management plan will therefore be required that satisfies the MLC. For RA1 only:The western part of the site lies within the Ramsey, Upwood & Great Raveley IDB and the eastern part within Ramsey IDB. The installation/ improvement of positive water level management systems and off-site works may be required. For RA7 only: Additionally the MLC have advised that they will require provision of an impact assessment advising of any adverse impacts on its system and any mitigation, together with a mechanism for the recovery of the cost of the future processing of the discharge.	add "and the Habitat Regulations (2010)" after "Water Framework Directive" in sentence 1.
RA2	Ramsey Gateway	45	Ramsey		
RA3	West Station Yard & Northern Mill	34	Ramsey		
RA4	Field Rd	90	Ramsey		
RA5	Whytefield Rd	40	Ramsey		
RA6	94 Great Whyte	32	Ramsey		
RA7	RAF Upwood	450	Ramsey		

Allocation code	Allocation Name	Number of dwellings	Wastewater Treatment Works	Comment from Development Guidance in HLP2036 dated 21/11/2016	Amendment required
BU1	East of Silver St	14	Buckden	A ditch runs parallel with the southern boundary of the site. A flood risk assessment will be required due to potential flood risk in the south of the site, and potential mitigation measures incorporated where necessary.	include statement about likellihood of impact of flooding on Ouse Washes
FS1	Former Dairy Crest	88	St Ives		
FS2	Cambridge Rd	120	St Ives		
FS3	Ivy Nursery	34	St Ives	A sustainable drainage scheme on site should ensure that surface water is catered for so as not to increase flood risk.	include statement about likellihood of impact of flooding on Ouse Washes
KB1	West of Station Rd	20	Kimbolton	The site is considered to be at a low risk of fluvial flooding from the River Kym, due to its location on a hill, however a site-specific Flood Risk Assessment will need to show the effect of additional drainage from the site on the river.	include statement about likellihood of impact of flooding on Ouse Washes and Portholme
KB2	South of Bicton Industrial Estate	0	Kimbolton		
SY1	East of Glebe Farm	80	Sawtry	A 9 metre wide maintenance access strip for the open watercourse that forms the northern boundary of the site would be required by Middle Level Commissioners (MLC). Although the site falls within floodzone 1, part is known to be prone to flooding around Sawtry Brook. This will need to be addressed in any planning application. Surface water run off should be restricted to greenfield rates to reduce the risk of flooding, as Catchwater Drain approaches capacity during high rainfall events. It is unlikely that the site will be conducive to the use of soakaways or infiltration devices, therefore a flood risk assessment and drainage strategy to be produced in agreement with relevant bodies would be required.	need to include statement about likellihood of impact of flooding on Ouse Washes
SY2	West of St Andrews Way	43	Sawtry	Surface water run off should be restricted to green field rates to reduce the risk of flooding, as Catchwater Drain approaches capacity during high rainfall events. It is unlikely that the site will be conducive to the use of soakaways or infiltration devices, therefore a flood risk assessment and drainage strategy to be produced in agreement with relevant bodies would be required.	need to include statement about likellihood of impact of flooding on Ouse Washes

Allocation code	Allocation Name	Number of dwellings	Wastewater Treatment Works	Comment from Development Guidance in HLP2036 dated 21/11/2016	Amendment required to protect Ouse Washes and/or Portholme
SM1	Newlands	45	Somersham	The policy requires agreement with the Environment Agency and Anglian Water Services that the waste water flows from proposed development can be accommodated and that meeting the requirements of the Water Framework Directive would not be compromised. The Somersham Wastewater Treatment Works (WwTW) will serve this allocation. The WwTW currently has no available headroom and so unless additional headroom becomes available a change in discharge consent and process upgrades at the WwTW will be required for the projected growth. This would be achievable within the limits of conventional treatment and hence would not impact on attainment of future WFD water quality objectives. Interim treatment solutions will be necessary until a permanent treatment solution is put in place. Should temporary measures prove not to be viable or would be insufficient it may be necessary to place limits on the amount of development that can take place.	add "and the Habitat Regulations (2010)" after "Water Framework Directive" in sentence 1.
SM2	The Pasture	19	Somersham		
SM3	Somersham Town FC	47	Somersham		
SM4	North of The Bank	55	Somersham		
WB1	West of Station Rd	120	Oldhurst	The policy requires agreement with the Environment Agency and Anglian Water Services that the waste water flows from proposed development can be accommodated and that meeting the requirements of the Water Framework Directive would not be compromised. The Oldhurst Waste water Treatment Works (WwTW) will serve this allocation. The WwTW currently has no available headroom and so unless additional headroom becomes available a change in discharge consent and process upgrades at the WwTW will be required for the projected growth. This would be achievable within the limits of conventional treatment and hence would not impact on attainment of future WFD water quality objectives. Interim treatment solutions will be necessary until a permanent treatment solution is put in place. Should temporary measures prove not to be viable or would be insufficient it may be necessary to place limits on the amount of development that can take place.	add "and the Habitat Regulations (2010)" after "Water Framework Directive" in sentence 1.
WB2	West of Ramsey Rd	45	Oldhurst		
WB3	Manor Farm Buildings	10	Oldhurst		
WB5	South of Farriers Way	74	Oldhurst		
WB6	Fenton Field Farm	10	Oldhurst		

Allocation code	Allocation Name	Number of dwellings	Wastewater Treatment Works	Comment from Development Guidance in HLP2036 dated 21/11/2016	Amendment required to protect Ouse Washes and/or Portholme
YX1	Askew's Lane	12		The southern boundary of the site runs along the bank of the Yards End Dyke drainage channel which is part of the Middle Level Commissioners (MLC) systems. A 20 metre wide access strip is required for maintenance purposes by the MLC. The water level/ flood risk management system is sensitive to increased surface water/treated effluent discharges and consequently the MLC will not accept additional water to enter their managed system including the Yards End Dyke. Additionally soakaway and similar infiltration type drainage solutions are unlikely to be suitable. A flood risk assessment and drainage management plan will therefore be required that satisfies the MLC. Discussion is on going between MLC and Anglian Water regarding discharges from existing outlets into MLC's system, and this may have future implications for development proposals.	need to include statement about likellihood of impact of flooding on Ouse Washes
YX2	Snowcap Mushrooms	78			
YX3	Yax Pak	0		The water level/ flood risk management system downstream of the site is sensitive to increased surface water/treated effluent discharges and there has been flooding in the area consequently the Middle Level Commissioners (MLC) will not accept additional water to enter their managed system. A flood risk assessment and drainage management plan will therefore be required that satisfies the MLC.	need to include statement about likellihood of impact of flooding on Ouse Washes

Appendix 7 Impacts of Airborne pollutants on the qualifying features of European sites

			Airborne Pollution						
Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036 y/n	Cumulative HLP2036 and other LPs y/n	Impact of scenarios on airborne pollutants 1/2/3/4	Impact on site possible? y/n	Impact on habitat or qualifying feature? y/n	Impact on site integrity	rationale for verdict
Portholme	SAC	H6510	n	n	4>1>2>3	y but << difficult to detect	n	n	Realignment of A14 could improve air quality for Portholme far more than any increased traffic from HLP2036. Over the next 20 years emissions from vehicles will also be reduced which will counteract any increase due to the number of vehicles using Huntingdonshire - this verdict could alter depending on the results of the traffic modelling being undertaken for HLP2036
Ouse Washes	SPA	A037, A038, A050, A051 (Non-breeding), A051 (Breeding), A052, A053, A054, A055, A056 (Non-breeding), A056 (Breeding), A059, A082, A119, A151 (Non-breeding), A151 (Breeding), A156a (Non-breeding), A156a (Breeding)	n	n	n/a	y but << difficult to detect	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this species.
		Waterbird assemblage	n	n	n/a	y but << difficult to detect	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this species.

Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on airborne pollutants	Impact on site possible?	Impact on habitat or qualifying feature?	Impact on site integrity	rationale for verdict
		Breeding bird Assemblage	n	n	n/a	y but << difficult to detect	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this species.
Ouse Washes	SAC	S1149	n	n	n/a	y but << difficult to detect	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this species on this particular site.
Woodwalton Fen	part of Fenland SAC	H6410	n	n	n/a	y but << difficult to detect	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this site any more than it has in the past
		H7210	n	n	n/a	y but << difficult to detect	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this site any more than it has in the past
		S1149	n	n	n/a	y but << difficult to detect	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this species at this particular site

Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on airborne pollutants	Impact on site possible?	Impact on habitat or qualifying feature?	Impact on site integrity	rationale for verdict
Woodwalton Fen	SAC (part)/ Ramsar	S1166	n	n	n/a	y but << difficult to detect	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this species at this particular site
Rutland Water	SPA	A005, A036. A050, A051, A052, A056, A061, A067, A070, A125	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is much more than 1km from any of the main developments. Air pollution is unlikely to affect these species
		Waterbird assemblage	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is much more than 1km from any of the main developments. Air pollution is unlikely to affect these species
Orton Pit	SAC	H3140	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is much more than 1km from any of the main developments. Air pollution from HLP2036 is unlikely to affect this habitat at this site
		S1166	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is much more than 1km from any of the main developments. Air pollution from HLP2036 is unlikely to affect this species at this site

Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on airborne pollutants	Impact on site possible?	Impact on habitat or qualifying feature?	Impact on site integrity	rationale for verdict
Nene Washes	SPA	A037, A050, A051 (Non-breeding), A051 (Breeding), A052, A054, A055, A056 (Non-breeding), A056 (Breeding), A119, A151 (Non-Breeding), A151 (Breeding), A156a	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this species
		Waterbird assemblage	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect these species
	SAC	S1149	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect these species
Eversden and Wimpole Woods	SAC	S1308	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is much more than 1km from any of the main developments. Air pollution is unlikely to affect this species.
Barnack Hills and Holes	SAC	H6210	n	n	n/a	n	n	N	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution from HLP2036 is unlikely to affect this habitat

Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on airborne pollutants	Impact on site possible?	Impact on habitat or qualifying feature?	Impact on site integrity	rationale for verdict
The Wash	SPA	A054, A050, A051, A040, A169, A675, A067, A144, A672 , A143, A037, A130, A157, A616, A065, A160, A141, A195, A193, A048, A162	n	n	n/a	n	N	N	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect this species
		Waterfowl assemblage	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect these species
Upper Nene Valley Gravel Pits	SPA/Ramsar	A056,A050,A053,A051,A059, A061,A021,A125,A017,A140, A005,A142	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect these species
		Waterbird assemblage	n	n	n/a	n	n	n	Any increase from HLP2036 in air pollution will not be easily detectable for this site that is more than 1km from any of the main developments. Air pollution is unlikely to affect these species

Appendix 8- Impacts of increased recreation on the qualifying features of the European sites

			Increased recreation					
Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on public recreation	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
			y/n	y/n	1/2/3/4	y/n	y/n	
Portholme	SAC	H6510	y	n	4&1&2>3	y	y	Increased public use of Portholme could lead to added nutrients and ground disturbance and issues with the management of livestock on the site. Increased flytipping could cause chances of non-native species establishing
Ouse Washes	SPA	A037, A038, A050, A051 (Non-breeding), A051 (Breeding), A052, A053, A054, A055, A056 (Non-breeding), A056 (Breeding), A059, A082, A119, A151 (Non-breeding), A151 (Breeding), A156a (Non-breeding), A156a (Breeding)	n	n	n/a	n	n	It is unlikely that there will be noticeable increased recreational use of the Ouse Washes from HLP2036. There are no data on river traffic
		Waterbird Assemblage	n	n	n/a	n	n	It is unlikely that there will be noticeable increased recreational use of the Ouse Washes from HLP2036. There are no data on river traffic

Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on public recreation	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		Breeding bird Assemblage	n	n	n/a	n	n	It is unlikely that there will be noticeable increased recreational use of the Ouse Washes from HLP2036. There are no data on river traffic
	SAC	S1149	n	n	n/a	n	n	It is unlikely that there will be noticeable increased recreational use of the Ouse Washes from HLP2036. There are no data on river traffic
Woodwalton Fen	part of Fenland SAC	H6410	n	n	n/a	n	n	Although access to the Great Fen will be encouraged , dogs will still not be permitted in Woodwalton Fen and polltion from this source will not occur. Management of paths will ensure no lasting erosion damage takes place.
		H7210	n	n	n/a	n	n	Although access to the Great Fen will be encouraged , dogs will still not be permitted in Woodwalton Fen and polltion from this source will not occur. Management of paths will ensure no lasting erosion damage takes place.
		S1149	n	n	n/a	n	n	Although access to the Great Fen will be encouraged it should have no effect on this species.

Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on public recreation	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		S1166	n	n	n/a	n	n	Although access to the Great Fen will be encouraged it should have no effect on this species.
Rutland Water	SPA	A005, A036. A050, A051, A052, A056, A061, A067, A070, A125	n	n	n/a	n	n	Although it is possible there will be more visitors to Rutland Water the numbers will not have a significant impact
		Waterbird Assemblage	n	n	n/a	n	n	Although it is possible there will be more visitors to Rutland Water the numbers will not have a significant impact
Orton Pit	SAC	H3140	n	n	n/a	n	n	No public access
		S1166	n	n	n/a	n	n	No public access
Nene Washes	SPA	A037, A050, A051 (Non-breeding), A051 (Breeding), A052, A054, A055, A056 (Non-breeding), A056 (Breeding), A119, A151 (Non-Breeding), A151 (Breeding), A156a	n	n	n/a	n	n	It is unlikely that there will be noticeable increased recreational use of the Nene Washes from HLP2036. There are no data on river traffic
		Waterbird assemblage	n	n	n/a	n	n	It is unlikely that there will be noticeable increased recreational use of the Nene Washes from HLP2036. There are no data on river traffic

Designated Site	Designation	Qualifying Feature Code	likely significant effect HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on public recreation	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
	SAC	S1149	n	n	n/a	n	n	It is unlikely that there will be noticeable increased recreational use of the Nene Washes from HLP2036. There are no data on river traffic
Eversden and Wimpole Woods	SAC	S1308	y	y	4&1>2>3	y	n	Although there may be increased numbers of people that will have a negative impact on the site it will not affect the bats
Barnack Hills and Holes	SAC	H6210	n	n	n/a	n	n	The number of visitors to Barnack is not likely to increase due to HLP2036
The Wash	SPA	A054, A050, A051, A040, A169, A675, A067, A144, A672 , A143, A037, A130, A157, A616, A065, A160, A141, A195, A193, A048, A162	n	n	n/a	N	n	It is unlikely that there will be noticeable increased recreational use of the The Wash from HLP2036. There are no data on river traffic
		Waterfowl assemblage	n	n	n/a	N	n	It is unlikely that there will be noticeable increased recreational use of the The Wash from HLP2036. There are no data on river traffic
Upper Nene Valley Gravel Pits	SPA/Ramsar	A056,A050,A053,A051,A059, A061,A021,A125,A017,A140, A005,A142	n	y	4&1>2>3	N	n	Although there may be some extra visitors. A study has shown very few current visitors venture here from Huntingdonshire and no reason to think they might in future

Appendix 9 – Impacts of human induced changes in hydraulic conditions (drought)

Human induced changes in hyraulic conditions (drought)								
Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036 y/n	Cumulative HLP2036 and other LPs y/n	Impact of scenarios on drought 1/2/3/4	Impact on site possible?	Impact on habitat or qualifying feature? y/n	rationale for verdict
Portholme	SAC	H6510	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse. Climate change is a bigger driver
Ouse Washes	SPA	A037, A038, A050, A051 (Non-breeding), A051 (Breeding), A052, A053, A054, A055, A056 (Non-breeding), A056 (Breeding), A059, A082, A119, A151 (Non-breeding), A151 (Breeding), A156a (Non-breeding), A156a (Breeding)	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse. Climate change is a bigger driver
		Waterbird Assemblage	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse. Climate change is a bigger driver
		Breeding bird Assemblage	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse. Climate change is a bigger driver

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on drought	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
	SAC	S1149	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse. Climate change is a bigger driver
Woodwalton Fen	part of Fenland SAC	H6410	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse or Nene. Climate change is a bigger driver
		H7210	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse or Nene. Climate change is a bigger driver
		S1149	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse or Nene. Climate change is a bigger driver
		S1166	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse or Nene. Climate change is a bigger driver
Rutland Water	SPA	A005, A036. A050, A051, A052, A056, A061, A067, A070, A125	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse. Climate change is a bigger driver. It is not clear what the impacts of long-term drought would be on the reservoir.

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on drought	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Rutland Water		Waterbird Assemblage	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse. Climate change is a bigger driver. It is not clear what the impacts of long-term drought would be on the reservoir.
Orton Pit	SAC	H3140	n	n	equal	n	n	water supplies are to come from reservoirs not River Nene. Climate change is a bigger driver
		S1166	n	n	equal	n	n	water supplies are to come from reservoirs not River Nene. Climate change is a bigger driver
Nene Washes	SPA	A037, A050, A051 (Non-breeding), A051 (Breeding), A052, A054, A055, A056 (Non-breeding), A056 (Breeding), A119, A151 (Non-Breeding), A151 (Breeding), A156a	n	n	equal	n	n	water supplies are to come from reservoirs not River Nene. Climate change is a bigger driver
		Waterbird assemblage	n	n	equal	n	n	water supplies are to come from reservoirs not River Nene. Climate change is a bigger driver

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on drought	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Nene Washes	SAC	S1149	n	n	equal	n	n	water supplies are to come from reservoirs not River Nene. Climate change is a bigger driver
Eversden and Wimpole Woods	SAC	S1308	n	n	equal	n	n	Not connected to systems affected by water abstraction
Barnack Hills and Holes	SAC	H6210	n	n	equal	n	n	Not connected to systems affected by water abstraction
The Wash	SPA	A054, A050, A051, A040, A169, A675, A067, A144, A672 , A143, A037, A130, A157, A616, A065, A160, A141, A195, A193, A048, A162	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse or Nene. Climate change is a bigger driver. Sea-level rise of most relevance
		Waterfowl assemblage	n	n	equal	n	n	water supplies are to come from reservoirs not River Ouse or Nene. Climate change is a bigger driver. Sea-level rise of most relevance
Upper Nene Valley Gravel Pits	SPA/Ramsar	A056,A050,A053,A051,A059, A061,A021,A125,A017,A140, A005,A142	n	n	equal	n	n	Huntingdonshire will not affect water supplies in this catchment.

Appendix 10 – Impacts of human induced changes in hydraulic conditions (flooding)

Human induced changes in hydraulic conditions (flooding)								
Designated Site	Designation	Qualifying Feature Code	likely significant effect 4 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on flooding	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
			y/n	y/n	1/2/3/4	y/n	y/n	
Portholme	SAC	H6510	y	y	equal	n	n	Occasional extreme flooding predicted by climate change (much bigger driver than urban development) scenarios, where SuDS are overwhelmed could affect flooding of Portholme. The quantity of water from extra flooding every 5 to 10 years would not be detrimental to the meadow as long as *Rumex* species can be controlled. Water quality is a more important driver for this plant community.
Ouse Washes	SPA	A037, A038, A050, A051 (Non-breeding), A052, A053, A054, A055, A056 (Non-breeding), A059, A119, A156a (Non-breeding)	y	y	4>1>2>3	y	n	Extra depth of winter flooding not considered a threat to these species.
		A051 (Breeding), A055 (Breeding), A119 (Breeding), A156a (Breeding)	y	y	4>1>2>3	y	y	Great Ouse CFMP acknowledges possibility of flooding in late spring into late summer because the Ouse Washes are used as part of the flood defence for property and agricultural land. This could negatively affect breeding. Some of the flooding could be attributable to development but most is due to climate change.

Designated Site	Designation	Qualifying Feature Code	likely significant effect 4 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on flooding	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		A082	y	y	4>1>2>3	y	y	extra flooding could lead to a reduction in prey
		A151 (Breeding)	y	y	4>1>2>3	y	n	Extra flooding not seen as problem for this species as it uses lagoons outside of the Ouse Washes.
		A156a	y	y	4>1>2>3	y	y	Great Ouse CFMP acknowledges possibility of flooding in late spring into late summer because the Ouse Washes are used as part of the flood defence for property and agricultural land. This could negatively affect breeding. Some of the flooding could be attributable to development but most is due to climate change.Flooding in late spring into late summer could negatively affect breeding
		Waterbird Assemblage	y	y	4>1>2>3	y	y	Overriding effect will come from climate change but any extra flooding in summer will affect species assemblage of waterbirds
		Breeding Bird Assemblage	y	y	4>1>2>3	y	y	Overriding effect will come from climate change but any extra flooding in summer will affect species assemblage of breeding birds
	SAC	S1149	n	n	n/a	n	n	It is unlikely that any additional flooding on top of that caused by climate change will affect this species
Woodwalton Fen	part of Fenland SAC	H6410	n	n	n/a	n	n	Woodwalton Fen will not be noticeably affected by HLP2036 as it is in the Nene catchment/Middle Level Commission. Any increased flow from development in Ramsey as identified in the WCS (Dec, 2014) will be away from Woodwalton Fen.

Designated Site	Designation	Qualifying Feature Code	likely significant effect 4 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on flooding	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		H7210	n	n	n/a	n	n	Woodwalton Fen will not be noticeably affected by HLP2036 as it is in the Nene catchment/Middle Level Commission. Note that this community is not found at Woodwalton
		S1149	n	n	n/a	n	n	Woodwalton Fen will not be noticeably affected by HLP2036 as it is in the Nene catchment/Middle Level Commission. Any increased flow from development in Ramsey as identified in the WCS (Dec, 2014) will be away from Woodwalton Fen.
		S1166	n	n	n/a	n	n	Woodwalton Fen will not be noticeably affected by HLP2036 as it is in the Nene catchment/Middle Level Commission. Any increased flow from development in Ramsey as identified in the WCS (Dec, 2014) will be away from Woodwalton Fen.
Rutland Water	SPA	A005, A036. A050, A051, A052, A056, A061, A067, A070, A125	n	n	n/a	n	n	Rutland Water will not be affected by HLP2036 as it is not in the same catchment as the developments
		Waterbird Assemblage	n	n	n/a	n	n	Rutland Water will not be affected by HLP2036 as it is not in the same catchmnet as the developments
Orton Pit	SAC	H3140	n	n	n/a	n	n	Orton Pits will not be affected by HLP2036 as it is not in the same catchment as the developments

Designated Site	Designation	Qualifying Feature Code	likely significant effect 4 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on flooding	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		S1166	n	n	n/a	n	n	Orton Pits will not be affected by HLP2036 as it is not in the same catchment as the developments
Nene Washes	SPA	A037, A050, A051 (Non-breeding), A051 (Breeding), A052, A054, A055, A056 (Non-breeding), A056 (Breeding), A119, A151 (Non-Breeding), A151 (Breeding), A156a	n	n	n/a	n	n	The Nene Washes will not be affected by any extra flooding caused by HLP2036 as they are in a different catchment. This assumes any waste water from Alconbury Hill and Wyton on the Hill is directed towards the Ouse
		Waterbird Assemblage	n	n	n/a	n	n	The Nene Washes will not be affected by any extra flooding caused by HLP2036 as they are in a different catchment. This assumes any waste water from Alconbury Hill and Wyton on the Hill is directed towards the Ouse
	SAC	S1149	n	n	n/a	n	n	The Nene Washes will not be affected by any extra flooding caused by HLP2036 as they are in a different catchment. This assumes any waste water from Alconbury Hill and Wyton on the Hill is directed towards the Ouse
Eversden and Wimpole Woods	SAC	S1308	n	n	n/a	n	n	These woods will not be affected by flooding

Designated Site	Designation	Qualifying Feature Code	likely significant effect 4 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on flooding	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Barnack Hills and Holes	SAC	H6210	n	n	n/a	n	n	These grasslands will not be affected by flooding
The Wash	SPA	A054, A050, A051, A040, A169, A675, A067, A144, A672 , A143, A037, A130, A157, A616, A065, A160, A141, A195, A193, A048, A162	n	n	n/a	n	n	The Wash will not be affected by any greater flooding caused by HLP2036. Any serious flooding will be climate change/weather driven
		Wildfowl Assemblage	n	n	n/a	n	n	The Wash will not be affected by any greater flooding caused by HLP2036. Any serious flooding will be climate change/weather driven
Upper Nene Valley Gravel Pits	SPA/Ramsar	A056,A050,A053,A051,A059, A061,A021,A125,A017,A140, A005,A142	n	n	n/a	n	n	This area is upstream and in a different catchment to Huntingdonshire

Appendix 11 – Impacts of invasive non-native species on the qualifying features of the European sites

			Invasive non-native species					
Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on invasive non-native species	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
			y/n	y/n	1/2/3/4		y/n	
Portholme	SAC	H6510	y	n	n/a	y	y	waterborne seeds could establish on the meadow but this would not be due to HLP2036 or other plans. Fly-tipping covered in recreation section (Appendix 3) could cause an effect.
Ouse Washes	SPA	A037, A038, A050, A051 (Non-breeding), A051 (Breeding), A052, A053, A054, A055, A056 (Non-breeding), A056 (Breeding), A059, A082, A119, A151 (Non-breeding), A151 (Breeding), A156a (Non-breeding), A156a (Breeding)	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
		Waterbird Assemblage	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on invasive non-native species	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		Breeding bird Assemblage	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
	SAC	S1149	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
Woodwalton Fen	part of Fenland SAC	H6410	n	n	n/a	n	n	Waterborne seeds could establish here but this would not be due to HLP2036 or other plans.
		H7210	n	n	n/a	n	n	NB - this community is not at Woodwalton Fen.
		S1149	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
		S1166	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
Rutland Water	SPA	A005, A036. A050, A051, A052, A056, A061, A067, A070, A125	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on invasive non-native species	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		Waterbird Assemblage	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
Orton Pit	SAC	H3140	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
		S1166	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
Nene Washes	SPA	A037, A050, A051 (Non-breeding), A051 (Breeding), A052, A054, A055, A056 (Non-breeding), A056 (Breeding), A119, A151 (Non-Breeding), A151 (Breeding), A156a	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
		Waterbird assemblage	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
	SAC	S1149	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
Eversden and Wimpole Woods	SAC	S1308	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on invasive non-native species	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Barnack Hills and Holes	SAC	H6210	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
The Wash	SPA	A054, A050, A051, A040, A169, A675, A067, A144, A672 , A143, A037, A130, A157, A616, A065, A160, A141, A195, A193, A048, A162	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
		Wildfowl Assemblage	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect
Upper Nene Valley Gravel Pits	SPA/Ramsar	A056,A050,A053,A051,A059, A061,A021,A125,A017,A140, A005,A142	n	n	n/a	n	n	No non-native species likely to be due to development could have an effect

Appendix 12 – Impacts of pollution to groundwater on qualifying features of the European sites

Pollution of Groundwater								
Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on pollution of groundwater	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Portholme	SAC	H6510	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments or road accidents it is highly unlikely that this could affect Portholme.
Ouse Washes	SPA	A037, A038, A050, A051 (Non-breeding), A051 (Breeding), A052, A053, A054, A055, A056 (Non-breeding), A056 (Breeding), A059, A082, A119, A151 (Non-breeding), A151 (Breeding), A156a (Non-breeding), A156a (Breeding)	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments or road accidents it is highly unlikely that this could affect this species in the long-term.

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on pollution of groundwater	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		Waterbird Assemblage	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments or road accidents it is highly unlikely that this could affect this species in the long-term.
		Breeding Bird Assemblage	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments or road accidents it is highly unlikely that this could affect this species in the long-term.
	SAC	S1149	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments or road accidents which could cause large scale mortality it is considered highly unlikely.
Woodwalton Fen	part of Fenland SAC	H6410	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments (Alconbury Airfield) or road accidents it is highly unlikely that this could affect this habitat in the long-term.
		H7210	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments (Alconbury Airfield) or road accidents it is highly unlikely that this could affect this species in the long-term. NB this community is not found at Woodwalton Fen.

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on pollution of groundwater	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		S1149	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments (Alconbury Airfield) or road accidents it is highly unlikely that this could affect this habitat in the long-term.
		S1166	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments (Alconbury Airfield) or road accidents it is highly unlikely that this could affect this habitat in the long-term.
Rutland Water	SPA	A005, A036. A050, A051, A052, A056, A061, A067, A070, A125	n	n	4>1>2>3	n	n	This site is too remote from HLP2036 to be affected
		Waterbird Assemblage	n	n	4>1>2>3	n	n	This site is too remote from HLP2036 to be affected
Orton Pit	SAC	H3140	n	n	4>1>2>3	n	n	This site is too remote from HLP2036 to be affected

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on pollution of groundwater	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		S1166	n	n	4>1>2>3	n	n	This site is too remote from HLP2036 to be affected
Nene Washes	SPA	A037, A050, A051 (Non-breeding), A051 (Breeding), A052, A054, A055, A056 (Non-breeding), A056 (Breeding), A119, A151 (Non-Breeding), A151 (Breeding), A156a	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments (Alconbury Airfield or Wyton on the Hill could flow to the Nene Washes eventually) or road accidents it is highly unlikely that this could affect this species in the long-term.
		Waterbird Assemblage	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments (Alconbury Airfield or Wyton on the Hill could flow to the Nene Washes eventually) or road accidents it is highly unlikely that this could affect this assemblage in the long-term.
	SAC	S1149	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments (Alconbury Airfield or Wyton on the Hill could flow to the Nene Washes eventually) or road accidents it is highly unlikely that this could affect this assemblage in the long-term.

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on pollution of groundwater	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Eversden and Wimpole Woods	SAC	S1308	n	n	4>1>2>3	n	n	This site could not be affected
Barnack Hills and Holes	SAC	H6210	n	n	4>1>2>3	n	n	This site could not be affected
The Wash	SPA	A054, A050, A051, A040, A169, A675, A067, A144, A672 , A143, A037, A130, A157, A616, A065, A160, A141, A195, A193, A048, A162	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments or road accidents it is highly unlikely that this could affect this species in the long-term because of dilution before it reaches the Wash.
		Wildfowl Assemblage	n	n	4>1>2>3	n	n	Although there is a possibility of groundwater pollution from large developments or road accidents it is highly unlikely that this could affect this species in the long-term.
Upper Nene Valley Gravel Pits	SPA/Ramsar	A056,A050,A053,A051,A059, A061,A021,A125,A017,A140, A005,A142	n	n	n/a	n	n	Not possible as there is no connection between Huntingdon developments and the groundwater of this site.

Appendix 13 – Impacts of the reduction in water quality on the qualifying features of the European sites

			Reduction of Water Quality					
Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on water quality	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Portholme	SAC	H6510	y	y	equal	y	y	*Increased pollution from floodwater when SuDS upstream of Huntingdon (including St Neots) are overtopped could be detrimental to this site.The capacity of WwTWs along the River Great Ouse needs to be addressed. If exceeded levels of phosphates could increase in water flooding Portholme threatening the qualifying plant community.* The Great Ouse CFMP (2010 Table B10) does not discount the possibility that pollution may increase due to development. The WCS for Huntingdonshire (URS 2014) notes that there is a threat from wastewater to the European sites. It must be assumed that the consenting authority will work with Anglian Water Services to ensure that increased pollution from WwTWs does not occur upstream of Portholme.Use of SUDS will reduce the likelihood of pollutants reaching the WwTWs in the first place.This is linked to flooding and so climate change is a major driver too.

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on water quality	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Ouse Washes	SPA	A037, A038, A050, A051 (Non-breeding), A051 (Breeding), A052, A053, A054, A055, A056 (Non-breeding), A056 (Breeding), A059, A082, A119, A151 (Non-breeding), A151 (Breeding), A156a (Non-breeding), A156a (Breeding)	y	y	4>1>2>3	y	n	*Increased pollution from floodwater when SuDS upstream of Huntingdon (including St Neots) are overtopped could be detrimental to this site. The capacity of WwTWs along the River Great Ouse needs to be addressed (see WCS for Huntingdon, URS, 2014) if they are likely to be exceeded. However, phosphate and nitrates not likely to affect these bird species directly. Impacts on the supporting vegetation (Ramsar objectives) may be negative.We must assume consenting authority will work with Anglia Water Services to ensure WwTWs are sufficient.*
		Waterbird assemblage	y	y	4>1>2>3	y	n	*Increased pollution from floodwater when SUDS or WwTWs are overtopped could be detrimental to this site.*
		Breeding bird assemblage	y	y	4>1>2>3	y	n	*Increased pollution from floodwater when SUDS or WwWTsare overtopped could be detrimental to this site.*
	SAC	S1149	y	y	4>1>2>3	y	y	*Increased pollution from floodwater when SUDS upstream of Huntingdon (including St Neots) are overtopped could be detrimental to this site.The capacity of WwTWs along the River Great Ouse needs to be addressed (see WCS for Huntingdon, URS, 2014) if they are likely to be exceeded. Assume consenting authority will ensure WwTWs are adequate. However, phosphate and nitrates not likely to affect these bird species directly. Impacts on the supporting vegetation (Ramsar objectives) and macrophytes may be negative.*

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on water quality	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
Woodwalton Fen	part of Fenland SAC	H6410	n	n	n/a	n	n	Not directly linked to development sites
		H7210	n	n	n/a	n	n	Not directly linked to development sites
		S1149	n	n	n/a	n	n	Not directly linked to development sites
		S1166	n	n	n/a	n	n	Not directly linked to development sites
Rutland Water	SPA	A005, A036. A050, A051, A052, A056, A061, A067, A070, A125	n	n	n/a	n	n	Not directly linked to development sites
		Waterbird assemblage	n	n	n/a	n	n	Not directly linked to development sites
Orton Pit	SAC	H3140	n	n	n/a	n	n	Not directly linked to development sites
		S1166	n	n	n/a	n	n	Not directly linked to development sites
Nene Washes	SPA	A037, A050, A051 (Non-breeding), A051 (Breeding), A052, A054, A055, A056 (Non-breeding), A056 (Breeding), A119, A151 (Non-Breeding), A151 (Breeding), A156a	n	n	n/a	n	n	Not directly linked to development sites. Assumes developments at Alcobury Airfield and Wyton on the Hill drain into Ouse

Designated Site	Designation	Qualifying Feature Code	likely significant effect 3 HLP2036	Cumulative HLP2036 and other LPs	Impact of scenarios on water quality	Impact on site possible?	Impact on habitat or qualifying feature?	rationale for verdict
		Waterbird assemblage	n	n	n/a	n	n	Not directly linked to development sites. Assumes developments at Alcobury Airfield and Wyton on the Hill drain into Ouse
	SAC	S1149	n	n	n/a	n	n	Not directly linked to development sites. Assumes developments at Alcobury Airfield and Wyton on the Hill drain into Ouse
Eversden and Wimpole Woods	SAC	S1308	n	n	n/a	n	n	Not directly linked to development sites
Barnack Hills and Holes	SAC	H6210	n	n	n/a	n	n	Not directly linked to development sites
The Wash	SPA	A054, A050, A051, A040, A169, A675, A067, A144, A672 , A143, A037, A130, A157, A616, A065, A160, A141, A195, A193, A048, A162	y	y	4>1>2>3	y	y	very remote chance of pollution surge affecting the Wash
		Wildfowl Assemblage	y	y	4>1>2>3	y	y	very remote chance of pollution surge affecting the Wash
Upper Nene Valley Gravel Pits	SPA/Ramsar	A056,A050,A053,A051,A059, A061,A021,A125,A017,A140, A005,A142	n	n	n/a	n	n	No connection between the developments of Huntingdonshire and this European site as it is in another catchment and also upstream.

Appendix 14 – Distances of Allocations to Eversden and Wimpole Woods SAC

Barbastelle Bats can forage up to 20km from the roosting sites. Natural England requested that this aspect be investigated for HLP2036. There is a published 'Area of Principal Importance' drawn for this species around the Eversden and Wimpole Woods SAC (South Cambridgeshire Biodiversity SPD, adopted 2009). None of this area is within Huntingdonshire. The allocations at St Neots, St Ives, Fenstanton, HU24 and HU25 are within 20km. However, the published study takes precedence over these figures and it is considered there will be no likely significant effects on the foraging grounds of the Barbastelle Bats from HLP2036.

Distance of allocations from Eversden and Wimpole Woods SAC					
Allocation	Distance (km)	Allocation	Distance (km)	Allocation	Distance (km)
SEL1	23.5	HU24	19	BU1	21
SEL2	15	HU25	18	FS1	15
SEL3	21	SN1	18	FS2	15
HU1	23	SN2	16.5	FS3	15
HU2	23	SN3	17	KB1	29
HU3	22	SN4	16.5	KB2	28.5
HU4	21.5	SN5	15	SY1	≈35
HU6	21.5	SN6	15.5	SY2	≈35
HU7	21.5	SN7	15.5	SM1	25
HU8	21.5	SN8	17.5	SM2	25
HU9	21.5	SI1	19	SM3	25
HU11	21.5	SI2	19	SM4	25
HU12	21.5	SI3	19	WB1	27
HU13	21	SI4	18	WB2	27
HU14	21	SI5	17.5	WB3	27
HU15	22	RA1	33	WB5	27
HU16	21	RA2	33	WB6	27
HU18	23	RA3	33	YX1	40
HU19	21	RA4	33	YX2	40
HU20	21	RA5	33	YX3	40
HU21	21	RA6	33		
HU22	21	RA7	31		