FENLAND Local Plan 2021 - 2040

Habitats Regulations Assessment of the Fenland Local Plan Consultation Draft (Regulation 18)

Main Report

August 2022

Fenland CAMBRIDGESHIRE

Fenland District Council

Appendices (available separately)

Table of Abbreviations

AA	Appropriate Assessment
AMP	Asset Management Plan
APIS	Air Pollution Information System
AQMA	Air Quality Management Area
BCT	Bat Conservation Trust
CAMS	Catchment Abstraction Management Strategies
CSO	Combined Sewer Overflows
DEFRA	Department for Environment, Food & Rural Affairs
DWF	Dry Weather Flow
FRMP	Flood Risk Management Plan
GIS	Geographical Information System
HRA	Habitats Regulations Assessment
IPENS	Improvement Programme for England's Natura 2000 Sites
IROPI	Imperative Reasons of Over-Riding Public Interest
IRZ	Impact Risk Zone
JNCC	Joint Nature Conservation Committee
LSE	Likely Significant Effects
MHCLG	Ministry of Housing, Communities & Local Government
NOx	Nitrogen oxides
NPPF	National Planning Policy Framework
PRoW	Public Right of Way
RSPB	Royal Society for the Protection of Birds
SAC	Special Areas of Conservation
SIP	Site Improvement Plan
SPA	Special Protection Areas
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
WFD	Water Framework Directive
WRC	Water Recycling Centre
WRLTP	Water Recycling Long-Term Plan

WRMP	Water Resources Management Plan
WRZ	Water Resource Zones
WWT	Wildfowl and Wetland Trust

1. Introduction and Background

1.1. Introduction

1.1.1. Fenland District Council is currently preparing a new Local Plan for Fenland. The Local Plan will set out the planning policies and allocations for the growth and regeneration of Fenland over the next 20 years. The development of the Local Plan is currently at the Draft Plan (Regulation 18) stage.

1.1.2. This report is the Habitats Regulations Assessment (HRA) of the Fenland Local Plan Consultation Draft, August 2022 (the Local Plan). It sets out the methodology, findings and conclusions of the HRA process, to determine whether the Local Plan, either alone or in combination with other plans or projects, is likely to have a significant adverse effect on a European site. It has been prepared in accordance with the requirements of the Habitats Regulations 2017 (as amended) (the 'Regulations').[1]

1.1.3. The first stage of the HRA process is the preparation of a Stage 1 Screening Assessment, which assesses whether the Local Plan is likely to have a significant effect, either alone or in-combination with other plans and projects, on the integrity of European nature conservation sites. This report presents the results of Stage 1 and should be read alongside the Local Plan. Should the Stage 1 assessment conclude that the Local Plan, either alone or in combination with other plans or projects, is likely to have a significant effect, then the HRA process proceeds to Stage 2 Appropriate Assessment.

1.1.4. The Council has also prepared a Sustainability Appraisal (incorporating Strategic Environmental Assessment) and this work has been undertaken alongside the HRA, with the two assessments informing each other where appropriate.

1.2. Fenland Local Plan

1.2.1. The district of Fenland is located within the northern part of Cambridgeshire. The district covers approximately 200 square miles and includes the four market towns of March, Wisbech, Chatteris and Whittlesey as well as around 30 villages. It is a rural and sparsely populated district with many diverse communities, each with very different needs. The population of Fenland is approximately 101,500[2] with approximately 70% of the population living within one for the Market Towns.

1.2.2. The existing Fenland Local Plan was adopted in May 2014 and forms the Development Plan for the district of Fenland. A HRA was undertaken for this Local Plan[3], which concluded no likely significant effects on European sites.

1.2.3. The Council has decided to review the adopted Local Plan, to ensure it remains up to date with changes in national planning policy and that there is a robust and flexible housing supply. The first formal stage of the review was the Issues and Options consultation (Regulation 18), which took place in October and November 2019. The Council is now consulting on a Draft Local Plan (a further Regulation 18 consultation). The Draft Local Plan proposes a plan period of 2021 to 2040.

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[1] The Conservation of Habitats and Species Regulations 2017 SI No. 2017/1012, TSO (The Stationery Office), London. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents; The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Available at: https://www.legislation.gov.uk/ukdsi/2019/9780111176573

[2] Mid 2018

[3] There have been changes in case law (see Section 4.2) since this HRA was undertaken.

1.2.4. The Local Plan has been prepared in accordance with the National Planning Policy Framework (NPPF) (February 2019), and National Planning Policy Guidance (NPPG). Following consultation on this version of the Local Plan, and consideration of all representations received, the Council intends to publish a Proposed Submission Draft Local Plan, under Regulation 19 of the Planning Regulations.

Table 1.1: Fenland Local Plan – Timetable of Production

Local Plan Stage	**Description**
Public Participation (Regulation 18)	*Completed Oct-Nov 2019* Opportunity for interested parties and statutory consultee to consider the options for the Plan before the final document is produced.
Further Public Participation (Regulation 18)	Current stage August 2022 Opportunities for interested parties and statutory consultees to consider the preferred polices and sites for the Plan before the final document is produced.
Pre-submission Publication (Regulation 19)	The Council publishes the Local Plan which is followed with a 6 week period when formal representations can be made on the Local Plan.
Submission (Regulation 22)	The Council submits the Local Plan to the Secretary of State together with the representations received at Regulation 19 stage.
Independent Examination	Held by a Planning Inspector into objections raised at Regulation 19 stage on the Local Plan.
Inspector's Report Issued	This will report whether if the Plan is 'Sound' or 'Not Sound'. The Inspector may make recommendations to make the plan 'sound'.
Adoption of Local Plan	Final stage, the Council will formally need to adopt the Local Plan and it will then be used in making planning decisions.

1.2.5. The Local Plan contains several key elements:

- An overall, high level **vision** for the growth and regeneration of the district over the period to 2040;
- A set of 25 **objectives** to ensure that the overall vision of the Local Plan is achieved;
- A suite of 69 detailed **strategic and non-strategic policies** and standards that set an overall strategy for the area, in terms of the pattern, scale and quality of development expected, and that seek to protect and enhance the local environment;
- A **Policies Map** that shows the relevant spatial policies.

1.2.6. The strategic and non-strategic policies within the Local Plan cover a number of different themes. The main headings are:

- Setting the Scene

- The Spatial Strategy
- The Policies
- Policies for Sites and Settlements

1.3. Purpose, Scope and Structure of this Report

1.3.1. The purpose of this report is to document the HRA assessment of the Fenland Local Plan, as required under Regulation 105 of the Regulations.

1.3.2. The scope of the HRA covers the Local Plan vision, objectives, policies and site allocations. It is important to note that some of the site allocations have already been granted planning permission or built out since the 2021 base date of the Plan. The development provided for under site allocations with full planning permission has already been subject to assessment under the Habitat Regulations at the project stage, including consultation with Natural England as the statutory conservation body. There is therefore no requirement to re-assess such allocations, where they have already been found to be acceptable by the relevant local planning authority as the competent authority, at a project level.

1.3.3. The report sets out the methodology, findings and conclusions of Stage 1 and Stage 2 of the HRA process. It is structured into the following sections:

- **Section 1 Introduction and Background:** provides an overview of the Fenland Local Plan and the purpose and structure of this report.
- **Section 2 Habitats Regulations Assessment Legislation and Requirements:** provides an overview of HRA legislation, guidance and best practice and consultation with Natural England.
- **Section 3 Habitats Regulations Assessment Process:** identifies the key stages in the HRA process.
- **Section 4 Identification of European Sites:** sets out those European sites that are included in the assessment and their key pressures, threats and vulnerabilities.
- **Section 5 HRA Methodology:** sets out the approach taken for the Stage 1 Screening process, including the main assumptions in relation to potential effects, the screening categories.
- **Section 6 Stage 1 HRA Screening Assessment and Conclusions:** identifies whether the plan, either alone or in combination with other plans or projects, is likely to have significant effects on European sites.

2. Habitats Regulations Assessment Legislation, Guidance and Best Practice

2.1 Legislation

2.1.1. The HRA process assesses the potential effects of a plan or project on the conservation objectives of sites afforded the highest level of protection in the UK. These were classified under European legislation (the 'Habitats Directive' and the 'Birds Directive'), but since 1 January 2021, they are protected in the UK by the Habitats Regulations 2017 (as amended).

2.1.2. The sites previously formed a network of internationally important sites throughout Europe designated for their ecological status – known as the 'Natura 2000' Network. Sites within the network were referred to as 'Natura 2000 sites'. However, a UK Government Policy Paper[4] on changes to the Habitats Regulations 2017 post Brexit stated that any references to Natura 2000 in the Regulations and in guidance now refers to 'European' sites and the new 'national site network'. The national site network includes Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) designated under these Regulations.

2.1.3. The Policy Paper goes on to state that proposed SACs, potential SACs, Ramsar sites and any areas secured as sites compensating for damage to a European site, also require a HRA because they are protected by government policy. Ramsar sites (Designated Wetlands of International Importance) do not form part of the national site network, however they remain protected in the same way as SPAs and SACs. Many Ramsar sites overlap with SPAs and SACs and may be designated for the same or different species and habitats.

2.1.4. Provision 105 (1) of the Conservation of Habitats and Species Regulations 2017 requires Appropriate Assessment (AA) to be undertaken for plans and projects which are likely to have a significant effect on one or more European sites, either individually, or in combination with other plans and projects. This does not apply to plans or projects directly connected to the conservation management of the features for which the European site was designated.

2.1.5. The term 'Habitats Regulations Assessment" has emerged to refer to the several distinct stages of the overall assessment process, from screening through to Imperative Reasons of Over-Riding Public Interest (IROPI). The purpose of HRA is to assess the impacts of a plan or project, in combination with the effects of other plans and projects, against the conservation objectives of a European site and to ascertain whether it would adversely affect the integrity of that site. Where significant negative effects are identified, alternative options or mitigation measures should be examined to avoid any potential damaging effect.

2.2 Recent Case Law

2.2.1. In April 2018, the Court of Justice for the European Union, in People Over Wind & Sweetman v Coillte Teoranta5, ruled that when making screening decisions for the purposes of deciding whether an appropriate assessment is required, competent authorities cannot take into account any mitigation measures. This means that measures which have been specifically added to a plan or project to achieve the purpose of avoiding

[4] DEFRA (2021) Habitats Regulations Assessments: Protecting a European Site. How a competent authority must decide if a plan or project proposal that affects a European site can go ahead.
[5] http://curia.europa.eu/juris/document/document.jsf?docid=200970&doclang=EN

or reducing its harmful effects on a habitats site should not be considered at the screening stage. A full and precise analysis of the measures capable of avoiding or reducing any significant effects on the site concerned must be carried out specifically at Stage 2 Appropriate Assessment, and not as part of the Screening stage. This is a departure from the approach established by domestic case law. The Habitats Regulations have been amended to reflect this change in the law[6].

2.2.2. In November 2018, the *Holohan v An Bord Pleanala* judgement stated that:

"*Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that an 'appropriate assessment' must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site*."

2.2.3. This means that a HRA must consider the potential for effects on habitats and species located beyond the boundaries of European sites that may be important in supporting the ecological processes of the qualifying features.

2.3 HRA Guidance and Best Practice

2.3.1. The Habitats Regulations do not prescribe a particular methodology for carrying out the HRA of Local Plans.

2.3.2. The HRA of the Fenland Local Plan will be carried out in accordance with current available guidance and best practice and seeks to meet the requirements of the Habitats Regulations. The main guidance that will be referred to includes:

- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6(30 and (4) of the Habitats Directive 92/43/EEC' (European Commission, 2001);
- Appropriate Assessment – Guidance on the Use of Habitats Regulations Assessment (Ministry of Housing, Communities & Local Government July 2019[7] ; and
- Scottish Natural Heritage guidance on HRA of Plans: 'Habitats Regulation Appraisal of Plans Guidance for Plan Making Bodies in Scotland' (David Tyldesley and Associates for Scottish Natural Heritage, August 2010 and updated January 2015).

2.3.3. Although the later guidance is for Scottish Plan making bodies, the council considers that the general principles and approaches set out in this guidance are transferable and can be applied to HRA in England, subject to minor revisions.

2.4 Definition of Key Terms

2.4.1. "**Integrity**" is defined as "…the site's coherence, ecological structure and function across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of species for which it was classified" (ODPM Circular 06/2005, para 20). The 'integrity test' is undertaken during Stage 2 Appropriate Assessment.

[6] http://www.legislation.gov.uk/uksi/2018/1307/contents/made
[7] https://www.gov.uk/guidance/appropriate-assessment

2.4.2. Regulation 105 of the Habitats Regulations requires an assessment of the 'likely significant effects' of a land use plan. A "**Significant**" effect is one that could adversely impact on a European site's integrity, i.e., it would undermine the conservation objectives for the site. It is typically determined by considering the extent, complexity, probability, duration, frequency and reversibility of the effect.

2.4.3. The likelihood of it occurring should adopt the precautionary principle, taking into account the ecological circumstances of the site. An effect should be considered "**likely**" "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site." (ECJ Case C-127/02 "Waddenzee" Jan 2004)

2.4.4. Significance will vary from site to site according to conservation sensitivities and magnitude of potential impact. Assessment is triggered by likelihood, not certainty, in line with the precautionary principle. Therefore Stage 1 of the HRA considers where the effects are 'likely' and 'significant'. Those effects which are trivial may be disregarded. Significant effects are also determined in-combination with other plans or projects and take account of cumulative effects.

2.5 Consultation with Natural England

2.5.1. Natural England is the statutory nature conservation body for HRA, who will assist in obtaining the necessary information, help agree the process (such as the selection of sites and the scope of the appraisal) and work with the competent authority on agreeing the outcomes and mitigation proposals. The Council must consult Natural England, and have regard to its advice, under provision 105 (2) of the Habitats Regulations.

2.5.2. The Council may also consult other bodies and the general public, if considered appropriate (provision105 (3)). This HRA Report has been published on the Fenland District Council website and as such, views on the report are welcomed from anybody, during the consultation period of the Local Plan.

2.5.3. This HRA Report has been sent to Natural England in accordance with provision 105 (2).

3. Main Stages of HRA

3.1 Stages of HRA

3.1.1. There are 4 main stages to the HRA process.

3.1.2. The first step is to decide whether a plan or project should be subject to HRA. This will depend on the type of plan or project and on its potential effects on a European site. All plans and projects (including planning applications) which are not directly connected with, or necessary for, the conservation management of a habitat site, require consideration of whether the plan or project is likely to have significant effects on that site.

3.1.3. The competent authority must therefore first consider: '*Is the plan or project directly connected with or necessary to the management of a European site for nature conservation purposes*?'. If the answer is no, which is the case for the Fenland Local Plan, then HRA is required, and the following sequence of stages should be undertaken.

Stage 1 Screening for Likely Significant Effects (LSE)

3.1.4. The first stage of the HRA is to identify the likely impacts of a plan or project (alone or in combination with others) upon a European site, and to consider whether these impacts are likely to be 'significant', i.e. Likely Significant Effects (LSE).

3.1.5. The aim of Stage 1 Screening is to identify and screen out those parts of a plan or project that, without detailed assessment, can be determined as unlikely to result in significant effects upon European sites. The screening exercise should be approached on a precautionary basis. If the screening stage concludes that there are likely to be no significant impacts on European sites, then there will be no need to progress to Stage 2 Appropriate Assessment. If effects are judged likely or uncertain, the precautionary principle is applied, and the Plan is considered in more detail in Stage 2.

Stage 2 Appropriate Assessment

3.1.6. Where the screening process undertaken in Stage 1 determines that the Plan is likely to have a significant effect on a European site, the assessment proceeds to Stage 2 Appropriate Assessment. The Ministry of Housing, Communities & Local Government published guidance on appropriate assessment explains:

"*Where the potential for likely significant effects cannot be excluded, a competent authority must make an appropriate assessment of the implications of the plan or project for that site, in view the site's conservation objectives. The competent authority may agree to the plan or project only after having ruled out adverse effects on the integrity of the habitats site*."[8]

3.1.7. This stage considers the impact of a plan or project (alone or in combination with others and directly or indirectly) on the integrity of the European site, with respect to the site's conservation objectives and to their structure and function.[9] The scope and content of the appropriate assessment will depend on the nature, location, duration and scale of the proposed plan or project and the interest features of the relevant protected site. The assessment needs to be proportionate and sufficient to enable the competent authority to determine whether the plan or project will adversely affect the integrity of the site.

[8] Paragraph 001 Reference ID: 65-001-20190722

[9] Natural England's formal advice on conservation objectives for Natura 2000 sites is publicly available online: http://publications.naturalengland.org.uk/category/6490068894089216

3.1.8. Should the appropriate assessment identify significant effects on a site's integrity, there is a need to consider potential mitigation. Mitigation measures are protective measures forming part of a project and are intended to avoid or reduce any direct adverse effects that may be caused by a plan or project, to ensure that it does not have an adverse effect on the integrity of a protected site(s). The mitigation hierarchy should be applied. Alternatives, such as changes to the Plan, should be examined first to avoid any potential damaging effects. If no alternative exists, impact reduction measures should be defined and evaluated. If effects remain after all alternatives and mitigation measures have been considered, the plan or project proceeds to Stage 3.

Stage 3 Assessment of Alternative Solutions

3.1.9. This stage examines and recommends alternative ways of achieving the objectives of the project or plan which avoid adverse impact on the integrity of the European site. If, after mitigation, there will still be a negative effect on the integrity of a European site, the plan should be dropped. The only exceptions are where it can be shown that there are 'imperative reasons of overriding public interest'.

Stage 4 IROPI and Compensatory Measures

3.1.10. After consideration of a plan or project under stages 1 to 3, and if it cannot be ascertained that a proposal will not adversely impact on the integrity of a European site, the proposal can only proceed if there are no alternatives solutions and there are IROPI. Any necessary compensation measures must be taken to secure the integrity of the European site network.

3.1.11. The stages outlined above must be undertaken with the rigorous application of the precautionary principle.[10] This requires those undertaking the exercise to be confident that the plan will not have a significant impact on relevant conservation objectives. Where uncertainty or doubt remains, an adverse impact should be assumed.

[10] The Precautionary Principle, which is referenced in Article 191 of the Treaty on the Functioning of the European Union, has been defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2005) as: *"When human activities may lead to morally unacceptable harm* [to the environment] *that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The judgement of plausibility should be grounded in scientific analysis."*

4. Identification of European Sites

4.1 European sites that may be affected by the Local Plan

4.1.1. This section of the report identifies the European sites that may be affected by development proposed in the Draft Local Plan and therefore those sites that should be initially considered as the study area for the HRA.

4.1.2. There are two European sites within the administrative boundary of Fenland: Nene Washes SPA, SAC and Ramsar and Ouse Washes SPA, SAC and Ramsar. Detailed site characterisation information for the sites is provided in **Appendix 1**.

4.1.3. However, the Local Plan also has the potential to impact on areas that are beyond the Plan area boundary. While distance can be used as a starting point, it is commonly recognised in HRA guidance that when considering the potential for effects on European sites that distance itself is not a definitive guide to the likelihood or severity of an impact. There are other factors that will influence the relative distance at which an impact can occur, such as the prevailing wind or river flow direction. This means that development proposed in a Local Plan that is some distance away from a European site could potentially affect the site, and therefore should be considered as part of HRA screening.

4.1.4. Rather than rely on distance alone, best practice is to use a 'source-pathway-receptor' model which focuses on whether there is a pathway from the **source** (the direct or indirect change occurring as a result of development) by which impacts from the Plan can affect the vulnerabilities/ sensitivities of a European sites' environmental conditions. The **pathway** is the route or mechanism by which any likely significant effect would be manifest in the environment and would reach the **receptor** (the European site). The potential pathways for unmitigated effects arising from the Local Plan include:

- Air – localised air pollution from increased traffic on the roads, dust emissions, whether potential impacts can reach the European site/s via the prevailing wind.
- Water – surface or groundwater pollution and hydrogeological impacts to water-dependent sites including changes in water levels.
- Land take – direct and indirect impacts from habitat loss and degradation, both within and outside of European site boundaries.
- Habitat/Species disturbance/displacement – noise and visual disturbance from human activities, introduction of invasive species.

4.1.1. Using this approach, the European sites within or adjacent to the plan area with the potential to be affected by the Local Plan are identified in **Table 4.1** below. A 15km buffer was also applied from the Local Plan boundary, to take a precautionary approach in identifying sites that may potentially be subject to transboundary impacts. A map showing the location of these European sites is provided overleaf in **Figure 4.1**. Detailed information about each site is provided in **Appendix 1**.

4.1.2. Threats and pressures to the integrity of the qualifying features of each European site have been identified through reviewing JNCC standard data forms and information sheets[11], and Natural England's SIPs[12] and Supplementary Advice on Conservation Objectives[13]. The full range of threats and pressures at each European site is covered in

[11] https://jncc.gov.uk/
[12] http://publications.naturalengland.org.uk/category/5458594975711232
[13] http://publications.naturalengland.org.uk/category/6490068894089216

more detail in **Appendix 1**. **Table 4.2** below sets out a summary of those threats and pressures.

Table 4.1: European Sites potentially affected by the Local Plan

Name of European Site (Location)	**Designation**			**Approximate distance from plan boundary to boundary of European site (km)**
	Ramsar	**SPA**	**SAC**	
Sites lying <u>within</u> Fenland				
1.Nene Washes (Fenland)	✓	✓	✓	
2.Ouse Washes (Fenland)	✓	✓	✓	
Sites lying <u>outside</u> Fenland but wholly or partly within 15km of its boundary				
3.Fenland - Woodwalton Fen (Huntingdonshire)	✓		✓	6.3
4.Orton Pit			✓	6.4
5.The Wash	✓	✓		9.2
6.The Wash and North Norfolk			✓	9.2

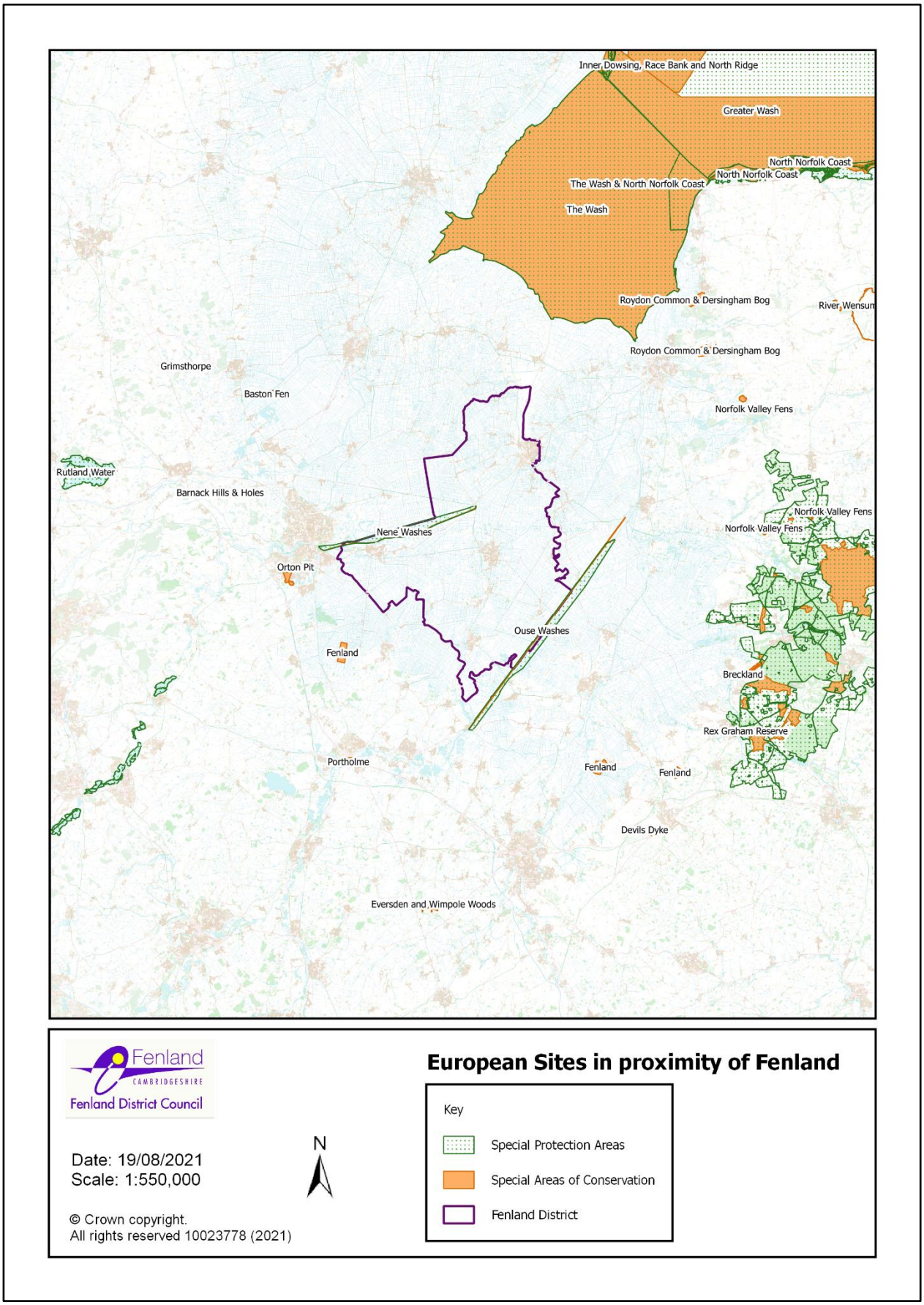
Table 4.2: Summary of Threats and Pressures to Site Integrity of Qualifying Features

Name of European Site	**Threats and Pressures to Site Integrity of Qualifying Features (P = pressure T = threat)**
Within Fenland	
Nene Washes SPA and Ramsar	• Changes in water supply or flow and water quality (T) • Changes in surrounding supporting off-site habitat (T) • Air pollution: impact of atmospheric nitrogen deposition (P) • Public/access disturbance (T) • Predation (T) • Grazing animals (T)

Nene Washes SAC	• Changes in water supply or flow and water quality (P/T) • Changes in surrounding supporting off-site habitat (T) • Invasive Species (T) • Fisheries (T) • Climate Change (P) • Air pollution: impact of atmospheric nitrogen deposition (P)
Ouse Washes SPA and Ramsar	• Changes in water supply or flow and water quality (P/T) • Air pollution: impact of atmospheric nitrogen deposition (P) • Changes in surrounding supporting off-site habitat (T) • Public/access disturbance (T)
Ouse Washes SAC	• Changes in water quality (T) • Climate Change (P) • Air pollution: impact of atmospheric nitrogen deposition (P) • Invasive Species (T) • Fisheries: recreational (T) • Over-grazing (T)
Outside Fenland	
Fenland SAC (Woodwalton Fen Ramsar)	• Changes in water supply or flow and water quality (P) • Air pollution: impact of atmospheric nitrogen deposition (P) • Climate Change (P) • Invasive Species (T) • Changes in surrounding supporting off-site habitat (T)
Orton Pit SAC	• Predation (T) • Invasive Species (T) • Public/access disturbance (vandalism, arson and disturbance from dogs) (T) • Disease (T) • Changes in water supply or flow and water quality (P) • Changes in surrounding supporting off-site habitat (T) • Air pollution: impact of atmospheric nitrogen deposition (P)
The Wash and North Norfolk Coast SAC	• Siltation (T) • Fisheries: Recreational marine and estuarine (T) • Invasive Species (T) • Inappropriate coastal management (T)

	• Fisheries: commercial marine and estuarine (T) • Coastal squeeze (T) • Air pollution: impact of atmospheric nitrogen deposition (P) • Change in land management (T) • Changes in surrounding supporting off-site habitat (T) • Climate change (P) • Changes in water supply or flow and water quality (P)
The Wash SPA and Ramsar	• Public/access disturbance (T) • Fisheries: Recreational marine and estuarine (T) • Fisheries: commercial marine and estuarine (T) • Coastal squeeze (T) • Changes in surrounding supporting off-site habitat (T) • Predation (T) • Air pollution: impact of atmospheric nitrogen deposition (on supporting habitats) (P/T) • Changes in water supply or flow and water quality (P)

Figure 4.1: Location of European Sites



4.2 Sources of Information

European Sites

4.2.1. Relevant information on each European site, including its features of interest, were taken from the Natura 2000 Data Form or the Information Sheet on Ramsar Wetlands for the designated site, accessed from the JNCC website (www.jncc.gov.uk). Additional details of each site (where they are either a SPA or SAC) were taken from Natural England's Site Improvement Plans (SIP). The location, extent and site area of the European sites in GIS format was sourced from the UK Government Open Data Portal at https://data.gov.uk/.

Natural England's Impact Risk Zones

4.2.2. Natural England has developed a GIS tool and dataset to make a rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

4.2.3. European sites are underpinned by the SSSI designation, and their interest features and sensitivities are covered by the SSSI IRZs. Where the notified features of the European site and SSSI are different, the SSSI IRZs have been set so that they reflect both. The SSSI IRZs can be used as part of a HRA to help determine whether there are likely to be significant effects from a particular development on the interest features of the site. The IRZs are therefore a useful tool when considering the potential impact of proposed site allocations and will be drawn upon in the Stage 1 HRA Screening of the Fenland Local Plan.

4.3 Potentially Functionally Linked Land IRZ and Recreational Impact IRZs

4.3.1. Functionally linked land comprises areas outside the designated European site boundary that are known to be regularly used for foraging and/or roosting by qualifying species.

4.3.2. Natural England has prepared indicative functionally linked IRZ maps for The Wash, Nene Washes and the Ouse Washes. These can be viewed in **Appendix 1**.

4.3.3. Natural England also uses the IRZ tool to identify zones of potential recreational pressure on SSSIs from proposed development. Where a SSSI is considered to be at significant risk from recreational pressure, it has been given a zone of potential risk using IRZ mapping. These zones have been defined by Natural England following visitor surveys and discussions with land managers.

5. HRA Methodology

5.1 Stages in the HRA Screening process

5.1.1. The HRA screening process is summarised in **Table 5.1** below. The HRA process is iterative and will be revisited as the Local Plan develops.

Table 5.1: HRA Stage 1 Screening Key Stages

Stages	Habitats Regulations Assessment	Location in this Report
Stage 1. Screening for likely significant effects	**Task 1 -** Identify European sites in and around the Plan area that should be considered in the assessment.	Section 4: Table 4.1
	Task 2 – Gather information on the European sites, including the vulnerabilities of their qualifying features, conservation objectives and site condition. Identify the changes to environmental conditions that may occur as a result of implementing the Plan.	Section 4: Table 4.2, Appendix 1,
	Task 3 - Identify key components of the emerging Local Plan, including the Plan objectives and policies.	Section 1
	Task 4 – Determine, through a screening exercise, all aspects of the Plan which would have no effect on a European site and those aspects where it is not possible to rule out the risk of significant effects.	Section 6 and Appendix 2
	Task 5 - Consider whether other plans or projects, in combination with the Local Plan, would have the potential for adverse effects on the qualifying features of identified sites.	Section 6 and Appendix 3
	Task 6 - Conclude whether there are likely significant effects. If there are no likely significant effects, consult Natural England on the screening recommendation that the further appropriate assessment stages of the HRA are not necessary.	Section 6
	Task 7 - If, after Task 6, significant effects are judged likely or uncertainty exists, or Natural England disagrees with the	Section 6

Stages	Habitats Regulations Assessment	Location in this Report
	screening recommendation that an appropriate assessment is not necessary proceed to Stage 2 Appropriate Assessment.	

5.2 Screening Approach

5.2.1. The screening of the Local Plan involves a series of steps to remove or 'screen out' those elements that are not likely to have a significant effect on a European Site, and to ensure other aspects of the Local Plan are 'screened in' where further appraisal is required. An assessment of the Local Plan will be undertaken using the criteria set out in **Table 5.2**.

5.2.2. These are broadly based on the screening categories set out within the HRA guidance for Scotland. When considering significant effects, effects which would not undermine the conservation objectives of a European site should not be regarded as significant: thus, where a policy/aspect of the Local Plan may potentially have a positive significant effect on a European site, this policy/part can be 'screened out' because the impact would not be negative.

Table 5.2: Screening Categories for HRA Screening: Categorising the Potential Effects of the Local Plan

Screening Category	Type of Policy
'N' categories: screened out or eliminated elements of the Plan (Appropriate Assessment not required) Plan elements assessed as not likely to have a significant effect on a European site if implemented, either alone or in combination with effects from other plans or projects.	
N1	**General Policy Statement** General strategy statement or general criteria-based policy not likely to have a significant effect as the policy will not lead to development itself.
N2	**Policy refers to proposals that are not generated by the Local Plan and therefore excluded from the assessment.** For example, a policy that refers to a transport project, which is identified in another Plan and possibly by another authority (and this will have been subject to HRA for the other Plan).
N3	**Policies that intend to protect, conserve or enhance the natural (including biodiversity), built or historic environment**, or that positively steers development away from European sites.
N4	**Policy that will not lead to development or other change**, because it is qualitative or design criteria based, which guide development.
N5	**Policy makes provision for change or promotes development but would have no likely significant effect on a European site** Policies that promote development but have no likely significant (negative) effect because there is no physical, ecological, hydrological, chemical or biological link or pathway between the changes the policy may cause and the site's qualifying interests of any European site. This category also covers policies that may have a positive effect; or would not otherwise undermine the

	conservation objectives for the site. A Plan's positive effects on a site cannot be regarded as 'significant' and can therefore be 'screened out'.
N6	**Policies that make provision for change/promotes development in specific areas but would have no significant effect on a European Site** Policies that could have effects that are trivial or 'de minimis', or so restricted in scale or remote from a European site, even if combined with other effects, that they would not undermine the conservation objectives for the European site. For example, a policy that focuses development in existing urban areas whereby the likelihood of the policy affecting an isolated, relatively inaccessible European site is remote.
N7	**Policies that promote development or change but where it is so general it is not known where, when or how the aspect of the Local Plan may be implemented or where the potential effects may occur, or which European sites, if any, may be affected.** These are very general / strategic policies or proposals which are too general to identify any effect as it is not known where, when or how the aspect of the Local Plan may be implemented, or where any potential effects may occur, or which European Sites, if any, may be affected. These plan aspects may be very similar to the general policy statements screened under N1 but are different in that they promote overall change.
'P' category: screened in elements of the Local Plan (Appropriate Assessment required) Plan considered likely to have a significant effect on a European site	
P	**Policy/proposal/element of the Local Plan with potential to have a likely significant effect and therefore subject to further assessment, including consideration of potential mitigation measures.** This category will cover: • Policies which have been identified as having likely significant effects, either alone or in combination, and directly or indirectly, and are therefore subject to further appraisal; and • Policies where it is not possible to conclude likely significant effects as this is currently uncertain.

5.2.3. The outcome of the screening assessment will be recorded and presented in screening matrices. A colour code will be applied to the categories used to record the potential effects of the Local Plan policies and site allocations on European sites. Green categories record that there are unlikely to be significant effects (and therefore appropriate assessment is not required). Amber categories record that there are likely to be significant effects, or uncertainty remains as to whether there will be likely significant effects (and therefore appropriate assessment is required).

5.3 Potential Impacts of the Local Plan on European Sites

5.3.1. The provisions for growth and new development in the Local Plan has the potential to generate a range of impacts that, depending on their nature, magnitude, location and duration, can potentially significantly impact on European sites. Most potential impact pathways are associated with 'broad quantum of development' or 'population growth' aspects of a Local Plan.

5.3.2. The main ways by which the Local Plan could impact on European sites are through individual allocations of land for development that are directed to a specific location and through in combination effects resulting from the cumulative impacts of development associated with the Local Plan, or with the plans and programmes of external authorities.

5.3.3. The main categories of possible effects arising from the Local Plan are:

Potential Effect	**Description**
Habitat loss/ fragmentation (including loss of functionally linked land) and effects on species away from European Sites	• Loss of on-site habitat within European site boundary as a result of direct land take. • Loss of off-site, functional habitat outside of European site boundary as a result of direct land take. • Habitat fragmentation/loss of connectivity. • Direct mortality (for example, due to collision risk).
Public access and disturbance: recreation and visitor pressure	• Potential for direct damage to habitats from trampling and erosion. • Potential for increased disturbance to species from larger footfall of people and dogs. Impacts will depend on scale, type and predictability of disturbance. Certain species, when breeding and foraging, are particularly sensitive. • Eutrophication from dog fouling. • Spread of invasive species.
Disturbance: urbanisation effects	• Noise, vibration, light pollution, both from construction activity and once development is occupied. • Fly-tipping of garden waste can lead to spread of invasive species. • Predation from domestic cats. • Vandalism and anti-social behaviour. • Increased risk of fire.
Hydrological: Changes in water levels and flows	• Potential for drying and reduced water levels arising from increase in water abstraction levels to provide supply (e.g., new housing). Changes to water levels can impact on river flow and water quality. • Flooding/storm water. • Potential impact on groundwater in water cycle by buildings altering groundwater flow.
Hydrological: Changes in water quality	• Potential increase in pressure on sewage infrastructure network and capacity.

Potential Effect	Description
	• Potential increase in volume of wastewater discharges (consented) which can lead to reduced water quality. • Hydrological cycle impacts from additional take up of land, loss of permeable surfaces and topography alteration, potentially resulting in flood risk and water quality impacts. • Potential increase in accelerated run off arising from new hard standing/non-permeable surfaces of new development. • Potential increase in surface water run off as a result of new development, which can lead to contamination of watercourse links and reduced water quality.
Air pollution	• Dust emissions (construction phase). • Increased traffic movements and trips arising from construction and once development is occupied, leading to increased air pollution which could damage vegetation and harm species sensitive to changes in air quality. • Potential for increased emissions from buildings.

5.4 Screening Assumptions

5.4.1 This section sets out the assumptions that will be applied when undertaking Stage 1 Screening of the Local Plan. The vulnerabilities/sensitivities of each European site have been considered for relevance to the Local Plan.

5.4.2 Using these assumptions, it is possible to 'screen out' some European sites and impact pathways prior to the Stage 1 screening assessment, as the effects would be trivial or 'de minimis', or so restricted in scale or remote from a European site, even if combined with other effects, that they would not undermine European site conservation objectives.

Habitat loss/ fragmentation - within European Site

5.4.3 Any development resulting from the Local Plan would take place within the administrative boundary of Fenland District Council. Therefore, only European sites within the boundary of Fenland would have potential to be affected by direct physical damage and habitat loss. Fenland (Woodwalton Fen) SAC, Orton Pit SAC, The Wash SPA and The Wash and North Norfolk Coast SAC lie outside of Fenland and can therefore be screened out from the assessment.

5.4.4 ***The Nene Washes SPA, Nene Washes SAC, Ouse Washes SPA and Ouse Washes SPA lie within Fenland and therefore likely significant effects need to be considered for loss of on-site habitat.***

Habitat loss/ fragmentation - functionally linked habitat

5.4.5 Damage or loss of off-site, supporting habitat (i.e., land outside European sites that is functionally linked as it may be used by the qualifying species of a site) may be an issue, particularly for highly mobile species, such as birds and bats. Functionally linked habitat refers to land or water which is linked to a qualifying species. It may be located some distance from a European site, therefore development some distance from a European site can have an effect on the site if its interest features are reliant on habitats being affected by the development. This includes land which may provide offsite foraging and roosting habitat and movement corridors for mobile species such as birds, bats and fish.

5.4.6 Maximum foraging distances for protected sites notified for bird species have been derived by Natural England[14] as a guide and are set out in the table below.

	Maximum Foraging Distance
Sites notified for breeding bird assemblages (excluding ground-nesting heathland species, stone-curlew, marsh harrier & nightjar)	500m Some breeding SSSI birds of prey (peregrine, merlin, hen harrier & honey buzzard) can also forage up to 4km.
Sites notified for wintering birds (except wintering waders and grazing wildfowl, wigeon and geese)	500m Wintering marsh harrier and hen harrier can forage 10s of km. Owing to the extensive presence of farmland within 10s of km and low densities of birds, the standard distance of 500m relating to all wintering birds is deemed acceptable.
Sites notified for wintering waders (except golden plover and lapwing), brent goose & wigeon	2km Breeding marsh harrier can also forage up to 4km and are likely to make significant use of farmland habitat beyond semi-natural areas encompassed by site boundaries. Owing to extensive presence of farmland and low densities of birds, a reduced distance of 2km is deemed generally acceptable.
Sites notified for ground-nesting heathland species (breeding nightjar & stone curlew)	2km Many sites with such sensitive features have issues of recreational disturbance. Buffers need to take into account travel to sites from proposed residential developments. For some Heathland SSSIs/SPAs most of the suitable habitat is designated, areas surrounding the sites are largely built up and the extent of functionally connected land will be limited.

[14] Natural England (2018) Guidance on evaluating the ecological consequences of badge culling on European Sites

	Nightjar - up to 4km foraging distance for nightjars but unlikely to be >2km beyond site boundary.
Sites notified for wintering lapwing and golden plover	15-20km Golden plover can forage up to 15km from a roost site within a protected site. Lapwing can also forage similar distances. Both species use lowland farmland in winter, and it is usually difficult to distinguish between designated populations and those present within the wider environment. Developments affecting functionally linked land more than 10km from the site are unlikely to impact significantly on designated populations.
Sites notified for wintering white-fronted goose, greylag goose, bewick's swan, whooper swan & wintering bean goose	10km
Sites notified for wintering pink-footed goose, barnacle goose	15-20km

5.4.7 The Bat Conservation Trust has identified Core Sustenance Zones (CSZs)[15] for different bat species, which refers to the area surrounding a bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation of the bat colony using the roost. The zones vary depending on species; from 1km to 6km.

5.4.8 There is the possibility that designated bird species might collide with tall buildings or structures, such as wind turbines, if they are located close to a designated site or within foraging range of bird species, resulting in direct collision mortality.

5.4.9 With regards to the European sites within the study area, site information gathered for **Appendix 1** suggests the following European sites are sensitive to the loss of functionally linked habitat and/or effects on species away from European Sites due to the presence of qualifying mobile species:

- Nene Washes SPA/Ramsar
- Ouse Washes SPA/Ramsar
- Orton Pit SAC
- The Wash SPA/Ramsar

5.4.10 The Nene Washes SPA/Ramsar is a washland habitat which regularly supports internationally and nationally important numbers of wildfowl and waders. The area supports a diverse assemblage of waterbirds including Black tailed-godwit, Lapwing, Pochard, Teal, Gadwall, Wigeon, Shoveler, Pintail, Ruff, and Bewick's swan. Natural England have prepared an indicative goose and swan functional land IRZ for the Nene Washes (see **Appendix 1**) and the identified land to the south and east of the Nene Washes SSSI falls within Fenland.

[15] BCT (2020) Core Sustenance Zones and habitats of importance for designing Biodiversity Net Gain for bats. Bat Conservation Trust, London

5.4.11 The Ouse Washes SPA/Ramsar is a washland habitat which regularly supports internationally and nationally important numbers of over-wintering and breeding bird species. Of particular note are the large number of Teal, Pintail, Wigeon, Shoveler, Pochard and Bewick's swans. Natural England have prepared an indicative goose and swan functional land IRZ for the Ouse Washes (see **Appendix 1**) and the identified land to the west and north west of the Ouse Washes SSSI falls within Fenland.

5.4.12 Orton Pit SAC comprises of an extensive network of around 400 ponds which support qualifying populations of Great Crested Newt. Great Crested Newts disperse over land to forage for food and move between ponds. At most sites, adults stay within 250m of the breeding pond, however they may travel further if there are areas of high-quality habitat and foraging[16]. Good quality terrestrial habitat, particularly within 500m of the breeding ponds, provides important sheltering, dispersing and foraging conditions and can include all semi-natural habitat along with meadows, rough tussocky grassland, scrub, woodland, as well as 'brownfield' land or low-intensity farmland[17]. As Fenland is more than 500m from Orton Pit SAC, it is considered unlikely for Great Crested Newts to rely on suitable habitat in Fenland. ***Orton Pit can be ruled out from further consideration in relation to physical damage and loss of habitat due to lack of impact pathway****.*

5.4.13 The Wash SPA/ Ramsar is the most important migratory and over-wintering site for waterbirds in the UK. In addition, the site supports two species of breeding tern (common and little). Farmland adjoining the protected sites is also important to a number of species e.g., bewick's swan and pink-footed goose for foraging and roosting. Natural England have prepared an indicative goose and swan functional land IRZ for The Wash (see **Appendix 1**), however none of the identified land is within Fenland and therefore ***The Wash can be ruled out from further consideration in relation to physical damage and loss of habitat due to lack of impact pathway****.*

5.4.14 It is unlikely that development proposed as part of the Plan will result in the loss of offsite functional habitat used by the SPA/Ramsar species unless it is within or immediately adjacent to the IRZ; however, in line with a precautionary approach this cannot be screened out as safeguards set out in Local Plan policies cannot be taken into account at the screening stage.

5.4.15 ***Therefore, likely significant effects relating to the physical loss or damage of off-site habitat, or physical damage/disturbance of species needs to be considered for the Nene Washes SPA and Ouse Washes SPA*****.**

Public access and disturbance: recreation and visitor pressure

5.4.16 An increase in population is expected to increase the numbers of people visiting the countryside, which may include increased visitor numbers to European sites. Visitors can trample vegetation, cause erosion and disturb sensitive features, such as birds, through both terrestrial and water-based forms of recreation. Dogs taken on to sites can disturb breeding and wintering birds and cause eutrophication through the deposition of faeces.

5.4.17 The Local Plan will result in housing growth and an associated population increase. Where increases in population are likely to result in significant increase in recreation at European sites, either alone or in-combination, the potential for likely significant effects will require assessment.

[16] Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), Great Crested Newt Conservation Handbook, Froglife, Halesworth.
[17] Natural England (2018) Supplementary Advice Orton Pit Special Area of Conservation (SAC)

5.4.18 In theory, sites that are closest to the urban area and other proposed allocation sites may be expected to attract larger numbers of visitors than sites further away. However, HRAs of other Local Plans have considered this issue and research has demonstrated that the majority of visitors to such sites are by car. A visitor assessment of the Thames Basin Heaths SPA[18] determined that the majority of visitors travel by car and 94% of visitor postcodes fell within a 5km radius of the SPA boundary. A visitor study undertaken by Footprint Ecology in 2011[19], found that the median distance among visitors to Breckland SPA was 8.81km. In short, there is no standard method for defining the 'zone of influence' of increased recreational and visitor pressure, and a range of approaches have been adopted nationally.

5.4.19 In terms of the European sites relevant to this HRA, a visitor survey of The Wash, to inform the South East Lincolnshire Local Plan[20], also revealed that the majority of visitors arrived by car and that half of all visitors lived within 7.5km or less of the survey points.

5.4.20 Natural England advised a nearby council (Peterborough City) that any development within 8km of European sites should be taken into consideration in the HRA of the Peterborough Local Plan. Therefore, 8km is considered a reasonable and appropriate distance inside which recreation and visitor pressure should be considered for the Fenland Local Plan and which could require mitigation measures. Whether recreational pressure has been identified as a potential issue via Natural England's SSSI IRZs is also a key consideration.

5.4.21 The nature of the proposed development will be considered in relation to this impact. For example, employment sites are less likely to result in increased recreation pressure than residential sites, as the employees will be in work within the employment site for the majority of their time spent there. Therefore, employment site allocations with no housing element have been assumed to not give rise to increased recreational pressure.

Sites identified as vulnerable/sensitive to this effect	**Within SSSI IRZ where recreational pressure is a potential issue?**	**Within 8km of Fenland boundary?**	**Further assessment required?**
Nene Washes SPA	Yes	Yes. Lies mainly within Fenland	Yes
Ouse Washes SPA	Yes	Yes. Lies partly within Fenland	Yes
Orton Pit SAC	No	Yes	Yes
The Wash SPA	No	No	No
The Wash and North Norfolk Coast SAC	No	No	No

[18] Fearnley, H. and Liley, D. 2013. Results of the 2012/13 visitor survey on the Thames Basin Heaths Special Protection Area (SPA). Natural England Commissioned Reports
[19] Fearnley, H., Liley, D. and Cruickshanks, K. (2010). Visitor survey from results Breckland SPA. Footprint Ecology.
[20] Panter, C. and Liley, D. (2016) Wash Visitor Survey. Footprint Ecology.

5.4.22 ***Using this approach, the likely significant effects of increased recreation and visitor pressure needs to be considered in relation to Nene Washes SPA, Ouse Washes SPA and Orton Pit SAC.***

Disturbance: urbanisation effects

5.4.23 Urbanisation is a general term used to cover a range of impacts that occur due to increases in human populations near to designated sites. The main impacts of urbanisation include: noise, vibration and light pollution, fly tipping of garden waste, vandalism, litter, increased risk of fire and cat predation. (Impacts from trampling, eutrophication (dog fouling) and habitat damage are covered under increased recreational pressure). Proximity to urban centres and high population pressure means these impacts are all exacerbated and as a result, particular management measures are often required.

5.4.24 Urbanisation effects tend to occur over short distances. Development buffers of around 400m are typically used to minimise the effects of urbanisation.[21] The three key factors to consider are species sensitivity, proximity of disturbance sources and timing/duration of the potentially disturbing activity.

5.4.25 The Nene Washes SPA/Ramsar, Ouse Washes SPA/Ramsar and the Wash SPA/Ramsar are designated for regularly supporting large populations of over-wintering and breeding bird species. Many of these species are sensitive to human presence. Construction of new developments, both residential and employment, can cause noise and vibration disturbance and visual disturbance through human presence in close proximity to the designated site.

5.4.26 On a precautionary basis, it has been assumed that these impacts may have a significant impact on European sites where they take place within 500m of the European site boundary.

5.4.27 The Nene Washes SAC and Ouse Washes SAC are designated for their Spined Loach populations. According to the SIPs and supplementary guidance for these European sites, Spined Loach is sensitive to changes in water quality and flow and changes in air quality. ***The Nene Washes SAC and Ouse Washes SAC can therefore be screened out in relation to urbanisation effects.***

5.4.28 ***Likely significant effects of urbanisation need to be considered in relation to the Nene Washes SPA and Ouse Washes SPA.***

5.4.29 ***Orton Pit SAC, Fenland (Woodwalton Fen) SAC, The Wash SPA and The Wash and North Norfolk Coast SAC are all greater than 500m from the Fenland boundary and therefore these European sites can be screened out in relation to urbanisation effects due to lack of impact pathway.***

Hydrological Changes: water quality and water levels

5.4.30 Impacts on water levels are most likely to affect European sites that are hydrologically connected to potential site allocations, either via surface or groundwater pathways, and those with qualifying features that are wetland habitats or are species dependent on

[21] For example, local planning authorities near the Thames Basin Heaths SPA have adopted a 400m zone around the SPA boundary where there is a presumption against new residential development.

wetland habitats, or habitats sensitive to changes to the water table, as identified in the SIPs.

5.4.31 Both groundwater and surface levels can be affected by abstraction for public water supply and for industrial and agricultural uses. Development promoted through the Local Plan is likely to increase the demand for water abstraction and treatment, which could indirectly impact on European sites in the study area sensitive to water quantity and or quality changes. However, it is important to note that much of the water supply to water-resource sensitive European sites is managed through specific consenting regimes that are independent of the Local Plan. These consenting regimes are subject to HRA, and water companies are required to prepare Water Resources Management Plans (WRMPs) that take into account population growth and protected sites when considering future water resource provision.

5.4.32 Water dependent European sites are classified as protected under the Water Framework Directive; each protected site has specific objectives to ensure their favourable conservation status. Many European sites are dependent upon there being appropriate water quality to support their integrity, including water courses and other wetland habitats, as well as habitat types such as heathlands, which may be dependent on groundwater quality. Water quality can be affected by a number of factors, such as pollution, pesticides and nutrient enrichment and discharges from water treatment works. The most likely impact pathways relating to water quality from increased development in Fenland are pollution from surface water runoff and discharge from water treatment works.

5.4.33 An adverse effect on the integrity of a European site from hydrological changes was assumed to be likely only where the qualifying features of that site are sensitive to hydrological changes.

Sites identified as vulnerable/sensitive to this effect	**Further assessment required?**	**Comments**
Nene Washes SPA and Ramsar	Yes	Qualifying features are sensitive to hydrological change. The site is hydrologically connected to Fenland via the River Nene and Morton's Leam Drain.
Nene Washes SAC	Yes	Qualifying features are sensitive to hydrological change. The site is hydrologically connected to Fenland via the River Nene.
Ouse Washes SPA and Ramsar	Yes	Qualifying features are sensitive to hydrological change. The site is hydrologically connected to Fenland via the

Sites identified as vulnerable/sensitive to this effect	Further assessment required?	Comments
		Forty Foot Drain, an artificial drainage channel which drains into the Old Bedford River via Welches Dam.
Ouse Washes SAC	Yes	Qualifying features are sensitive to hydrological change. The site is hydrologically connected to Fenland via the Forty Foot Drain, an artificial drainage channel which drains into the Old Bedford River via Welches Dam.
Fenland SAC (Woodwalton Fen Ramsar)	No	Qualifying features are sensitive to hydrological change. However, the site is not hydrologically connected to Fenland, either via watercourses or aquifers. The site is located too far from the district boundary to be affected by surface water runoff from increased development in Fenland.
Orton Pit SAC	No	Qualifying features are sensitive to hydrological change. However, the site is not hydrologically connected to Fenland, either via watercourses or aquifers. The site is located too far from the district boundary to be affected by surface water runoff from increased development in Fenland.
The Wash and North Norfolk Coast SAC	Yes	Qualifying features are sensitive to hydrological change. The Wash is fed by the rivers Witham, Welland, Nene and Great Ouse.

Sites identified as vulnerable/sensitive to this effect	Further assessment required?	Comments
		Potential for possible impacts from hydrological changes via the Rivers Nene and Great Ouse. The site is located too far from the district boundary to be affected by surface water runoff from increased development in Fenland.
The Wash SPA and Ramsar	Yes	Qualifying features are sensitive to hydrological changes, including water abstraction and changes to water quality. The Wash is fed by the rivers Witham, Welland, Nene and Great Ouse. Potential for possible impacts from hydrological changes via the Rivers Nene and Great Ouse. European site located at too great a distance to be impacts by issues of surface water runoff from increased development in Fenland.

5.4.34 ***Therefore, the likely significant effects of hydrological changes or water quality needs to be considered in relation to the Nene Washes SPA and Ramsar, Nene Washes SAC, Ouse Washes SPA and Ramsar, Ouse Washes SAC, The Wash SPA and Ramsar, and The Wash and North Norfolk SAC.***

Air Quality

5.4.35 The development proposed in the Local Plan is likely to generate an increase in traffic which may lead to an increase in levels of air pollution relative to no growth. Many habitats of nature conservation importance in the UK are adapted to low nutrient conditions and/or are vulnerable to acidification and are sensitive to dust and particulate matter (PM), nitrogen oxides (NOx), sulphur dioxide (SO2) and ammonia (NH3), as well as to nitrogen deposition and acid deposition. Pollutants come from a range of different sources, but transport is known to be the single largest source of NOx emissions and particulate matter.

5.4.36 Air pollution is most likely to affect European sites where plant, soil and water habitats are qualifying features. The risks to qualifying features from air pollution arise from the direct

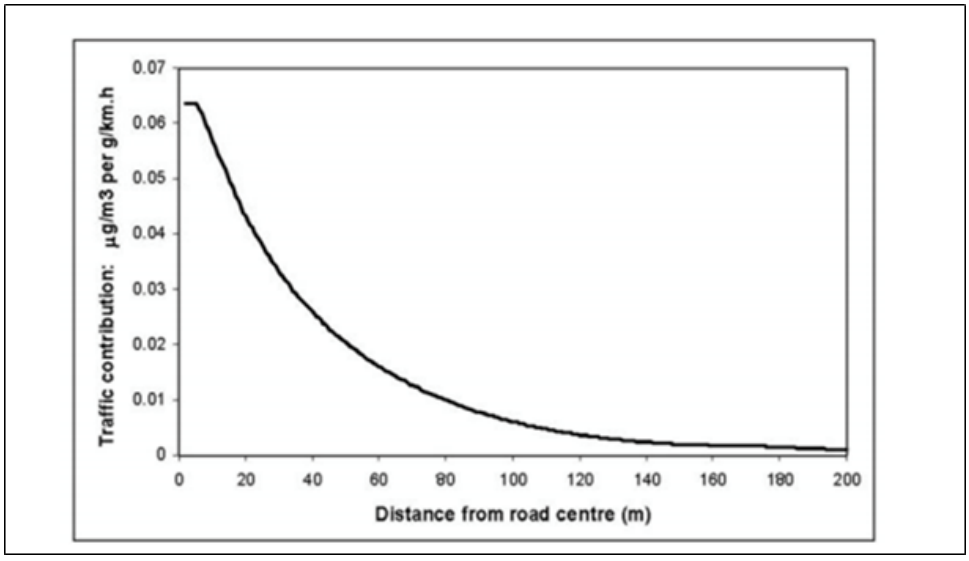
effects which arise when a pollutant which is dispersed in the air is taken up by vegetation, and indirect effects which arise when the pollutant settles into the ground causing nutrient enrichment of the soil or change to the soil PH.[22]

5.4.37 Natural England's advice on the assessment of air quality impacts under the Habitats Regulations states that consideration should be given to the risk of road traffic emissions likely to result from a Local Plan. The main issue for Local Plans is the assessment of 'in-combination' effects due to air quality changes that might be associated with the amount of development proposed, particularly in relation to traffic and nitrogen deposition.

5.4.38 Natural England's (2016)[23] review of the ecological impacts of road traffic concluded that vegetation was impacted by exposure to motor vehicle pollution up to 200m from roads and that distance has the potential to be greater. They also found that impacts are greatest within the first 50-100m from roads.

5.4.39 According to 'The Highways Agency Design Manual for Roads and Bridges, Section 3, Part 1'5, in terms of nitrogen deposition from traffic emissions, only increases in heavy duty vehicle (HDV) flows that will change by 200 Annual Average Daily Traffic (AADT) or more are considered significant. Additionally, it is widely accepted that air pollution from roads is unlikely to be significant beyond 200m from the road itself (see **Figure 5.1**). In most cases, only traffic on major roads (e.g., 'A' roads) is considered sufficient to affect air quality at a level significant to habitats. 200m is therefore the distance that has been used in this HRA to determine whether a European site is likely to be significantly affected by the Local Plan in terms of reduced air quality from atmospheric pollution. Where a site is within 200m of only minor roads, no significant effect from traffic-related air pollution is the likely outcome.

Figure 5.1: Traffic Contribution to Pollutant Concentration at Different Distances from the Road Centre (DFT)[24]



[22] Natural England (2018) Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001). Available at: http://publications.naturalengland.org.uk/publication/4720542048845824
[23] http://publications.naturalengland.org.uk/publication/6212190873845760
[24] http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/ha20707.pdf

Sites identified as vulnerable/sensitive to this effect	Further assessment required?	Comments
Nene Washes SPA and Ramsar	Yes	The following A roads are within 200m of the SPA: • A1139 • A141 • A47 According to the supplementary advice for the site, the structure and function of habitats which support the qualifying features of the SPA may be sensitive to changes in air quality, affecting the quality and availability of nesting, feeding or roosting habitats. Such features include: • Bewick's swan • Eurasian wigeon • Gadwall • Eurasian teal • Northern pintail • Garganey • Northern shoveler • Black-tailed godwit
Nene Washes SAC	Yes	The following A roads are within 200m of the SAC: • A1139 • A141 • A47 According to the supplementary advice for the site, the supporting habitat type for the following qualifying features is considered potentially sensitive to changes in air quality, in particular nitrogen and acidity: • *Cobitis taenia* Spined loach
Ouse Washes SPA and Ramsar	Yes	The following A roads are within 200m of the SPA: • A1123 Earith Bridge • A142 Mepal • A1101 Welney According to the supplementary advice for the site, the structure and function of habitats which support the qualifying features of the SPA may be sensitive to changes in air quality, affecting the quality and availability of

Sites identified as vulnerable/sensitive to this effect	Further assessment required?	Comments
		nesting, feeding or roosting habitats. Such features include: • Bewick's swan • Whooper swan • Eurasian Wigeon • Gadwall • Eurasian Teal • Mallard • Norther pintail • Garganey • Northern shoveler • Hen harrier • Ruff • Black-tailed godwit • Waterbird assemblage • Breeding bird assemblage
Ouse Washes SAC	Yes	The following A roads are within 200m of the SPA: • A1123 Earith Bridge • A142 Mepal • A1101 Welney According to the supplementary advice for the site, the supporting habitat type for the following qualifying features is considered potentially sensitive to changes in air quality, in particular nitrogen and acidity: • *Cobitis taenia* Spined loach
Fenland SAC (Woodwalton Fen Ramsar)	No	Beyond 200m from the nearest A road. The site will therefore not be exposed to potentially significant air quality changes associated with increased traffic originating from Fenland, alone or in combination with other plans or projects.
Orton Pit SAC	Yes	The following A roads are within 200m of the SAC: • A1260 • A1139 According to the supplementary advice for the site, the following qualifying features are sensitive to changes in air quality: • H3140. Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.;

Sites identified as vulnerable/sensitive to this effect	Further assessment required?	Comments
		Calcium rich nutrient-poor lakes, lochs and pools' • *Triturus cristatus* Great Crested Newt
The Wash and North Norfolk Coast SAC	No	The A149 is within 200m of the SAC at Blakeney and at locations to the east of Blakeney. However, the Fenland boundary is over 80km, as the crow flies, from Blakeney. Due to this distance, the site will therefore not be exposed to potentially significant air quality changes associated with increased traffic originating from Fenland, alone or in combination with other plans or projects.
The Wash SPA and Ramsar	No	Beyond 200m from the nearest A road. The site will therefore not be exposed to potentially significant air quality changes associated with increased traffic originating from Fenland, alone or in combination with other plans or projects

5.4.40 ***Therefore, the likely significant effects of changes in air quality need to be considered in relation to the Nene Washes SPA and Ramsar, Nene Washes SAC, Ouse Washes SPA and Ramsar, Ouse Washes SAC and Orton Pit SAC.***

5.5 In-combination effects

5.5.1 As well as considering whether the Local Plan policies alone may result in likely significant effects, a key requirement of the Regulations is to determine whether the Local Plan is likely to have a significant effect when considered in-combination with other plans and projects. For example, the effect of a plan on air quality may be insignificant when considered alone, but when combined with the effects of increased air pollution from other plans, may lead to significant impacts on site integrity. Regulation 105 of the Regulations requires an appropriate assessment of "*any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or project*."

5.5.2 This HRA has taken a pragmatic approach to considering plans and projects in-combination; focusing on in-combination effects within the plan, i.e., separate policies or site allocations affecting the same European Site(s), and in-combination impacts with Local Plans that direct spatial development within and adjacent to the Fenland area. **Appendix 3** lists the plans and projects that will be taken into account.

5.6 Summary of Screening Assumptions

5.6.1 Based on the screening assumptions established above, **Table 5.3** below sets out a summary of the European sites and potential effects resulting from the Local Plan screened into the Stage 1 Screening Assessment. Those sites and impact pathways 'screened out' have not been considered further in the screening matrices in **Appendix 2**.

Table 5.3: Summary of Screening Assumptions for the Local Plan

'Screened in' – amber 'Screened out' – green

European Site	**Habitat loss/ fragmentation - within European Site**	**Habitat loss/ fragmentation - functionally linked habitat**	**Physical damage /disturbance to species**	**Disturbance: recreation and visitor pressure**	**Disturbance: urbanisation**	**Hydrological changes**	**Air Quality**
Nene Washes SPA							
Nene Washes SAC							
Ouse Washes SPA							
Ouse Washes SAC							
Fenland (Woodwalton Ramsar) SAC							
Orton Pits SAC							
The Wash SPA							
The Wash and North Norfolk Coast SAC							

5.6.2 The following table summarises the screening distances that will be used as a guide for each impact pathway described above. They are for guidance purposes only and do not imply that all sites allocated within the Local Plan, within these distances, will result in a likely significant effect on a European site.

Table 5.4: Impact Pathway Screening Distances

Impact Pathway	**Screening Distance**	**Rationale**
Physical loss, damage and/or fragmentation of habitat Physical damage/disturbance of species	No set distance – use Natural England's SSSI Impact Risk Zones and Indicative Functional Land Maps where available	Agreed approach with Natural England
Biological disturbance from introduction of invasive species	No standard distance	Use source/pathway/receptor model
Air Pollution – vehicle exhaust emissions	200m from European site	Highways Agency Guidance

Impact Pathway	Screening Distance	Rationale
Indirect disturbance from noise, vibration and/or light pollution	500m from European site supporting disturbance sensitive species	Good Practice Guidance
Hydrological changes	No standard distance	Use source/pathway/receptor model
Increased recreational pressure	Within 8km and/or in IRZ where recreational pressure has been identified by Natural England as a potential issue	Agreed approach with Natural England

5.7 Appropriate Assessment

5.7.1 Should it not be possible at Stage 1 Screening to conclude that there will be no likely significant effects on European sites as a result of the Local Plan, it will be necessary to undertake a Stage 2 Appropriate Assessment. **Table 5.5** below sets out the key steps of an Appropriate Assessment.

Table 5.5: HRA Stage 2 Appropriate Assessment Key Stages

Stage	Habitats Regulations Assessment
Stage 2 Appropriate Assessment	**Task 1 -** Explore the reasons for the European designation of screened in sites
	Task 2 - Explore the environmental conditions required to maintain the integrity of the European sites and trends in current environmental processes
	Task 3 - Gain an understanding of the Plan and its policies and consider each policy in context of the environmental processes
	Task 4 - Decide on any identified impacts and whether they would lead to an adverse effect on site integrity. Consider whether impacts are direct, indirect or cumulative
	Task 5 - Identify other plans or projects that might affect the European sites in combination with the Plan and decide whether there are any adverse effects that might not result from the Plan in isolation but will do so 'in-combination'
	Task 6 - Develop mitigation measures to avoid the effect entirely, or if not possible, to mitigate the impact sufficiently that the effect on the European site is rendered effectively inconsequential

5.7.2 The focus of the appropriate assessment, if required, will be on those impacts identified at the screening stage as likely to have a significant effect. The assessment would consider whether any of the identified impacts would lead to an adverse effect on the integrity of the qualifying features of the European site/s.

5.7.3 A site's integrity depends on it being able to sustain its 'qualifying features' (i.e. the features for which each site is significant) and to ensure their continued viability. Assessing effects on site integrity involves considering whether the predicted impacts of the Plan's policies (either alone or in-combination) have the potential to:

- Cause delays to the achievement of conservation objectives for the site;
- Interrupt progress towards the achievement of conservation objectives for the site;
- Disrupt those factors that help to maintain the favourable conditions of the site;
- Interfere with the balance, distribution and density of key species that are the indicators of favourable condition on the site;
- Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem;
- Change the dynamics of relationships that define the structure or function of the site (e.g. relationships between soil and water, or animals and plants);
- Interfere with anticipated natural changes to the site;
- Reduce the extent of key habitats or the population of key species;
- Reduce the diversity of the site;
- Result in disturbance that could affect the population, density or balance between key species;
- Result in fragmentation;
- Result in the loss of key features.

6. Stage 1 HRA Screening Assessment and Conclusions

6.1. Stage 1 Screening

6.1.1. A screening assessment has been undertaken to identify the likely significant effects of the policies and site allocations within the Local Plan on European sites. Screening matrices have been prepared to assess policies and site allocations individually and these are presented in **Appendix 2**. In accordance with the requirements of the Habitats Regulations, the in-combination effects of the policies together and with other plans, projects or programmes has been taken into consideration.

6.1.2. A summary of the results of the HRA Stage 1 Screening Assessment is provided below.

Significant Effects Unlikely

6.1.3. Significant effects on the integrity of European sites were assessed as unlikely for the majority of the general Local Plan policies, either because they would not result directly in development or they seek to protect, conserve or enhance the natural or historic environment, and/or positively steer development away from European sites. The screening assessment has resulted in the majority of policies, **46 in total**, being screened out from further HRA work (i.e. appropriate assessment). **Table 6.1** below summarises those aspects of the Local Plan that would not be likely to have a significant effect alone on a European site for the reasons given.

Significant Effects Likely

6.1.4. The screening assessment concluded that **23 policies** in the Local Plan were **likely or uncertain** to result in significant effects on a European site and has therefore been screened in for further assessment at Stage 2 Appropriate Assessment. These are summarised in **Table 6.2** below.

6.1.5. Additionally, **63 housing site allocations** and **5 employment site allocations** were considered likely or uncertain to result in significant effects and have been screened in for further assessment at Stage 2 Appropriate Assessment.

6.1.6. The potential impacts arising as a result of these site allocations are:

- Loss/fragmentation off-site supporting habitat/functionally linked land
- Physical damage/disturbance of species
- Disturbance: recreation and visitor pressure
- Urbanisation effects
- Hydrological change

6.1.7. The results of the screening assessment identified that the following European sites are potentially adversely affected by impacts arising from the Local Plan, either alone or in-combination:

- Nene Washes SPA
- Nene Washes SAC
- Ouse Washes SPA
- Ouse Washes SAC

Table 6.1: Local Plan policies 'Screened Out' from further HRA appraisal

Aspects of the plan which would not be likely to have a significant effect on a European Site alone	**Relevant Parts of the Local Plan**
General Policy Statement (N1)	• Vision • Objectives • Policy LP1: Settlement Hierarchy • Policy LP4: Securing Fenland's Future • Policy LP19: Strategic Infrastructure • Policy LP21: Public Rights of Way
Policies that would have no effect because they refer to projects not generated by the Local Plan (N2)	• Policy LP42: Whittlesey - A Market Town fit for the Future
Policies that intend to protect, conserve or enhance the natural (including biodiversity), built or historic environment (N3)	• Policy LP23: Historic Environment • Policy LP24: Natural Environment • Policy LP25: Biodiversity Net Gain • Policy LP26: Carbon Sinks and Carbon Sequestration • Policy LP27: Trees and Planting • Policy LP28: Landscape • Policy LP29: Green Infrastructure • Policy LP30: Local Green Spaces and Other Existing Open Spaces • Policy LP32: Flood and Water Management • Policy LP33: Development on Land affected by Contamination • Policy LP34: Air Quality
Policies that will not themselves lead to development or other change because it is qualitative or design criteria based, which guide development (N4)	• Policy LP5: Health and Wellbeing • Policy LP7: Design • Policy LP8: Amenity Provision • Policy LP9: Residential Annexes • Policy LP10: Shop Frontages, Security Shutters and Canopies • Policy LP11: Community Safety • Policy LP12: Meeting Housing Needs • Policy LP13: Custom and Self Build • Policy LP15: Employment • Policy LP17: Culture, Leisure, Tourism and Community Facilities • Policy LP20: Accessibility and Transport • Policy LP22: Parking Provision
Policies that make provision for change or promote development but would have no likely significant effect on a European site, because there is no physical, ecological, hydrological, chemical or biological link or pathway between	• Policy LP14: Gypsies, Travellers and Travelling Showpeople • Policy LP16: Town Centres • Policy LP35 Regeneration of Wisbech

Aspects of the plan which would not be likely to have a significant effect on a European Site alone	Relevant Parts of the Local Plan
the changes the policy may cause and the site's qualifying interests of any European site (N5)	• Policy LP36: Residential Site Allocations for Wisbech • Policy LP37: Site Allocations for Non-Residential Development in Wisbech • Policy LP40: Site Allocations for Non-Residential Development in March • Policy LP45: An aspirational Community • Policy LP47: Employment Allocations in Chatteris • Policy LP50: Residential Site Allocations in Wimblington • Policy LP55: Residential Site Allocations in Gorefield • Policy LP56: Residential Site Allocations in Leverington • Policy LP60: Residential Site Allocations in Eastrea • Policy LP63: Residential Site Allocations in Tydd St Giles • Policy LP65: Residential Site Allocations in Collett's Bridge • Policy LP66: Residential Site Allocations in Newton • Policy LP67: Employment Allocations in Newton
Policies/proposals that make provision for change/promotes development in specific areas, but would have no significant effect on a European site, because the effects are trivial or 'de minimis' (N6)	• Policy LP18: Development in the Countryside
Policies that promote development or change but where it is so general it is not known where, when or how the aspect of the Plan may be implemented or where the potential effects may occur, or which European sites, if any, may be affected (N7)	

Table 6.2: Local Plan Policies 'Screened In' for Stage 2 Appropriate Assessment

Aspects of the plan which are likely to have a significant effect on a European Site, either alone or in-combination	Relevant Parts of the Local Plan
Policy/proposal/element of the Plan with potential to have a likely significant effect and therefore subject to further assessment,	• Policy LP2: Spatial Strategy for the Location of Residential Development

Aspects of the plan which are likely to have a significant effect on a European Site, either alone or in-combination	Relevant Parts of the Local Plan
including consideration of potential mitigation measures.	• Policy LP3: Spatial Strategy for Employment Development • Policy LP6: Renewable and Low Carbon Energy Infrastructure • Policy LP38: March Community Regeneration • Policy LP39: Residential Site Allocations for March • Policy LP41: Land north of Knight's End Road and East of the A141 • Policy LP43: Residential Site Allocations in Whittlesey • Policy LP44: Site Allocations for Non-Residential Development in Whittlesey • Policy LP46: Residential Site Allocations in Chatteris • Policy LP48: Residential Site Allocations in Doddington • Policy LP49: Residential Site Allocations in Manea • Policy LP51: Residential Site Allocations in Coates • Policy LP52: Employment Allocations in Coates • Policy LP53: Residential Site Allocations in Elm • Policy LP54: Residential Site Allocations in Friday Bridge • Policy LP57: Residential Site Allocations in Parson Drove • Policy LP58: Residential Site Allocations in Wisbech St Mary • Policy LP59: Residential Site Allocations in Christchurch • Policy LP61: Residential Site Allocations in Guyhirn • Policy LP62: Residential Site Allocations in Murrow • Policy LP64: Residential Site Allocations in Coldham • Policy LP68: Residential Site Allocations in Ring's End • Policy LP69: Residential Site Allocations in Tholomas Drove

Table 6.3: Local Plan Site Allocations 'Screened In' for Stage 2 Appropriate Assessment

Aspects of the plan which are likely to have a significant effect on a European Site, either alone or in-combination
Housing Sites
• LP38 (40262) March Town Centre Opportunity Area • LP39.01 (40285) Land north of Knight's End Road and East of the A141, March • LP39.02 (40252) Land southeast of 433 Wisbech Road, March • LP39.03 (40382 (north)) Land south of Knight's End Road and West of Wimblington Road, March • LP39.04 (40382 (south)) Land West of Wimblington Road, March • LP39.05 (40190) Land to the rear of number 81, March • LP39.06 (40430) Westry Hall, March • LP39.08 (40126) Land east of Berryfield, March • LP39.09 (40315) Hereward Hall, March • LP39.10 (40446) Land west of 85 Wimblington Road, March • LP39.11 (40434) Land fronting Elm Road and south and west of Highfield House, March • LP39.12 (40194) Land Southeast of 433 Wisbech Road, March • LP39.13 (40316) Queen's Street Close Car Park, March • LP39.21 (40052) Land north of Woodville, March • LP39.23 (40077) Land North of The Green and North of 145-159 Wisbech Road, March • LP39.26 (40105) Rear of 131-137 Upwell Road, March • LP39.27 (40263) Land to the west of Hereward Hall, March • LP39.28 (40264) Land to the east of Norwood Road, March • LP39.30 (40523) 15 Station Road, March • LP39.31 (40523) 72 - 74 High Street, March • LP43.01 (40300) Land at Eastrea Road, Whittlesey • LP43.02 (40335) Land rear of 98 -112 Drybread Road, Whittlesey • LP43.03 (40012) North and South of Eastrea Road, Whittlesey • LP43.05 (40526) 158 Stonald Road, Whittlesey • LP43.07 (40528) Land West of 36 Peterborough Road, Whittlesey • LP46.01 (40211) Land south of Salisbury House, Blackmill Road, Chatteris • LP46.02 (40326) Land East of 80 The Elms, Chatteris • LP46.03 (40447) Womb Farm (North-West), Chatteris • LP46.04 (40499) Land on the west side of 92 London Road, Chatteris • LP46.05 (40288) Land Westside of Fenland Way, Chatteris • LP46.06 (40325) Land rear of 2-8 Gibside, Chatteris • LP46.09 (40072) Land West and South of 74 West Street, Chatteris • LP46.10 (40367) Womb Farm, Chatteris • LP46.11 (40384) Land south east of Chatteris, London Road, Chatteris • LP48.03 (40427) Land south of Wimblington Road, Doddington • LP48.07 (40444) 28 Wimblington Road, Doddington • LP49.01 (40223) West Field, Manea • LP49.02 (40185) Land to rear of No.15 Westfield Road, Manea • LP49.04 (40048) Lavender Mill Bungalow, Manea • LP49.06 (40522) 18 Westfield Road, Manea • LP51.01 (40265) Land north of March Road, Coates • LP51.02 (40328) Land South of 104 -178 March Road, Coates • LP51.03 (40198) Minuet Phase 2, Coates • LP51.04 (40070) Land South East of 208 Coates Road, Coates • LP53.01 (40322/40306) Land north of March Road, Elm • LP54.01 (40319) Land East of Flint Way, Friday Bridge • LP54.02 (40305) Land at Rookery Farm, Friday Bridge

Aspects of the plan which are likely to have a significant effect on a European Site, either alone or in-combination
• LP54.03 (40127) Well End, Friday Bridge • LP57.01 (40451) Land south of Brewery Close and Ingham Hall Gardens • LP57.02 (40302) Land at Swanbridge Farm, Parson Drove • LP57.03 (40504) Land east of The Silverings, 114 Main Road, Parson Drove • LP58.01 (40103) Trafford Farm, Barton Road, Wisbech St Mary • LP58.02 (40171) Land at Sunset, Station Road, Wisbech St Mary • LP58.03 (40424) Station Road next to Grantchester House, Wisbech St Mary • LP58.05 (40518) Land north of The Barn, High Road, Wisbech St Mary • LP59.01 (40463) Land north west of Syringa House, Christchurch • LP59.02 (40369) Land adjacent to the fern, Christchurch • LP59.04 (40059) CFC Disposals Ltd, Christchurch • LP61.01 (40147) Land at Gull Drove, Guyhirn • LP61.02 (40303) Land at Selwyn Lodge Farm, Guyhirn • LP61.03 (40207) Land to the rear of Neneside, Guyhirn • LP62.01 (40150) Front Road, Murrow • LP64.01 (40135) Land North of March Road, Coldham • LP68.01 (40241) 6 March Road, Ring's End • LP69.01 (40307) Land at Willock Farm, Tholomas Drove
Employment Sites
• LP44.01 (40270 (south)) Land to the southwest of the proposed realignment of the A605 at Kings Dyke, Whittlesey • LP44.02 (40270 (north)) Churchfield Farm, Kings Dyke, Whittlesey • LP44.04 (40502) Vacant site, Kings Dyke, Whittlesey • LP52.01 (40321) Land East of Ben Burgess, Coates
Wind Turbine Allocations
• LP06.01 (40468) Coldham Wind Farm, Elm • LP06.02 (40469) Land adjacent to Graysmoor Drove, Elm

Table 6.4: Summary of Screening Assessment

European Site	Loss/ fragmentation of habitat (functionally linked habitat)	Physical damage and/or disturbance to species	Disturbance: recreation and visitor pressure	Hydrological changes	Atmospheric pollution	Disturbance: urbanisation
Nene Washes SPA	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE
Nene Washes SAC	No LSE	No LSE		Potential LSE	Potential LSE	
Ouse Washes SPA	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE
Ouse Washes SAC		No LSE		Potential LSE	Potential LSE	
Orton Pits SAC			No LSE			
The Wash SPA				No LSE		
The Wash and North Norfolk Coast SAC				No LSE		

7. Stage 2 Appropriate Assessment

7.1 Introduction

7.1.1 Following the screening stage, if likely significant effects on European sites are unable to be ruled out, the competent authority is required to make an 'Appropriate Assessment' of the implications of the plan for European sites, in view of their conservation objectives. The appropriate assessment should consider the impacts of the plan (either alone or in combination with other projects or plans) on the integrity of European sites with respect to their conservation objectives and to their structure and function. A site's integrity depends on it being able to sustain its 'qualifying features' (i.e., those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated) and to ensure their continued viability.

7.1.2 Based on the information gathered for the screening process and considering the Habitats Regulations requirement for a precautionary approach, it has been determined that an Appropriate Assessment is required for the policies and sites in the Local Plan as set out in **Paras 6.1.4** to **6.1.5, Table 6.2** and **Table 6.3** in **Section 6**.

7.1.3 The following section presents the Appropriate Assessment of the Fenland Local Plan (August 2022). The Appropriate Assessment should be revisited in the light of any significant changes to the Local Plan as it progresses through the plan making process.

7.1.4 The consideration and assessment of potential effects was informed by the information provided by the European site characterisation (**Appendix 1**), the Plans and Projects Review (**Appendix 3**) and the additional information provided through the Scoping work (Task 1 of the Appropriate Assessment).

7.2. Loss and/or fragmentation of supporting habitat/functionally linked habitat

Introduction

7.2.1. The Local Plan proposes development in areas where qualifying SPA and Ramsar bird species may make use of offsite habitat for foraging, roosting and loafing.

7.2.2. Screening identified the following European Sites potentially at risk of adverse effects as a result of loss and/or fragmentation of supporting habitat/functionally linked habitat:

- Nene Washes SPA and Ramsar
- Ouse Washes SPA and Ramsar

7.2.3. Bewick's swan is a migratory bird species that comes to the UK from Siberia each winter. The Nene Washes has one of the largest concentrations of Bewick's Swan in the UK. The site supported 1,300 individuals at notification, more than 7% of the north-west European wintering population. Numbers of Bewick's swans on the Nene Washes have held up well in comparison with the national trend. In recent decades, this species has increasingly taken to foraging on agricultural land, selecting certain field types for foraging, including open grassland and arable stubble fields, so their field usage varies from year to year. Bewick's Swan tends to feed by day and return to wetland areas to roost overnight. They are known to travel up to 30km between roosting and foraging sites. The SPA description states that "*In winter, some wildfowl, especially Bewick's Swan Cygnus columbianus bewickii, feed in surrounding areas of agricultural land outside the SPA*." Natural England[25] has set a target to restore the size of the non-breeding Bewick's Swan population above 1,300 individuals: "*This will sustain the site's population and contribute to a viable local, national and bio-geographic population*". However, the advice goes in to acknowledge that "*Since the SPA was notified there has been a substantial decline in the numbers of Bewick's swans travelling to Britain, probably because milder winters in Europe provide suitable conditions closer to breeding grounds. If the climate trend continues, numbers on the Nene Washes are unlikely to recover*."

7.2.4. For Bewick's Swan, the Ouse Washes supported 4,980 individuals at notification, 29% of the north-west European wintering population. Numbers of Berwick's Swans have increased at the Ouse Washes since the 1940s, when only a small number of birds wintered there, and have held up well in comparison with the national international trends. Natural England[26] has set a target to restore the size of the non-breeding Bewick's Swan population at a level which is above an average of 4,980 individuals. The advice goes on to say "…*restoration is unlikely without off-site changes*". According to the supplementary advice, Bewick's swans roost on the Ouse Washes at night but forage mainly on the surrounding agricultural land during the day and may travel considerable distances. The arable land is an important source of food.

7.2.5. For Whooper Swan, the site supported 590 individuals at notification, 3% of the British population. The Ouse Washes is the main wintering area for Whooper Swans in Britain, supporting around 17.2% of the national population.[27] Natural England has set a target to restore the size of the non-breeding Whooper Swan population at a level which is above

[25] Natural England (2019) Nene Washes SPA European Site Conservation Objectives: Supplementary Advice on conserving and restoring site features
[26] Natural England (2019) Ouse Washes SPA European Site Conservation Objectives: Supplementary Advice on conserving and restoring site features
[27] https://hub.jncc.gov.uk/assets/3634580a-cabc-4218-872f-8660a1760ad8

an average of 590 individuals. The supplementary advice for the SPA states that whooper swans, like Bewick's swans, tend to feed on nearby agricultural land during the day and roost on the washes at night and may also travel considerable distances.

7.2.6. The British Trust for Ornithology (BTO) calculate and provide Wetland Bird Survey Data (WeBS) [28]. Counts of swans at the Nene Washes and Ouse Washes are shown in **Table 7.1** and **Table 7.2** below. These figures may include numbers in surrounding areas of intensively managed farmland outside the SPA boundary.

Table 7.1: Data on the presence of swans at the Nene Washes SPA and Ramsar

Species	Count Month	2015/16	2016/17	2017/18	2018/19	2019/20	5 year average
Bewick's Swan	Jan	26	347	215	148	147	259
Whooper Swan	Dec	930	916	1,522	1,679	3,027	1,615
Mute Swan*	Feb	146	110	135	168	138	139

*Not an individual qualifying feature but included in qualifying assemblage for Ramsar designation

Table 7.2: Data on the presence of swans at the Ouse Washes SPA and Ramsar

Species	Count Month	2015/16	2016/17	2017/18	2018/19	2019/20	5 year average
Bewick's Swan	Jan	1,445	2,997	1,085	1,140	169	1,367
Whooper Swan	Nov	8,016	7,663	6,321	11,177	5,389	7,713
Mute Swan*	Nov	377	384	287	304	203	311

* Not an individual qualifying feature but included in qualifying assemblage of breeding waders and wildfowl and also likely to feed on nearby arable fields during the day.

7.2.7. There is some interchange between birds at the Nene Washes and those at the nearby Ouse Washes, as confirmed by the designation citation for the Nene Washes SSSI:

"*The washlands are used for the seasonal uptake of floodwaters and, traditionally, for cattle grazing in the summer months. The mosaic of rough grassland and wet pasture provide a variety of sward structure and herbs of importance respectively for bird nesting habitat and feeding. Additional winter feeding is provided by remains of arable cropping on small areas. These washlands play an additional role in relation to the nearby Ouse Washes in that they accommodate wildfowl populations displaced from the Ouse Washes when deep floodwaters prevent their feeding.*

The site is favoured by large numbers of wintering wildfowl and particularly the dabbling ducks wigeon Anas penelope, teal Anas crecca, pintail A. acuta and Bewick's swan Cygnus bewickii. Wetland birds such as snipe Gallinago gallinago and redshank Tringa totanus regularly breed and during passage periods there is often a large movement of waders and raptors through the area."

7.2.8. The Ouse Washes was also designated for its waterbird assemblage comprising of a very large number of birds. The site's ability to support and sustain this assemblage is reliant on the overall quality and diversity of the habitats that support them. The feeding and

[28] https://app.bto.org/webs-reporting/numbers.jsp

roosting habitats which support the assemblage occur within and outside of the SPA boundary. Offsite arable land is listed in the supplementary advice for the SPA as habitat likely to be important for the waterbird assemblage, as well as shallow waterbodies, waterbodies larger than 10ha and short sward wet grassland.

Assessment of Effects

7.2.9. Stage 1 Screening identified that the Nene Washes SPA and Ramsar is *potentially* at risk from physical loss or damage of *off-site* functionally linked habitat as a result of the following policies and site allocations:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development
- Policy LP6: Renewable and Low Carbon Energy Infrastructure
- LP43.01 (40300) Land at Eastrea Road, Whittlesey
- LP43.05 (40526) 158 Stonald Road, Whittlesey
- LP51.01 (40265) Land north of March Road, Coates
- LP51.02 (40328) Land South of 104 -178 March Road, Coates
- LP51.03 (40198) Minuet Phase 2, Coates
- LP51.04 (40070) Land South East of 208 Coates Road, Coates
- LP52.01 (40321) Land East of Ben Burgess, Coates
- LP06.01 (40468) Coldham Wind Farm, Elm
- LP06.02 (40469) Land adjacent to Graysmoor Drove, Elm

7.2.10. Stage 1 Screening identified that the Ouse Washes SPA and Ramsar is *potentially* at risk from physical loss or damage of *off-site* functionally linked habitat as a result of the following policies and site allocations:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development
- LP46.11 (40384) Land south east of Chatteris, London Road, Chatteris
- LP49.01 (40223) West Field, Manea
- LP49.02 (40185) Land to rear of No.15 Westfield Road, Manea
- LP59.01 (40463) Land north west of Syringa House, Christchurch
- LP59.02 (40369) Land adjacent to the fern, Christchurch

7.2.11. Natural England's SSSI Impact Risk Zones (IRZs) are a GIS based tool that can be used to identify potential risk posed by development proposals to SSSIs, SACs, SPAs and Ramsar sites. The tool identifies zones around each designated site, which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposals that could have adverse impacts.

7.2.12. Natural England has updated the IRZs to identify land potentially functionally linked to the Nene Washes SPA and Ouse Washes SPA. These areas, identified through a BTO research project, are regularly used by SPA qualifying bird species, particularly Whooper and Berwick's Swans. A map of the Goose and Swan Functional Land IRZs is shown in **Figure 7.1** and **Figure 7.2**.

7.2.13. The following paragraphs will assess the above mentioned site allocations to determine whether a site is functionally linked to the SPA. A desk-based study has been undertaken to identify potential impacts from the site allocations on offsite habitat used by the

qualifying bird species of the Nene Washes and Ouse Washes. The desk-based study included the following considerations:

- Identification of and ruling out the qualifying bird species unlikely to use the habitat types located within the site allocations;
- A review of aerial photography and Magic Map application[29] information submitted on potential site allocations (for example, Phase 1 habitat surveys) to identify the main habitat types within each site allocation and establish their potential suitability as habitat for SPA bird species;
- A review of the site's location within flood risk zones (because many of the SPA bird species favour sites which do or do not flood);
- Identification of any factors likely to impact on the suitability of the site allocation for functionally linked habitat:
  - Site size, shape and openness: allocations below 2ha in size or are narrow in shape are unlikely to provide sufficient resources to support 1% of the qualifying population of a species (i.e. a significant population
  - Proximity to potential sources of disturbance: sites in a highly urbanised context are less likely to be suitable
  - Tree and hedgerow cover: enclosed sites with tall boundary features increase risk of predation
  - Flight/site lines: some SPA species, including swans and wigeon, are known to favour large areas of open terrain largely free of obstructions to facilitate movement between the SPA and any off-site supporting habitat.

7.2.14. Where the initial desk-based study concluded a site's potential suitability for qualifying bird species was unlikely, no further investigations for that site allocation were carried out. If a site was found to be potentially suitable, a more detailed assessment was undertaken using available bird records.

Table 7.3 Summary of the qualifying species of the Nene Washes SPA and Ouse Washes SPA and their likelihood of using functionally linked land.

European site	**Qualifying species**	**Habitat preferences**[30] [31] [32]	**Susceptible to loss of habitat types found in Local Plan allocations?**
Nene Washes SPA	Bewick's swan	In winter the species traditionally occupies shallow tidal waters, coastal lagoons, inland freshwater lakes and marshes and flooded pastures. Increasingly, the Northwest European population is feeding on arable land during the winter, particularly on stubble fields (in autumn), winter	**Yes – may utilise arable fields and pasture for foraging**

[29] Such as the Living England Habitat Map
[30] BirdLife Data Zone
[31] Birds A- Z | Bird Guides - The RSPB
[32] Home - Swan Specialist Group (swansg.org)

European site	Qualifying species	Habitat preferences[30] [31] [32]	Susceptible to loss of habitat types found in Local Plan allocations?
		cereals, and the post-harvest remains of potato and sugar-beet crops, with maize fields also increasingly used in recent years.	
	Eurasian wigeon	In the non-breeding season this species shows a preference for coastal salt-marshes, freshwater, brackish and saline lagoons, flooded grasslands, estuaries, intertidal mudflats, and other sheltered marine habitats. Supporting feeding habitat may be provided by agricultural land outside of the SPA boundary.	**Yes – may utilise agricultural land for foraging**
	Gadwall	The species inhabits highly productive and eutrophic freshwater marsh or lake habitats in open lowland grassland, showing a preference for sheltered, shallow, standing or slow-flowing waters with abundant emergent vegetation and grass-covered islands providing cover for nesting. It may also be found on permanent, shallow, slightly alkaline marshes, as well as on oxbow lakes, channels reservoirs and gravel-pits. Supporting feeding habitat may be provided by land outside of the SPA boundary.	**Yes – may utilise supporting feeding habitat outside of the SPA boundary**

European site	Qualifying species	Habitat preferences[30] [31] [32]	Susceptible to loss of habitat types found in Local Plan allocations?
	Eurasian teal	In winter, birds congregate in low-lying wetlands, both coastal and inland. May feed on seeds of grains that remain in the fields.	**Yes – may utilise arable fields**
	Northern pintail	Wetland habitats include shallow freshwater marshes, small marshy lakes, slow-flowing rivers, wet meadows and flood-plains, especially favouring ponds with low, dense marginal vegetation and wetlands interspersed with brushy thickets or copses. During the winter, it also frequents large inland lakes, brackish coastal lagoons, brackish and saline marshes, shallow fresh or brackish estuaries, tidal flats and river deltas with adjacent agricultural land (e.g. stubble fields) and scattered impoundments.	**Yes – may utilise arable fields**
	Garganey	In the breeding season this species frequents small, shallow ponds and lakes with abundant floating, emergent and fringing vegetation (that is not too tall or dense, such as bulrush - Typha spp.), in grass dominated environments, like swampy meadows, flooded fields, shallow freshwater marshes. Meadows are the favoured nesting areas of this species,	No – habitat types affected by site allocations are of low importance for this species.

European site	Qualifying species	Habitat preferences[30] [31] [32]	Susceptible to loss of habitat types found in Local Plan allocations?
		with nests rarely located more than 150 m from water.	
	Northern shoveler	Inhabits permanent shallow freshwater wetlands, preferred sites being those surrounded by dense stands of reeds or other emergent vegetation whilst being free of overhanging trees or fringing forest. Suitable habitats include well-vegetated lakes and marshes and with muddy shores and substrates in open country (e.g. grasslands). Usually, the species nests close to water but if grass cover is unavailable in the wetland site it may also nest far away from water under bushes, in hayfields or in meadows.	No – habitat types affected by site allocations are of low importance for this species.
	Black-tailed godwit	During breeding, typically favours marshy hummocky moorland but changes in land management have created new habitat and poorly drained pastures, damp heaths free of scrub, or border of reedy wetland are of primary importance. But other grasslands managed as meadows, especially when grazed and hay-cut and flooded in winter are also used.	No – habitat types affected by site allocations are of low importance for this species.
Ouse Washes SPA	Bewick's swan	In winter the species traditionally occupies shallow tidal waters, coastal lagoons,	**Yes – may utilise arable fields and pasture for foraging**

European site	Qualifying species	Habitat preferences[30] [31] [32]	Susceptible to loss of habitat types found in Local Plan allocations?
		inland freshwater lakes and marshes and flooded pastures. Increasingly, the Northwest European population is feeding on arable land during the winter, particularly on stubble fields (in autumn), winter cereals, and the post-harvest remains of potato and sugar-beet crops, with maize fields also increasingly used in recent years.	
	Whooper swan	On migration the species frequents lakes, estuaries and sheltered coasts. It traditionally winters on freshwater lakes and marshes, floodlands, brackish lagoons and coastal bays, although low-lying coastal agricultural land and wet pastures are now used increasingly.	**Yes – may utilise arable fields and pasture for foraging**
	Eurasian wigeon	In the non-breeding season this species shows a preference for coastal saltmarshes, freshwater, brackish and saline lagoons, flooded grasslands, estuaries, intertidal mudflats, and other sheltered marine habitats.	**Yes – may utilise pasture where regular flooding occurs.**
	Gadwall	The species inhabits highly productive and eutrophic freshwater marsh or lake habitats in open lowland grassland, showing a preference for sheltered, shallow, standing or slow-flowing waters with	**Yes – may utilise supporting feeding habitat outside of the SPA boundary**

European site	Qualifying species	Habitat preferences[30] [31] [32]	Susceptible to loss of habitat types found in Local Plan allocations?
		abundant emergent vegetation and grass-covered islands providing cover for nesting. It may also be found on permanent, shallow, slightly alkaline marshes, as well as on oxbow lakes, channels reservoirs and gravel-pits.	
	Eurasian teal	In winter, birds congregate in low-lying wetlands, both coastal and inland. May feed on seeds of grains that remain in the fields.	**Yes – may arable fields**
	Mallard	The species occurs in almost every wetland type. It requires water less than 1 m deep for foraging and shows a preference for freshwater habitats. Habitats commonly frequented include flooded swampy woodlands, seasonal floodlands, wet grassy swamps and meadows, oxbow lakes, open waters with mudflats, banks or spits, irrigation networks, reservoirs, ornamental waters, canals and sewage farms.	**Yes – may use flooded fields**
	Garganey	In the breeding season this species frequents small, shallow ponds and lakes with abundant floating, emergent and fringing vegetation (that is not too tall or dense, such as bulrush - Typha spp.), in grass dominated environments, like	No – habitat types affected by site allocations are of low importance for this species.

European site	Qualifying species	Habitat preferences[30] [31] [32]	Susceptible to loss of habitat types found in Local Plan allocations?
		swampy meadows, flooded fields, shallow freshwater marshes. Meadows are the favoured nesting areas of this species, with nests rarely located more than 150 m from water.	
	Northern shoveler	Inhabits permanent shallow freshwater wetlands, preferred sites being those surrounded by dense stands of reeds or other emergent vegetation whilst being free of overhanging trees or fringing forest. Suitable habitats include well-vegetated lakes and marshes and with muddy shores and substrates in open country (e.g. grasslands). Usually, the species nests close to water but if grass cover is unavailable in the wetland site it may also nest far away from water under bushes, in hayfields or in meadows.	**Yes – may utilise arable and pasture.**
	Hen harrier	The hen harrier lives in open areas with low vegetation. In winter they move to lowland farmland, heathland, coastal marshes, fenland and river valleys.	**Yes – may utilise arable fields and pasture**
	Ruff	Preference for muddy margins of lakes, pools, ponds, rivers and other watercourses, irrigated levels, flood lands, and marshes; less frequently	**Yes – may utilise arable fields and pasture**

European site	Qualifying species	Habitat preferences[30] [31] [32]	Susceptible to loss of habitat types found in Local Plan allocations?
		seashores and tidal mudflats. May also use dry grasslands, harvested cornfields, airfields, and dried beds of seasonal water bodies.	
	Black-tailed godwit	During breeding, typically favours marshy hummocky moorland but changes in land management have created new habitat and poorly drained pastures, damp heaths free of scrub, or border of reedy wetland are of primary importance. But other grasslands managed as meadows, especially when grazed and hay-cut and flooded in winter are also used.	No – habitat types affected by site allocations are of low importance for this species.

7.2.14. **Table 7.3** above has identified that the following qualifying bird species of the Nene Washes SPA and Ouse Washes SPA may be susceptible to the loss and/or fragmentation of offsite habitat to be found within the site allocations:

- Gadwall
- Bewick's swan
- Whooper swan
- Eurasian wigeon
- Eurasian teal
- Northern pintail
- Mallard
- Northern shoveler
- Hen harrier
- Ruff

Housing and employment site allocations

7.2.15. **Table 7.4** below provides an assessment of each individual site allocation for housing and employment screened in for Appropriate Assessment.

Figure 7.1: Indicative Goose and Swan Functional Land IRZ for Nene Washes

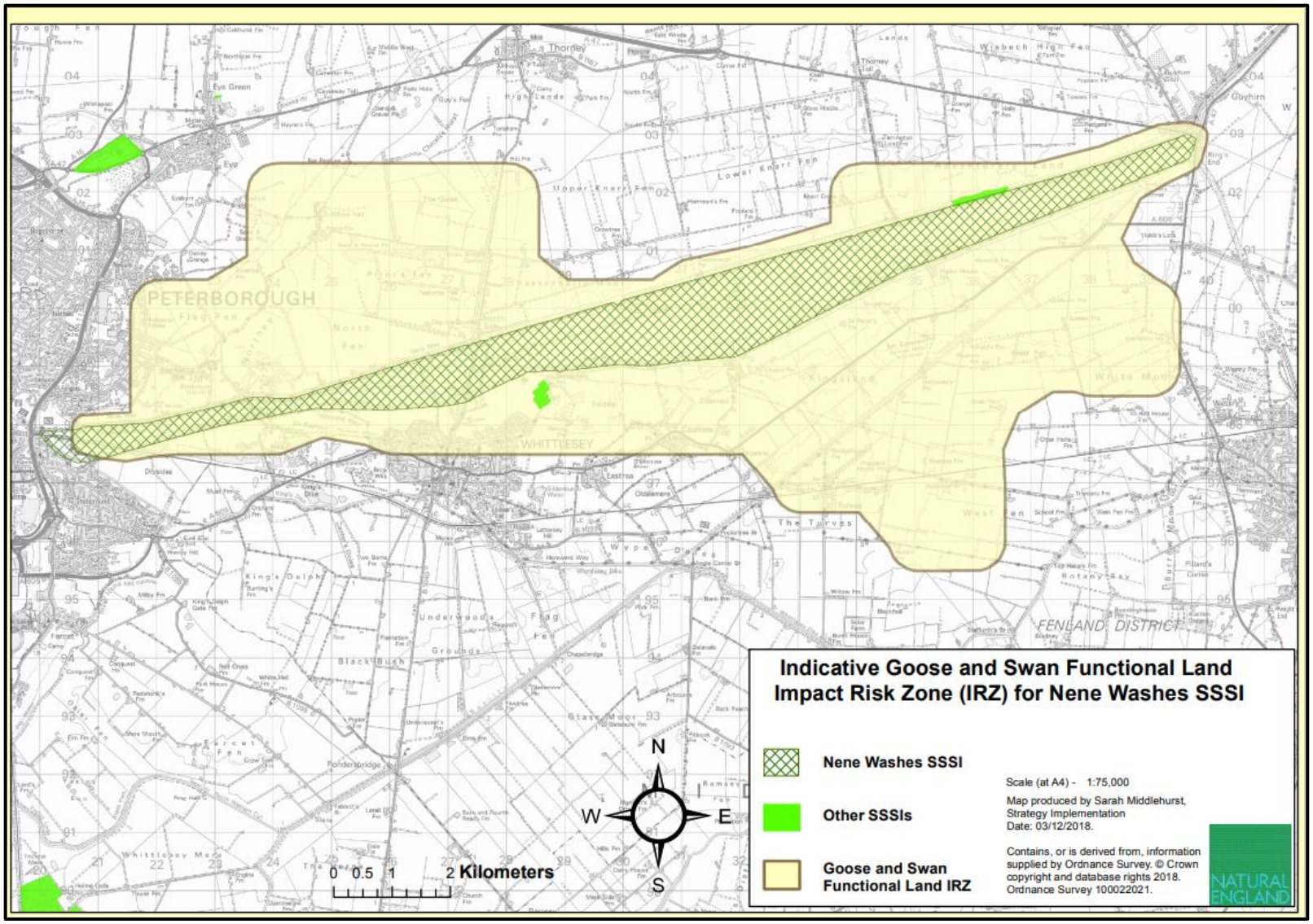


Figure 7.2: Indicative Goose and Swan Functional Land IRZ for Ouse Washes

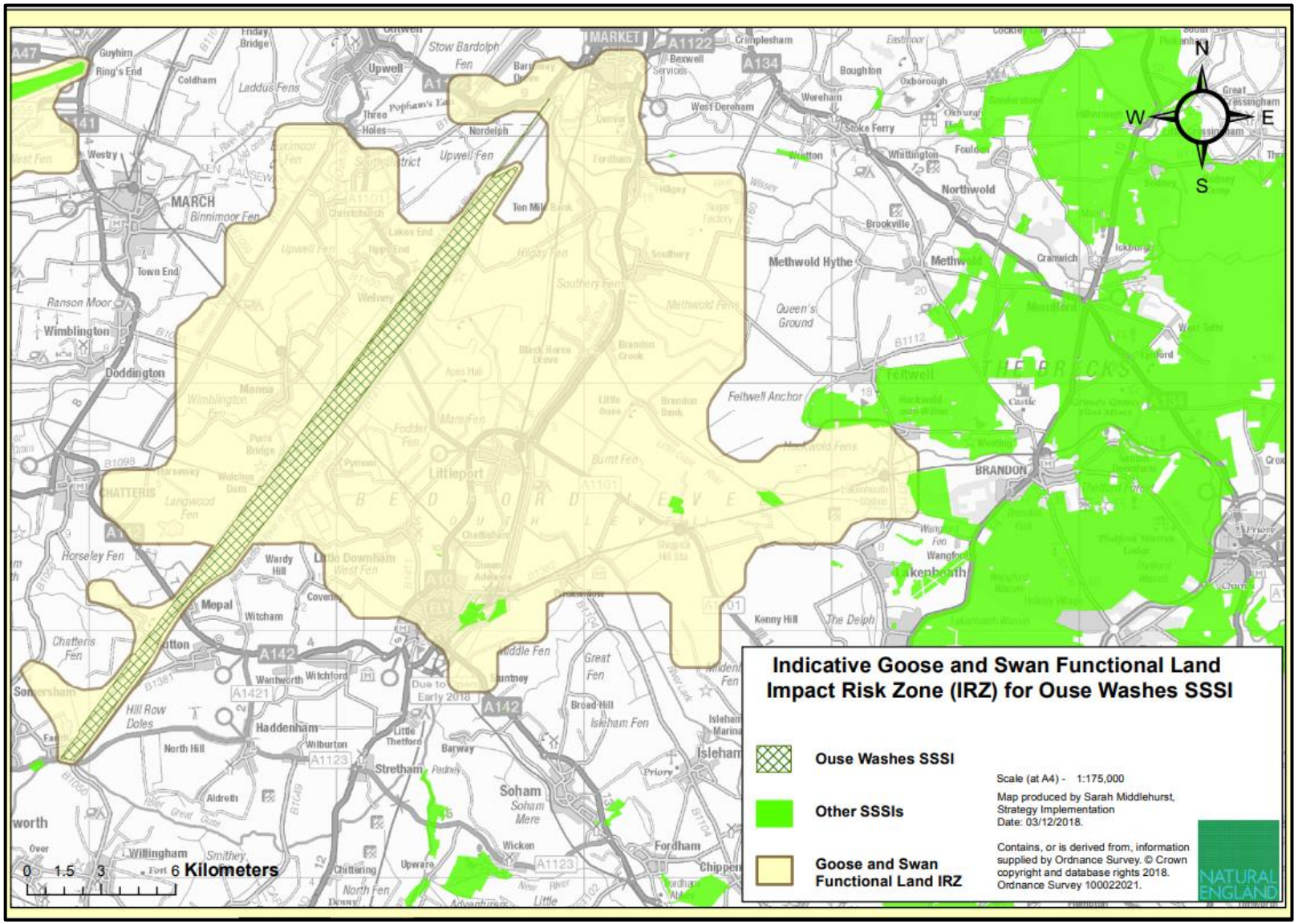


Table 7.4: Assessment of the likely suitability of habitat within housing and employment site allocations

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
LP43.01 Land at Eastrea Road, Whittlesey	7.26	Nene Washes SPA 1.67km	Greenfield; agricultural use (arable)	Arable fields and row of 5 houses beyond A605 to the north. Fenland Aquapark to the south. Residential site under construction to the west. Agricultural land (arable) fields and small employment site to the east.	No	• The site falls within the Nene Washes SSSI IRZ but outside of the Goose & Swan Functional Land IRZ. • The site is located relatively close to the Nene Washes SPA (<2km). • Habitats within the site comprises arable fields. • Relatively unobstructed flightline to the Nene Washes to the north. • Surrounding land uses, such as the aqua park and residential development to the west, increase the likelihood of human disturbance. • Hedgerows and trees on the northern, eastern and southern boundaries increase the risk of predation. • There is a public footpath along part of the eastern boundary of the site,

[33] Defra Magic Map

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
						increasing the likelihood of human disturbance. • Site is located outside of flood zone 2 and 3.
LP43.05 158 Stonald Road, Whittlesey	1.33	Nene Washes SPA 0.23km	Mixed brownfield/greenfield	Residential development to the south, east and west. Agricultural land to the north.	Yes	• The site lies within the Nene Washes SSSI IRZ and wholly within the Nene Washes Goose & Swan Functional Land IRZ. • The site is located relatively close to the Nene Washes SPA (<1km). • The site is below 2ha in size and therefore unlikely to provide sufficient space and resources to support a significant qualifying population of the Nene Washes SPA. • The site is long, narrow and enclosed, with residential development adjacent to the south and along the eastern and western boundaries, increasing the likelihood of human disturbance.

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
						• Unobstructed flightline to the Nene Washes to the north.
LP51.01 Land north of March Road, Coates	10.83	Nene Washes SPA 1.07km	Greenfield; agricultural use (arable)	Agricultural land (arable) to the north/north east and west. Residential to the south. Small employment site to the east.	Yes	• The site lies within the Nene Washes SSSI IRZ and wholly within the Nene Washes Goose & Swan Functional Land IRZ. • The site is located relatively close to the Nene Washes SPA (<2km). • The site is large and open. • Habitats within the site comprises arable fields. • Well-connected to other areas of potentially suitable habitat to the north. • Site is located outside of flood zone 2 and 3. • Unobstructed flightline to the Nene Washes to the north.
LP51.02 Land South of 104 -178 March Road, Coates	6.15	Nene Washes SPA 1.41km	Greenfield; grassland	Residential to the north, west and south west.	Partly	• The site lies within the Nene Washes SSSI IRZ and the northern half of the site lies within the Nene

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
				Agricultural land (arable) to the south east and east.		Washes Goose & Swan Functional Land IRZ. • The site is located relatively close to the Nene Washes SPA (<2km). • Flightline to the Nene Washes is obstructed by development to the north. • Hedgerow and trees to southern boundary increase risk of predation. • Residential development adjacent to the site to the north and west increase likelihood of human disturbance. • Whittlesey Public Footpath No.22 crosses through the site increasing likelihood of human disturbance. • Site is predominantly located outside of flood zone 2 and 3.
LP51.03 Minuet Phase 2, Coates	1.35	Nene Washes SPA 1.56km	Greenfield; grassland	Residential to the north and east. Agricultural land (arable) to the	No	• The site falls within the Nene Washes SSSI IRZ but outside of the Goose & Swan Functional Land IRZ.

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
				south, south west.		• The site is located relatively close to the Nene Washes SPA (<2km). • The site is below 2ha in size and therefore unlikely to provide sufficient space and resources to support a significant qualifying population of the Nene Washes SPA. • Flightline to the Nene Washes is obstructed by development to the north. • Hedgerow to 3 out of 4 site boundaries increases risk of predation. • Residential development adjacent to the site to the north and east increases likelihood of human disturbance.
LP51.04 Land South East of 208 Coates Road, Coates	2.73	Nene Washes SPA 1.37km	Greenfield; agricultural (arable) and grassland	Residential to the north. Agricultural land (arable) to the east and south.	Partly	• The site lies within the Nene Washes SSSI IRZ and the northern half of the site lies within the Nene Washes Goose & Swan Functional Land IRZ.

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
				Pasture to the west.		• The site is located relatively close to the Nene Washes SPA (<2km). • Habitats within the site comprises arable fields and grassland. • Flightline to the Nene Washes is obstructed by development to the north. • Site is located outside of flood zone 2 and 3.
LP52.01 Land East of Ben Burgess, Coates	4.78	Nene Washes SPA 1.29km	Greenfield; agricultural (arable)	Employment to the north, south east and west. Agricultural land (arable) to the east and south west beyond March Road.	Yes	• The site lies within the Nene Washes SSSI IRZ and wholly within the Nene Washes Goose & Swan Functional Land IRZ. • The site is located relatively close to the Nene Washes SPA (<2km). • Habitats within the site comprises arable fields. • Employment development adjacent to the site increases likelihood of human disturbance. • Site is predominantly located outside of flood zone 2 and 3.

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
LP46.11 Land south east of Chatteris, London Road, Chatteris	67.78	Ouse Washes SPA 4.49km	Greenfield; agricultural (arable)	Residential, school and associated playing fields to the north Residential to the west. Agricultural land (arable) and cricket club to the east. Agricultural land (arable) to the south	No	• The site falls within the Ouse Washes SSSI IRZ but outside of the Goose & Swan Functional Land IRZ. • Habitats within the site comprises arable fields. • The site is large enough to support a 'significant population' of SPA species. • Site is located outside of flood zone 2 and 3. • Recreational uses to the north and east increase likelihood of human disturbance.
LP49.01 West Field, Manea	4.25	Ouse Washes SPA 1.56km	Greenfield; agricultural (arable)	Residential beyond West Field Road to the north, residential to the east and west. Agricultural land to the south.	Yes	• The site lies within the Ouse Washes SSSI IRZ and wholly within the Ouse Washes Goose & Swan Functional Land IRZ. • Habitats within the site comprises arable fields. • The site is located relatively close to the Ouse Washes SPA (<2km). • Site is located outside of flood zone 2 and 3.

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
						• Residential development to the north, east and west and a public footpath along the eastern boundary of the site increases likelihood of human disturbance. • Unobstructed flightline to the Ouse Washes to the east.
LP49.02 Land to rear of No.15 Westfield Road, Manea	0.65	Ouse Washes SPA 1.44km	Greenfield; grassland	Residential to the north, east and west. Agricultural land (arable) to the south.	Yes	• The site lies within the Ouse Washes SSSI IRZ and wholly within the Ouse Washes Goose & Swan Functional Land IRZ. • The site is below 2ha in size and therefore unlikely to provide sufficient space and resources to support a significant qualifying population of the Ouse Washes SPA. • Hedgerow to western boundary increases risk of predation. • Site is located outside of flood zone 2 and 3. • Residential development to the north, east and west

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
						increases likelihood of human disturbance.
LP59.01 Land north west of Syringa House, Christchurch	0.81	Ouse Washes SPA 4.96Km	Greenfield; agricultural (arable)		Yes	• The site lies within the Ouse Washes SSSI IRZ and wholly within the Ouse Washes Goose & Swan Functional Land IRZ. • The site is below 2ha in size and therefore unlikely to provide sufficient space and resources to support a significant qualifying population of the Ouse Washes SPA. • An enclosed site with hedgerows and trees to all site boundaries, increasing risk of predation. • Residential development to the south and east and a primary school to the north, increases likelihood of human disturbance. • Site is located outside of flood zone 2 and 3. • Flightline to the Ouse Washes is obstructed by development.

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[33]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
LP59.02 Land adjacent to the fern, Christchurch	0.29	Ouse Washes SPA 4.87km	Greenfield; paddock	Residential to the south and east. Agricultural land (arable) to west. Paddocks to the north.	Yes	• The site lies within the Ouse Washes SSSI IRZ and wholly within the Ouse Washes Goose & Swan Functional Land IRZ. • The site is below 2ha in size and therefore unlikely to provide sufficient space and resources to support a significant qualifying population of the Ouse Washes SPA. • Residential development to the south and east increases likelihood of human disturbance. • Site is located outside of flood zone 2 and 3. • Flightline to the Ouse Washes is obstructed by development.

7.2.16. The assessment of housing and employment allocations in **Table 7.4** above indicates that the following sites have potential to contain functionally linked habitat suitable for SPA bird species:

- LP52.01 Land East of Ben Burgess, Coates
- LP51.04 Land South East of 208 Coates Road, Coates
- LP51.01 Land north of March Road, Coates
- LP46.11 Land south east of Chatteris, London Road, Chatteris
- LP49.01 West Field, Manea

7.2.17. The remaining housing site allocations not listed above were considered to have low potential to support the SPA qualifying bird species. Site allocations **LP51.03**, **LP49.02**, **LP59.01** and **LP59.02** are all located within the indicative Goose and Swan Functional Land IRZ; however, they are all small sites (below 2ha) which makes them unlikely to contain suitable habitat which would attract significant numbers of SPA birds. ***Significant effects for these sites can therefore be ruled out***.

7.2.18. Site allocation **LP51.02** is partly located within the indicative Goose and Swan Functional Land IRZ, however the suitability of the site is compromised by a public footpath crossing through the site and surrounding development which increases the likelihood of human disturbance. A hedgerow and trees to the southern boundary increases the risk of predation and the flightline to the Nene Washes is obstructed by development to the north. ***On this basis, site LP51.02 can be ruled out for significant effects***.

7.2.19. **Table 7.4** identified site allocation **LP46.11** as having potential to contain habitat suitable for SPA bird species. It is located adjacent to the indicative Goose and Swan Functional Land IRZ and contains arable fields; potentially suitable habitat for SPA bird species. The site has outline planning permission for a mixed-use development comprising residential development up to 1,000 dwellings, employment, local centre, primary school, playing fields and open space[34]. In their response to the planning application, Natural England considered that the proposals were unlikely to result in significant impacts on designated sites.

7.2.20. **Table 7.4** identified site allocation **LP51.04** as having potential to contain habitat suitable for SPA bird species. The site is located wholly within the indicative Goose and Swan Functional Land IRZ and contains arable fields and grassland; potentially suitable habitat for SPA bird species. The site has outline planning permission for 60 residential dwellings. In their response to the planning application, Natural England considered that the proposals were not likely to have a significant effect on the interest features of the Nene Washes SAC, SPA and Ramsar and advised that an Appropriate Assessment was not required to assess the implications of the proposal on the site's conservation objectives. It is therefore considered that the issue of loss of functional land has been appropriately explored and considered through the planning process for both sites LP46.11 and LP51.04. ***On this basis, sites LP46.11 and LP51.04 can be ruled out for significant effects***.

7.2.21. The remaining site allocations identified as having potential to contain habitat suitable for SPA bird species (**LP52.01**, **LP51.01** and **LP49.01**) do not benefit from planning permission. All 3 sites are located wholly within the indicative Goose and Swan Functional Land IRZ for either the Nene Washes or Ouse Washes. The results of a search of the

[34] F/YR10/0804/O

National Biodiversity Network Atlas[35] for SPA bird species records is presented in **Table 7.5**. The results indicate the presence of qualifying SPA bird species, indicating there is potential for LP52.01, LP51.01 and LP49.01 to be functionally linked to the Nene Washes SPA or Ouse Washes SPA. ***Without mitigation, there is a risk of adverse effects on the qualifying species of these SPA sites resulting from these site allocations.***

Table 7.5: National Biodiversity Network Atlas SPA bird species records for site allocations LP52.01, LP51.01 and LP49.01

Settlement	**Site allocation ref. and name**	**SPA qualifying bird species recorded within 1km radius of the centre of the site allocation (number of records in brackets)**
Manea	LP49.01 West Field	Ouse Washes SPA/Ramsar Qualifying individual species: • Whooper Swan (10) • Mallard (2) Waterbird assemblage: • Cormorant (1) • Mute swan (10) • Tufted duck (2) • Coot (4) Breeding bird assemblage: • Lapwing • Mute swan (10) • Mallard (2) • Tufted duck (2) • Moorhen (5) • Coot (4)
Coates	LP51.01 Land north of March Road, Coates	Nene Washes SPA/Ramsar Qualifying individual species: • Teal (38) • Gadwall (27) Waterbird assemblage: • Mute swan (115) • Whooper swan (39) • Mallard (105) • Tufted duck (54) • Coot (52) • Shelduck (50) Breeding bird assemblage: • Mute swan (115)

[35] https://species.nbnatlas.org/

Settlement	Site allocation ref. and name	SPA qualifying bird species recorded within 1km radius of the centre of the site allocation (number of records in brackets)
		• Sedge warbler (15) • Snipe (21) • Lapwing (91) • Yellow wagtail (15) • Redshank (32) Raptors • Marsh harrier (64) • Sparrowhawk (37) • Barn owl (32)
Coates	LP52.01 Land East of Ben Burgess, Coates	Nene Washes SPA/Ramsar Qualifying individual species: • Teal (40) • Gadwall (33) Waterbird assemblage: • Mute swan (117) • Whooper swan (47) • Mallard (111) • Coot (58) • Shelduck (52) Breeding bird assemblage: • Mute swan (117) • Sedge warbler (9) • Snipe (27) • Lapwing (96) • Yellow wagtail (9) • Redshank (37) Raptors • Marsh harrier (10) • Sparrowhawk (18) • Barn owl (37)

Site allocations for wind turbine proposals and LP6 Renewable and Low Carbon Energy Infrastructure

7.2.22. Policy LP6 Renewable and Low Carbon Energy Infrastructure, and the two sites it allocates for wind turbine development, were screened into the appropriate assessment. **Table 7.6** below provides an assessment of each individual site allocation for wind turbine proposals screened in for Appropriate Assessment.

Table 7.6: Assessment of the likely suitability of habitat within wind turbine site allocations

Site Allocation Ref and Name	Site Size (ha)	Approximate Distance to the Nearest European Site	Site Description/ Current Use	Surrounding Development/ Land Use	Site Falls Within Nene Washes or Ouse Washes Goose & Swan Functional Land IRZ[36]?	Likelihood of habitat suitability for SPA bird species? Green = Unlikely Amber = Potential
LP06.01 Coldham Wind Farm, Elm	98.79	Nene Washes SPA 5.97km	Agricultural land (arable) Wind farm	Agricultural land (arable)	No	• The site falls within the Nene Washes SSSI IRZ but outside of the Goose & Swan Functional Land IRZ. • The site is large and open. • Habitats within the site comprise arable fields.
LP06.02 Land adjacent to Graysmoor Drove, Elm	174.29	Nene Washes SPA 1.0km	Agricultural land (arable)	Agricultural land (arable)	No	• The site falls within the Nene Washes SSSI IRZ but outside of the Goose & Swan Functional Land IRZ. • The site is located relatively close to the Nene Washes SPA (<2km). • The site is large and open.

[36] Defra Magic Map

7.2.23. The results of a search of the National Biodiversity Network Atlas[37] for SPA bird species records is presented in **Table 7.7**.

Table 7.7: National Biodiversity Network Atlas SPA bird species records for site allocations LP06.01 and LP06.02

Nearest Settlement	**Site allocation ref. and name**	**SPA qualifying bird species recorded within 1km radius of the centre of the site allocation (number of records in brackets)**
Coldham	LP06.01	Nene Washes SPA and Ramsar Qualifying individual species: • Teal (1) Waterbird assemblage: • Mute swan (2) • Mallard (2) Breeding bird assemblage: • Lapwing (2) • Mute swan (2)
Coldham	LP06.02	Nene Washes SPA and Ramsar Qualifying individual species: • Pintail (3) • Ruff (4) • Shoveler (9) • Wigeon (5) Waterbird assemblage: • Mallard (2) • Pochard (2) Raptors • Merlin (2) • Short-eared owl (8)

7.2.24. The recorded SPA bird species in **Table 7.7** are for both site LP06.01 and LP06.02. However, in the absence of detailed proposals and up to date, site specific bird surveys, it cannot be concluded in complete confidence that the site would not have a likely significant effect on the Nene Washes SPA and Ramsar site as a result of damage or loss of off-site habitat/ functionally linked habitat. However, it is considered that any risk can be accurately identified and appropriately mitigated at the project level.

7.2.25. Policy LP6 Renewable and Low Carbon Energy Infrastructure requires any impacts on biodiversity to be satisfactorily addressed, the testing of which will be via applicable policies in development plan documents for the area. Sites LP06.01 and LP06.02 will therefore need to comply with Policy LP24 Natural Environment of the Fenland Local

[37] https://species.nbnatlas.org/

Plan, which makes provision for project level HRA should this be required. It is therefore considered that this policy contains sufficient protective wording to ensure these site allocations would not result in likely significant effects on the Nene Washes SPA and Ramsar due to loss and/or fragmentation of habitat/functionally linked land.

In-Combination Effects

7.2.26. The above assessment has considered the likely significant effects of off-site habitat damage and/or loss on the Nene Washes SPA and Ouse Washes SPA of Local Plan policies acting alone. It is also necessary to consider whether different policies in the Local Plan could *cumulatively* result in likely significant effects on site integrity.

7.2.27. Policy LP2: Spatial Strategy for the Location of Residential Development sets out the overall quantum of housing growth for the plan period 2021-2040. The majority of this growth will be met through allocated sites. However, the overall growth figure makes an allowance (around 1,500 new homes or 15% of the total housing requirement) for small sites coming forward on unallocated land for residential development, known as 'windfall' development. The scale, location and extent of this development is unknown until a planning application is submitted, but should the development take place within the Nene Washes or Ouse Washes indicative Goose and Swan Functional Land IRZs, it could result in the damage or loss of off-site, potentially functional linked habitat.

7.2.28. Policy LP3: Spatial Strategy for Employment Development focuses employment development on the market towns of Wisbech, March, Chatteris and Whittlesey, with limited new employment allocations in the rural area. The majority of this growth will be met through allocated sites. However, 'windfall' employment development may come forward outside of the site allocations and designated employment areas. The scale, location and extent of this development is unknown until a planning application is submitted, but should the development take place within the Nene Washes or Ouse Washes indicative Goose and Swan Functional Land IRZs, it could result in the damage or loss of off-site, potentially functional linked habitat.

7.2.29. In terms of in-combination effects with other plans and projects, the Peterborough Local Plan HRA, (July 2018)[38] considered loss of supporting off-site habitat in relation to the Nene Washes. The HRA found that, without mitigation, there was a risk of likely significant effects on the qualifying species of the Nene Washes, from the implementation of site allocation LP43.3 Red Brick Farm and from windfall development sites coming forward on greenfield land within the Nene Washes indicative Goose and Swam Functional Land IRZ. As such, as a precautionary measure, the HRA recommended inserting additional wording into the Local Plan to include a requirement for project-level HRA for applicable site allocation policies and windfall sites.

Avoidance and Mitigation Measures

Policies in the Fenland Local Plan

7.2.30. There are therefore a small number of policies in the Local Plan that could result in new development within the Nene Washes or Ouse Washes indicative Goose and Swan Functional Land IRZs and therefore within potentially functionally linked habitat. Any development proposals coming forward under these policies will be assessed against **Policy LP24 Natural Environment**, which requires development proposals that are likely to have an adverse impact on the integrity of a European site to be subject to the

[38] https://drive.google.com/file/d/1xTuFSJ0Qq0nGJBAaHP1UcMmqc5zQN0EN/view

requirements of the Habitat Regulations. Furthermore, part d of the policy specifically requires: "*Proposals for major, greenfield development within the Goose and Swan Functional Land IRZ of the Nene Washes and Ouse Washes must undertake a project-level Habitats Regulations Assessment to demonstrate that the proposed development will not have any adverse effects on Nene Washes or Ouse Washes functional land in accordance with the requirements of the Habitats Regulations*".

7.2.31. Site allocations LP49.01, LP51.01 and LP52.01 are designated under policies LP49 Residential site allocations in Manea, LP51: Residential site allocations in Coates and LP52 Employment allocations in Coates. Each allocation is supported by policy wording setting out requirements for each site. For sites LP49.01 and LP51.01, this policy wording requires "*evidence of consultation with Natural England due to the site's location within Impact Risk Zones, including the Goose & Swan Functional Land IRZ*". For LP52.01, the wording is slightly different: "*The site is in proximity of designated habitats and is located within the Goose & Swan Functional Land Impact Risk Zone. Development proposals are required to consult Natural England*." Revised policy wording is recommended under 7.2.34 below.

Ouse Washes Habitat Creation Project

7.2.32. The Ouse Washes Site Improvement Plan lists the Ouse Washes Habitat Creation Project as an action to address current pressures and threats. The aim of the Habitat Creation Project is to create at least 500ha of new wetland grassland habitat (i.e., grassland where water levels are held near ground level in spring and summer) adjacent to the Ouse Washes for a range of birds to address a historical decline in bird numbers using the Ouse Washes (specifically breeding black tailed godwit, snipe and ruff, and wintering wigeon). At the current time, 92ha of 180ha of new wet grassland habitat creation is underway at Coveney, with a further site identified at Sutton. This project provides some mitigation to the potential loss of agricultural land used as rest and foraging areas for swans and geese outside of the Ouse Washes.

Recommendations to ensure no LSE resulting from the Local Plan

7.2.33. The Local Plan includes a strong policy framework that will ensure new development protects designated habitats and species and delivers a net gain in biodiversity. However, as discussed above, site allocation LP49.01 has the potential to result in likely significant effects on the off-site, functional habitat of the Ouse Washes SPA, and site allocations LP52.01, LP51.01 on the Nene Washes SPA, through loss of agricultural land used for foraging by qualifying bird species, particularly Bewick's and Whooper Swans, and therefore could have an adverse impact on the integrity of these European sites.

7.2.34. Simply avoiding certain fields in the allocation process is unlikely to guarantee that there will be no adverse effects, due to variability in the use of many fields by swans, depending on annual cropping patterns. It is therefore important that project level survey work and assessment is required for these site allocations within the Nene Washes and Ouse Washes indicative Functional Land IRZs to ascertain the importance of these habitats to qualifying species and establish whether there is potential for the development to adversely impact on the integrity of these European sites. Any planning applications within these allocated sites should be subject to a project level HRA.

7.2.35. Therefore, it is recommended that the current policy wording in LP49 Residential site allocations in Manea, LP51: Residential site allocations in Coates and LP52 Employment allocations in Coates is replaced with the following text as an additional safeguard:

LP49 Residential site allocations in Manea, site allocation LP49.01

"*To demonstrate no adverse effect on the Ouse Washes SPA and Ramsar, planning applications must include a non-breeding bird survey to assess whether the land affected by the proposed development is regularly used by qualifying SPA and Ramsar bird species (especially foraging and roosting swans)*. *If the land is identified to be functionally linked to the SPA / Ramsar, avoidance measures and mitigation will be required, and the planning application will need to be assessed through a project level Habitats Regulations Assessment to ensure that the development does not result in adverse effects on site integrity*."

LP51: Residential site allocations in Coates, site allocations LP51.01
LP52 Employment allocations in Coates, site allocations LP52.01

"*To demonstrate no adverse effect on the Nene Washes SPA and Ramsar, planning applications must include a non-breeding bird survey to assess whether the land affected by the proposed development is regularly used by qualifying SPA and Ramsar bird species (especially foraging and roosting swans)*. *If the land is identified to be functionally linked to the SPA and Ramsar, avoidance measures and mitigation will be required, and the planning application will need to be assessed through a project level Habitats Regulations Assessment to ensure that the development does not result in adverse effects on site integrity*."

7.3. Physical damage and/or disturbance to species

Introduction

7.3.1. Wind turbines are known to have a number of impacts on birds and bird populations and include:

- Displacement of birds due to loss of suitable feeding and/or breeding/wintering habitat;
- Creating a barrier to dispersal regular movements or migration;
- Disturbance within and around the turbine envelope during the lifetime of a wind farm, i.e. during the construction, operational and decommissioning phases;
- Mortality resulting from collisions with turbine towers, blades and/or or associated infrastructure.[39] [40]

7.3.2. The effects of wind farms on birds are highly variable and depend on a wide range of factors, including site topography and that of the surrounding area, detailed specifications of the development, the habitats affected and, the species of birds present, their population size, vulnerability to wind farms and activity levels.[41] The potential for cumulative effects resulting from several wind farms should also be considered.

7.3.3. Screening identified the following European Sites as potentially at risk of adverse effects resulting from physical damage and/or disturbance to species:

- Nene Washes SPA and Ramsar
- Ouse Washes SPA and Ramsar

7.3.4. The supplementary advice for the both the Nene Washes SPA[42] and Ouse Washes SPA[43] recognise the importance of connectivity with supporting habitats and set a target to maintain the safe passage of Bewick's swans moving between roosting and feeding areas, as the ability of this species to safely and successfully move to and from feeding and roosting areas is critical to their fitness and survival. The advice for the Nene Washes goes on to state: "*Powerlines and wind turbines present a danger to swans. They are particularly vulnerable when flying in flocks from roosts to feeding or loafing areas due to their low manoeuvrability in flight. Where possible powerlines should be dug into the ground or marked with bird flight deflectors, and windfarms located away from known flight paths*."

7.3.5. Disturbance caused by human activity is recognised as a key issue for many of the qualifying bird species of both SPAs. The supplementary advice highlights that the "*nature, scale, timing and duration of some human activities can result in the disturbance of birds at a level which may significantly affect their behaviour, and consequently impact on the long-term viability of their populations. Such disturbing effects can for example result in changes to feeding or roosting behaviour, increased energy expenditure due to*

[39] Natural England (2007) Assessing ornithological impacts associated with wind farm developments: surveying recommendations (Technical Information Note TIN008)
[40] Scottish Natural Heritage (2018) Assessing the cumulative impacts of onshore windfarms on birds
[41] BirdLife Europe (2011) Meeting Europe's Renewable Energy Targets in Harmony with Nature (eds. Scrase I. and Gove B.). The RSPB, Sandy, UK.
[42] Natural England (2019) European Site Conservation Objectives: Supplementary Advice on conserving and restoring site features, Nene Washes Special Protection Area (SPA)
[43] Natural England (2019) European Site Conservation Objectives: Supplementary Advice on conserving and restoring site features, Ouse Washes Special Protection Area (SPA)

more frequent flights, abandonment of nest sites, disrupted incubation of eggs and desertion of supporting habitat (both within or outside the designated site boundary where appropriate)."

7.3.6. Landscape is also a relevant issue in relation to a consideration of physical damage and/or disturbance to species as a result of wind turbine development. Many of the qualifying SPA bird species prefer large open areas, largely free of obstructions, in and around their nesting, roosting and feeding areas. This is important for detecting approaching predators, to ensure visibility of displaying behaviour or to facilitate the movement of birds between the SPA and any off-site supporting habitat.

Assessment of Effects

7.3.7. Stage 1 Screening identified that the Nene Washes SPA and Ramsar and Ouse Washes SPA and Ramsar are *potentially* at risk of adverse effects on qualifying species as a result of physical damage and/or disturbance from wind turbine development promoted through the following policies and site allocations:

- Policy LP6: Renewable and Low Carbon Energy Infrastructure
- LP06.01 (40468) Coldham Wind Farm, Elm
- LP06.02 (40469) Land adjacent to Graysmoor Drove, Elm

7.3.8. In 2009 (map updated in 2016[44]), the RSPB published a high-level map and guidance[45] to aid the planning process for onshore wind energy development in the UK. The map (which can be viewed in **Appendix 4**) is based on the distribution of sensitive bird species, and sites containing nationally important populations of breeding waders and seabirds or wintering waders or wildfowl. It assigns one of three sensitivity ratings (high, medium or unknown) to each 1km square in England. In total, 19.2% of the UK land area was identified as having high ecological sensitivity, with 17.4% identified as medium ecological sensitivity. This leaves 63.4% of the UK land area as low/unknown sensitivity to commercial-scale onshore wind development.

7.3.9. The majority of Fenland was categorised as 'unknown' sensitivity. These areas are unlikely to be within the range of species included in the mapping, or will not contain suitable habitat, but some may be sensitive. However, land in close proximity to both the Nene Washes and Ouse Washes coincides with areas categorised by the RSPB mapping as 'medium' and 'high' sensitivity. These areas are considered to be the most sensitive bird areas in relation to onshore wind farms. The RSPB report stresses that the map and guidance "*do not obviate the need for specialist, detailed assessment of specific wind energy proposals on a case-by-case basis*" and the map "*is not intended to depict 'no-go' areas for development*".

Policy LP6: Renewable and Low Carbon Energy Infrastructure

7.3.10. Policy LP6 Renewable and Low Carbon Energy Infrastructure provides protective wording regarding considering the impact of renewable energy schemes. Proposals must comply with the criteria set out in bullets a to c of the policy. Criteria 'a' states: "*As a result of its*

[44] RSPB (2016) The RSPB's 2050 energy vision: meeting the UK's climate targets in harmony with nature. Technical Report.

[45] Bright J.A., Langston R.H.W.& Anthony S. (2009) Mapped and written guidance in relation to birds and onshore wind energy developments in England. RSPB Research report No.35. RSPB. Beds

scale, siting and design, the impacts on the following issues are satisfactorily addressed: landscape character; visual amenity; biodiversity; geodiversity; flood risk; townscape; historic assets; and highway safety". The policy goes on to state that "*Testing compliance with part 'a' above will be via applicable policies elsewhere in a development plan document for the area (i.e. this Local Plan; a Neighbourhood Plan, if one exists; any applicable policies in a Minerals or Waste Local Plan; and any further guidance set out in a Supplementary Planning Document)*." Therefore, any proposal that does not fall under 'permitted development rights' will need to comply with Policy LP24 Natural Environment within the Fenland Local Plan, which makes provision for project level HRA should this be required. This is considered sufficient to ensure that the qualifying bird species of the Nene Washes SPA and Ramsar and Ouse Washes SPA and Ramsar are not adversely affected by the Local Plan as a result energy schemes which may come forward under policy LP6.

LP06.01 Coldham Wind Farm, Elm and LP06.02 Land adjacent to Graysmoor Drove, Elm

7.3.11. Through policy LP6, the Local Plan allocates two sites for medium to large scale wind turbine development.

7.3.12. LP06.01 Coldham Wind Farm is an operational wind farm. The first phase of the wind farm saw the erection of eight wind turbines installed in 2005 with a total energy generating capacity of c.15 MW. In 2012, a further seven wind turbines were completed. The site contains a substation enabling the efficient transmission of renewable energy onto the grid. Allocation in the Local Plan would expand and therefore intensify wind turbine development in this area. The site is just under 6km from the Nene Washes SPA and Ramsar and just under 10km from the Ouse Washes SPA and Ramsar. It falls within the Nene Washes SSSI IRZ, but outside of Natural England's Indicative Goose and Swan Functional Land (IRZ) for both the Nene and Ouse Washes.

7.3.13. The site at LP06.02 Land adjacent to Graysmoor Drove would enable new wind farm development in this area. The current land use is agricultural land. The site is only 1km from the Nene Washes SPA and Ramsar and just over 13km from the Ouse Washes SPA and Ramsar. It falls within the Nene Washes SSSI IRZ, but outside of Natural England's Indicative Goose and Swan Functional Land (IRZ) for both the Nene and Ouse Washes.

7.3.14. Despite both sites being located outside of the Indicative Goose and Swan Functional Land (IRZ) for the Nene Washes, it is not possible rule out likely significant effects based on this alone. As identified in para 7.2.7 above, there is movement of wintering waterfowl between the Nene Washes SPA and Ramsar and the nearby Ouse Washes SPA and Ramsar. Due to their location between the Nene and Ouse Washes, there is potential for wind turbines sites LP06.01 and LP06.02 to result in mortality of qualifying bird species from collision with wind turbines as they fly through the wind farms between the Ouse Washes and the Nene Washes.

7.3.15. The Planning application for the existing wind farm at Coldham Farm[46] was accompanied by wintering bird surveys in 2000/1 and 2002, including information on swan movements through a fieldwork based study (see **Appendix 5**). Low numbers of Whooper and Bewick's swan were recorded in and around the application site. However, this survey data is now some twenty years old.

7.3.16. In the absence of detailed proposals and up to date, site specific bird surveys, it cannot be concluded in complete confidence that the development of sites LP06.01 and LP06.02 for wind farms would not have a likely significant effect on the Nene Washes SPA and Ramsar or Ouse Washes SPA and Ramsar as a result of physical damage and/or disturbance to SPA

[46] Planning reference: F/YR02/0143/F

bird species. However, it is considered that any risks can be accurately identified and appropriately mitigated at the project level.

7.3.17. Policy LP6 Renewable and Low Carbon Energy Infrastructure provides protective wording regarding considering the potential impact of wind turbine schemes, including potential cumulative impacts. Proposals must comply with the criteria set out in bullets a) to c) of the policy which states:

"*Proposals for renewable and low carbon energy schemes, including ancillary development, will be supported where the direct, indirect, individual and cumulative impacts on the following considerations are, or will be made, acceptable:*

a) As a result of its scale, siting and design, the impacts on the following issues are satisfactorily addressed: landscape character; visual amenity; biodiversity; geodiversity; flood risk; townscape; historic assets; and highway safety; and

b) Impacts on aviation and defence navigation system/communications; and

c) Impacts on the amenities of sensitive neighbouring uses (including local residents) are minimised (including by virtue of noise, dust, odour, shadow flicker, glint and glare, air quality or traffic)

Testing compliance with part 'a' above will be via applicable policies elsewhere in a development plan document for the area (i.e. this Local Plan; a Neighbourhood Plan, if one exists; any applicable policies in a Minerals or Waste Local Plan; and any further guidance set out in a Supplementary Planning Document)."

7.3.18. Any proposal for medium to large scale wind turbines, including sites LP06.01 and LP06.02, will therefore need to comply with Policy LP24 Natural Environment of the Fenland Local Plan, which make provision for project level HRA should this be required. This protective policy will ensure that the qualifying bird species of the Nene Washes and Ouse Washes are not adversely affected by development proposed within the Local Plan or which may come forward following the adoption of the Local Plan.

In-Combination Effects

7.3.19. There are a number of operational wind farms in the vicinity of the proposed site allocations for wind turbines in the Local Plan and/or in close proximity to the Nene Washes SPA and Ramsar or Ouse Washes SPA and Ramsar, which could act in combination with sites LP06.01 and LP06.02 to result in cumulative impacts on qualifying bird species. Potential cumulative impacts could be additive, antagonistic (i.e. the cumulative impact is less than the sum of the multiple individual effects, or synergistic (i.e. the cumulative impact is greater than the sum of the multiple individual effects).[47]

7.3.20. **Table 7.8** highlights some of the operational wind farms in close proximity to sites LP06.01 and LP06.02. It does not include wind turbines that have been consented but not built or applications formally submitted but have yet to be determined. Any project level HRA for sites LP06.01 and/or LP06.02 should consider both the individual and cumulative impacts of the proposed development on the qualifying features of European Sites.

Table 7.8: Wind Farms in close proximity to sites allocated in the Local Plan for wind turbine development

Name of Windfarm	Location	Local Authority	Description
Stags Holt Wind Farm	Coldham	Fenland	Immediately adjacent to site LP06.01 Coldham Wind Farm.

[47] Scottish Natural Heritage (2018) Assessing the cumulative impacts of onshore windfarms on birds

Name of Windfarm	Location	Local Authority	Description
			Planning permission for nine wind turbines was grated in 2004 and went into operation in 2007.
Glass Moor Wind Farm	Located south of Whittlesey	Fenland	Planning permission for 8 turbines granted in 2004 and went into operation 2006.
Glass Moor 2 Wind Farm	Located south of Whittlesey	Fenland	Planning permission for 6 turbines granted in 2012 and went into operation 2013.
Ransonmoor Wind Farm	Located between the Nene and Ouse Washes, north west of Doddington	Fenland	Planning permission for 5 wind turbines refused in 2010 but allowed on appeal 2011.
Wryde Croft Wind Farm	East of Peterborough between Crowland and Parson drove, just north of the Nene Washes,	Peterborough City Council	Planning permission for 13 wind turbines granted in 2010 and went into operation in 2016.
Burnthouse Wind Farm	South of Turves, between the Nene and Ouse Washes	Fenland	Planning permission for 3 turbines was granted refused in 2010 but allowed in appeal in 2011. Went into operation in 2013.

Avoidance and Mitigation Measures

Policies in the Fenland Local Plan

7.3.21. **Policy LP24 Natural Environment** will provide a high-level protection for the Nene Washes SPA and Ramsar and Ouse Washes SPA and Ramsar. It states: "*proposals having an adverse impact on the integrity of such areas, either alone or in combination, that cannot be avoided or adequately mitigated to remove any adverse effect, will not be permitted other than in very exceptional circumstances*." It goes on to state that development proposals "*that are likely to, or have the potential to, have an adverse effect, either alone or in-combination, on European designated sites must satisfy the requirements of the Habitats Regulations (or any superseding similar UK legislation, post the UK leaving the EU), determining site specific impacts (which could be off-site as well as on-site) and avoiding or mitigating against impacts where identified*."

Conclusion

7.3.22. ***The safeguards set out in Policy LP6 Renewable and Low Carbon Energy Infrastructure, together with Policy LP24 Natural Environment which sets out a requirement for project level HRA, provides sufficient assurance that the Local Plan will not result in a likely significant effect on the Nene Washes SPA and Ramsar or Ouse Washes SPA and Ramsar as a result of physical damage and/or disturbance to species.***

7.4. Disturbance: recreation and visitor pressure

Introduction

7.4.1. It is becoming widely acknowledged that access to nature has a positive impact on human health and wellbeing. However, the legal requirements for biodiversity and geodiversity must also be adhered to and this will require care on sites which are important for both biodiversity and public access, including European Sites[48].

7.4.2. There are 45,340 residential properties within Fenland (Council Tax data 2020[49]). The Local Plan seeks to deliver 10,525 new dwellings between 2021 and 2040. This would equate to around a 23% increase in residential properties. The development of new housing will result in an increase in people and an increase, therefore, in the number of people seeking recreation.

7.4.3. Disturbance due to recreation or visitor or recreational impact are not listed as a threat or pressure in the SIP for the Nene Washes or Ouse Washes. However, in certain locations, Natural England's IRZ for both the Nene Washes SSSI and Ouse Washes SSSI, states "*New housing developments will require an assessment of recreational pressure on relevant SSSIs and measures to mitigate adverse impacts e.g. alternative open space provision*." This suggests that there is potential for recreational pressure to impact on the qualifying features of the SPAs.

7.4.4. Public access via public rights of way is limited within the Nene Washes SPA and Ramsar. Visitors are encouraged and managed in some parts (the RSPB manage a nature reserve north east of Whittlesey).

7.4.5. There is public access to a large part of the Ouse Washes SPA and Ramsar via a network of public rights of way, and visitors are encouraged and managed in some parts (the RSPB manage a nature reserve at Manea and the Wildlife Trust manages a nature reserve at Welney which form part of the SPA). Recreational activities undertaken within the site include walking, dog walking and bird watching.

7.4.6. Screening identified the following European sites potentially at risk of adverse effects as a result of disturbance from increased recreational and visitor pressure:

- Nene Washes SPA and Ramsar
- Ouse Washes SPA and Ramsar

Assessment of Effects

7.4.7. Stage 1 Screening identified that the Nene Washes SPA and Ramsar is *potentially* at risk of adverse effects as a result of increased disturbance from recreation and visitor pressure as a result of the following policies and site allocations:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- LP38 (40262) March Town Centre Opportunity Area
- LP39.01 (40285) Land north of Knight's End Road and East of the A141, March

[48] IPENS (2015) Public Access and Disturbance Theme Plan - A strategic approach to identifying and addressing significant effects on the features of Natura 2000 sites
[49] https://www.gov.uk/government/statistics/council-tax-stock-of-properties-2019

- LP39.02 (40252) Land southeast of 433 Wisbech Road, March
- LP39.03 (40382 (north parcel)) Land south of Knight's End Road and West of Wimblington Road, March
- LP39.04 (40382 (south parcel)) Land West of Wimblington Road, March
- LP39.05 (40190) Land to the rear of number 81, March
- LP39.06 (40430) Westry Hall, March
- LP39.08 (40126) Land east of Berryfield, March
- LP39.09 (40315) Hereward Hall, March
- LP39.10 (40446) Land west of 85 Wimblington Road, March
- LP39.11 (40434) Land fronting Elm Road and south and west of Highfield House, March
- LP39.12 (40194) Land Southeast of 433 Wisbech Road, March
- LP39.13 (40316) Queen's Street Close Car Park, March
- LP39.21 (40052) Land north of Woodville, March
- LP39.23 (40077) Land North of The Green and North of 145-159 Wisbech Road, March
- LP39.26 (40105) Rear of 131-137 Upwell Road, March
- LP39.27 (40263) Land to the west of Hereward Hall, March
- LP39.28 (40264) Land to the east of Norwood Road, March
- LP39.30 (40523) 15 Station Road, March
- LP39.31 (40523) 72 - 74 High Street, March
- LP43.01 (40300) Land at Eastrea Road, Whittlesey
- LP43.02 (40335) Land rear of 98 -112 Drybread Road, Whittlesey
- LP43.03 (40012) North and South of Eastrea Road, Whittlesey
- LP43.05 (40526) 158 Stonald Road, Whittlesey
- LP43.07 (40528) Land West of 36 Peterborough Road, Whittlesey
- LP51.01 (40265) Land north of March Road, Coates
- LP51.02 (40328) Land South of 104 -178 March Road, Coates
- LP51.03 (40198) Minuet Phase 2, Coates
- LP51.04 (40070) Land South East of 208 Coates Road, Coates
- LP53.01 (40322/40306) Land north of March Road, Elm
- LP54.01 (40319) Land East of Flint Way, Friday Bridge
- LP54.02 (40305) Land at Rookery Farm, Friday Bridge
- LP54.03 (40127) Well End, Friday Bridge
- LP57.01 (40451) Land south of Brewery Close and Ingham Hall Gardens, Parson Drove
- LP57.02 (40302) Land at Swanbridge Farm, Parson Drove
- LP57.03 (40504) Land east of The Silverings, 114 Main Road, Parson Drove
- LP58.01 (40103) Trafford Farm, Barton Road, Wisbech St Mary
- LP58.02 (40171) Land at Sunset, Station Road, Wisbech St Mary
- LP58.03 (40424) Station Road next to Grantchester House, Wisbech St Mary
- LP58.05 (40518) Land north of The Barn, High Road, Wisbech St Mary
- LP61.01 (40147) Land at Gull Drove, Guyhirn
- LP61.02 (40303) Land at Selwyn Lodge Farm, Guyhirn
- LP61.03 (40207) Land to the rear of Neneside, Guyhirn
- LP62.01 (40150) Front Road, Murrow
- LP64.01 (40135) Land North of March Road, Coldham
- LP68.01 (40241) 6 March Road, Ring's End
- LP69.01 (40307) Land at Willock Farm, Tholomas Drove

7.4.8. Stage 1 Screening identified that the Ouse Washes SPA and Ramsar is *potentially* at risk of adverse effects as a result of increased disturbance from recreation and visitor pressure as a result of the following policies and site allocations:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- LP46.01 (40211) Land south of Salisbury House, Blackmill Road, Chatteris
- LP46.02 (40326) Land East of 80 The Elms, Chatteris
- LP46.03 (40447) Womb Farm (North-West), Chatteris
- LP46.04 (40499) Land Westside of Fenland Way, Chatteris
- LP46.05 (40288) Land Westside of Fenland Way, Chatteris
- LP46.06 (40325) Land rear of 2-8 Gibside, Chatteris
- LP46.09 (40072) Land West and South of 74 West Street, Chatteris
- LP46.10 (40367) Womb Farm, Chatteris
- LP46.11 (40384) Land south east of Chatteris, London Road, Chatteris
- LP48.03 (40427) Land south of Wimblington Road, Doddington
- LP48.07 (40444) 28 Wimblington Road, Doddington
- LP49.01 (40223) West Field, Manea
- LP49.02 (40185) Land to rear of No.15 Westfield Road, Manea
- LP49.04 (40048) Lavender Mill Bungalow, Manea
- LP49.06 (40522) 18 Westfield Road, Manea
- LP59.01 (40463) Land north west of Syringa House, Christchurch
- LP59.02 (40369) Land adjacent to the fern, Christchurch
- LP59.04 (40059) CFC Disposals Ltd, Christchurch

7.4.9. These residential site allocations are located within 8km of the site boundary of the Nene Washes SPA or Ouse Washes SPA. Sites located further than 8km from these designated sites are unlikely to result in significant effects on the qualifying features of the site in relation to increased disturbance from recreation and visitor pressure and therefore have been ruled out from Appropriate Assessment.

7.4.10. As European Sites are underpinned by a SSSI designation, their interest features and sensitivities are covered by the SSSI IRZ. Natural England's IRZs for the Nene Washes SSSI and Ouse Washes SSSI can therefore be used to help determine whether there are likely to be significant effects from a particular development on the interest features of the European Site. **Table 7.9** and **Table 7.10** identify where screened in residential site allocations fall within the Nene Washes or Ouse Washes SSSI IRZs where residential development is highlighted as having a potential impact and where Natural England recommends an assessment of recreational pressure and measures to mitigate adverse impacts.

Table 7.9: Screened in site allocations: assessment of LSE alone on the Nene Washes SPA

Site Allocation	**Settlement**	**Indicative number of dwellings**	**Within Nene Washes SSSI IRZ?**	**IRZ requires an assessment of recreational pressure & measures to mitigate adverse impacts?**
LP38 March Town Centre Opportunity Area	March	55	Yes	No

Site Allocation	Settlement	Indicative number of dwellings	Within Nene Washes SSSI IRZ?	IRZ requires an assessment of recreational pressure & measures to mitigate adverse impacts?
LP39.01 Land north of Knight's End Road and East of the A141,	March	1,200	Yes	No
LP39.02 Land southeast of 433 Wisbech Road	March	294	Yes	No
LP39.03 Land south of Knight's End Road and West of Wimblington Road,	March	189	Yes	No
LP39.04 Land West of Wimblington Road,	March	152	Yes	No
LP39.05 Land to the rear of number 81,	March	98	Yes	No
LP39.06 Westry Hall	March	62	Yes	No
LP39.08 Land east of Berryfield	March	24	Yes	No
LP39.09 Hereward Hall	March	19	Yes	No
LP39.10 Land west of 85 Wimblington Road	March	18	Yes	No
LP39.11 Land fronting Elm Road and south and west of Highfield House	March	9	Yes	No
LP39.12 Land Southeast of 433 Wisbech Road	March	8	Yes	No
LP39.13 Queen's Street Close Car Park	March	6	Yes	No
LP39.21 Land north of Woodville	March	9	Yes	No
LP39.23 Land North of The Green and North of 145-159 Wisbech Road	March	118	Yes	No
LP39.26 Rear of 131-137 Upwell Road	March	9	Yes	No
LP39.27 Land to the west of Hereward Hall	March	19	Yes	No
LP39.28 Land to the east of Norwood Road	March	48	Yes	No
LP39.30 15 Station Road	March	26	Yes	No
LP39.31 72 - 74 High Street	March	9	Yes	No
LP43.01 Land at Eastrea Road	Whittlesey	156	Yes	Yes
LP43.02 (40335) Land rear of 98 -112 Drybread Road	Whittlesey	11	Yes	Yes
LP43.03 (40012) North and South of Eastrea Road	Whittlesey	452	Yes	Yes

Site Allocation	Settlement	Indicative number of dwellings	Within Nene Washes SSSI IRZ?	IRZ requires an assessment of recreational pressure & measures to mitigate adverse impacts?
LP43.05 (40526) 158 Stonald Road	Whittlesey	18	Yes	Yes
LP43.07 (40528) Land West of 36 Peterborough Road	Whittlesey	9	Yes	No Site is under 10 dwelling threshold
LP51.01 (40265) Land north of March Road	Coates	232	Yes	Yes
LP51.02 (40328) Land South of 104 -178 March Road	Coates	117	Yes	Yes
LP51.03 (40198) Minuet Phase 2	Coates	20	Yes	No Site is under 50 dwelling threshold
LP51.04 (40070) Land South East of 208 Coates Road	Coates	60	Yes	Yes
LP53.01 (40322/40306) Land north of March Road	Elm	215	Yes	No
LP54.01 (40319) Land East of Flint Way, Friday Bridge	Friday Bridge	137	Yes	No
LP54.02 (40305) Land at Rookery Farm, Friday Bridge	Friday Bridge	87	Yes	No
LP54.03 (40127) Well End, Friday Bridge	Friday Bridge	6	Yes	No
LP57.01 (40451) Land south of Brewery Close and Ingham Hall Gardens	Parson Drove	30	Yes	No
LP57.02 (40302) Land at Swanbridge Farm	Parson Drove	8	Yes	No
LP57.03 (40504) Land east of The Silverings, 114 Main Road	Parson Drove	5	Yes	No
LP58.01 (40103) Trafford Farm, Barton Road	Wisbech St Mary	90	Yes	No
LP58.02 (40171) Land at Sunset, Station Road	Wisbech St Mary	51	Yes	No
LP58.03 (40424) Station Road next to Grantchester House	Wisbech St Mary	9	Yes	No

Site Allocation	Settlement	Indicative number of dwellings	Within Nene Washes SSSI IRZ?	IRZ requires an assessment of recreational pressure & measures to mitigate adverse impacts?
LP58.05 (40518) Land north of The Barn, High Road	Wisbech St Mary	5	Yes	No
LP61.01 (40147) Land at Gull Drove	Guyhirn	15	Yes	No Site is under 50 dwelling threshold
LP61.02 (40303) Land at Selwyn Lodge Farm	Guyhirn	15	Yes	No Site is under 50 dwelling threshold
LP61.03 (40207) Land to the rear of Neneside	Guyhirn	5	Yes	No Site is under 50 dwelling threshold
LP62.01 (40150) Front Road	Murrow	7	Yes	No
LP64.01 (40135) Land North of March Road	Coldham	11	Yes	No
LP68.01 (40241) 6 March Road	Ring's End	8	Yes	No Site is under 10 dwelling threshold
LP69.01 (40307) Land at Willock Farm	Tholomas Drove	10	Yes	No

Table 7.10: Screened in site allocations: assessment of LSE alone on the Ouse Washes SPA

Site Allocation	Settlement	Indicative number of dwellings	Within Nene Washes SSSI IRZ?	IRZ requires an assessment of recreational pressure & measures to mitigate adverse impacts?
LP46.01 (40211) Land south of Salisbury House, Blackmill Road	Chatteris	100	Yes	No
LP46.02 (40326) Land East of 80 The Elms	Chatteris	90	Yes	No
LP46.03 (40447) Womb Farm (North-West)	Chatteris	53	Yes	No

Site Allocation	Settlement	Indicative number of dwellings	Within Nene Washes SSSI IRZ?	IRZ requires an assessment of recreational pressure & measures to mitigate adverse impacts?
LP46.04 (40499) Land Westside of Fenland Way	Chatteris	52	Yes	No
LP46.05 (40288) Land Westside of Fenland Way	Chatteris	20	Yes	No
LP46.06 (40325) Land rear of 2-8 Gibside	Chatteris	6	Yes	No
LP46.09 (40072) Land West and South of 74 West Street	Chatteris	58	Yes	No
LP46.10 (40367) Womb Farm	Chatteris	248	Yes	No
LP46.11 (40384) Land south east of Chatteris, London Road	Chatteris	1,000	Yes	No
LP48.03 (40427) Land south of Wimblington Road	Doddington	40	Yes	No
LP48.07 (40444) 28 Wimblington Road	Doddington	13	Yes	No
LP49.01 (40223) West Field	Manea	105	Yes	Yes
LP49.02 (40185) Land to rear of No.15 Westfield Road	Manea	10	Yes	Yes
LP49.04 (40048) Lavender Mill Bungalow	Manea	29	Yes	Yes
LP49.06 (40522) 18 Westfield Road	Manea	5	Yes	No Site is under 10 dwelling threshold
LP59.01 (40463) Land north west of Syringa House	Christchurch	23	Yes	No
LP59.02 (40369) Land adjacent to the fern	Christchurch	10	Yes	No
LP59.04 (40059) CFC Disposals Ltd	Christchurch	16	Yes	No

7.4.11. **Table 7.9** and **Table 7.10** above highlight that the following sites have potential to impact alone on the Nene Washes SPA or Ouse Washes SPA as a result of disturbance from increased recreational and visitor pressure:

Nene Washes SPA

- LP43.01 Land at Eastrea Road, Whittlesey

- LP43.02 (40335) Land rear of 98 -112 Drybread Road, Whittlesey
- LP43.03 (40012) North and South of Eastrea Road, Whittlesey
- LP43.05 (40526) 158 Stonald Road, Whittlesey
- LP51.01 (40265) Land north of March Road, Coates
- LP51.02 (40328) Land South of 104 -178 March Road, Coates
- LP51.04 (40070) Land South East of 208 Coates Road, Coates

Ouse Washes SPA

- LP49.01 (40223) West Field, Manea
- LP49.02 (40185) Land to rear of No.15 Westfield Road, Manea
- LP49.04 (40048) Lavender Mill Bungalow, Manea

7.4.12. However, sites LP43.03, LP43.05, LP51.04 and LP49.04 have extant planning permission or resolution to grant planning permission at 1 April 2021. The Local Plan does not include any specific policy requirements for these sites as it is expected that sites will be developed in accordance with their planning permission. This HRA assumes that any necessary project level HRA was undertaken as part of these planning applications. ***Sites LP43.03, LP43.05, LP51.04 and LP49.04 can therefore be ruled out from further consideration in the appropriate assessment.***

7.4.13. Data on visitor numbers, reasons for visiting etc. from visitor surveys is not currently available for the Nene Washes and therefore it is not possible to make predictions of changes in access levels as a result of new development. Unlike many sites that are considered sensitive to increased recreational and visitor pressure (such as coastal sites with access to the foreshore, for example), the Nene Washes does not have open public access: access around the terrestrial margins of the site is limited to the south barrier bank along the PRoW network. Natural England's supplementary conservation advice notes that this footpath is little used and far enough away from the centre of the washes to be unlikely to cause significant disturbance. The majority of the land within the Nene Washes is in private ownership. The RSPB owned Nene Washes Nature Reserve is popular with bird watchers. It has a small car park (20 spaces) but no visitor facilities such as toilets or shop. Morton's Leam is used by anglers but the supplementary conservation advice states that they aren't thought to cause a disturbance problem.

7.4.14. Like the Nene Washes, data on visitor numbers, reasons for visiting etc. from visitor surveys is not currently available for the Ouse Washes. Public access is also restricted, limited to the margins of the site via the PRoW network, the RSPB reserve at Manea and the Wildfowl and Wetland (WWT) managed nature reserve at Welney. Natural England's supplementary conservation advice highlights in general, these footpaths are quiet because of the location of the site and difficult access, but there is significant disturbance immediately north of Earith, particularly from dog walkers. The advice also notes numbers of visitors to the RSPB reserve at Manea are small and are unlikely to result in disturbance. Numbers of visitors to the WWT reserve at Welney are larger but access is restricted, and disturbance is also unlikely there.

Policy LP2: Spatial Strategy for the Location of Residential Development

7.4.15. Policy LP2 sets out the overall quantum of housing growth for the plan period 2021-2040. The policy states that Fenland has a housing requirement of 10,525 new dwellings over the plan period. The Local Plan makes provision for 10,828 dwellings over the plan period, through site allocations, windfall development and existing sites with planning permission.

7.4.16. The Local Plan's strategy for the distribution of residential development to focus on urban areas and larger settlements. The majority of new housing will be focused on the four market towns: March (26%), Chatteris (17%), Wisbech (12%) and Whittlesey (8%). Large villages will supply 8% of the proposed growth and medium villages 14%. Around 14% (1,500 dwellings) of the housing requirement is expected to come forward as windfall development.

In-Combination Effects

7.4.17. As well as considering the potential for residential site allocations to impact on the Nene Washes and Ouse Washes alone, it is also necessary to consider the potential for cumulative effects as a result of disturbance from increased recreational and visitor pressure.

7.4.18. **Table 7.11** and **Table 7.12** below shows the indicative newly arising population as a result of residential site allocations in settlements within 8km of the Nene and Ouse Washes. The figures are indicative, as the Local Plan allocates sites for indicative dwelling numbers and therefore these may be slightly higher or slightly lower when a planning application is submitted for a site.

Table 7.11: Newly arising population within 8km of the Nene Washes SPA and Ramsar

Name of settlements within residential site allocations	Total indicative number of new dwellings within 8km of the Nene Washes SPA (new site allocations, committed large sites and additional net commitments)	Total indicative new population arising from new dwelling provision (based on 2.3 average people per household)
Coates	438	1,007
Coldham	11	25
Elm	288	662
Friday Bridge	239	550
Guyhirn	62	143
March	2,755	6,337
Murrow	27	62
Parson Drove	48	110
Ring's End	9	21
Tholomas Drove	13	30
Whittlesey	887	2,040
Wisbech St Mary	253	582
Total	**5,030**	**11,569**

Table 7.12: Newly arising population within 8km of the Ouse Washes SPA and Ramsar

Name of settlements within residential site allocations	Total indicative number of new dwellings within 8km of the Nene Washes SPA (new site allocations, committed large sites and additional net commitments)	Total indicative new population arising from new dwelling provision (based on 2.3 average people per household)
Chatteris	1,745	4,014
Christchurch	64	147
Doddington	361	830
Manea	224	515
Total	**2,394**	**5,506**

7.4.19. Dog walkers are a key source of disturbance as part of increased recreational pressure. An estimated 33% of households in the UK own a dog in 2021.[50] Taking this figure, the number of newly arising households within 8km of the Ouse Washes that may own a dog has been estimated at 3,818. Mitigation measures are set out below and are required to provide certainty that the residential site allocations will not adversely affect the site integrity of the Nene Washes SPA and Ouse Washes SPA.

Table 7.13: Estimate of Newly Arising Households with Dogs within 8km of Nene Washes SPA and Ramsar

Number of dwellings	Population (based on 2.3 people per household)	Households which could own a dog (33% of households)
5,030	11,569	3,818

Table 7.14: Estimate of Newly Arising Households with Dogs within 8km of Ouse Washes SPA and Ramsar

Number of dwellings	Population (based on 2.3 people per household)	Households which could own a dog (33% of households)
2,394	5,506	1,617

7.4.20. There is potential for in-combination effects as a result of increased recreational pressure from cross-boundary residential development in neighbouring local authority areas and this also needs to be considered. Those neighbouring local authorities with settlements within 8km of the Nene Washes are:

- Huntingdonshire
- South Holland
- Peterborough

7.4.21. The Huntingdonshire Local Plan HRA Report considered impacts from increased public recreation but found no likely significant effects for the Nene Washes.

7.4.22. The South East Lincolnshire Local Plan covers the administrative areas of South Holland and Boston district councils. The HRA which accompanies the Local Plan did not screen in the Nene Washes or Ouse Washes for further consideration in the HRA.

7.4.23. The HRA of the Peterborough Local Plan considered recreational pressure in relation to the Nene Washes. The report found that the limited public access to the site, together with the policy safeguards in place in the Local Plan, was sufficient to conclude that there were unlikely to be any significant adverse impacts on the Nene Washes resulting from in-combination recreational pressures from the proposed levels of growth and identified housing allocations in the Local Plan.

7.4.24. Neighbouring authorities within 8km of the Ouse Washes are:

- East Cambridgeshire
- King's Lynn and West Norfolk

[50] https://www.pfma.org.uk/pet-population-2021

- South Cambridgeshire

7.4.25. The HRA for the review of the East Cambridgeshire Local Plan found that residential allocations within 8km of the Ouse Washes have the potential to result in likely significant effects as a result of increased recreational pressure. Mitigation measures, in the form of strengthening policy wording, were required to provide certainty that the residential site allocations will not adversely affect the site integrity of the Ouse Washes. So long as these mitigation measures are implemented, the HRA concluded the Local Plan as unlikely to result in significant effects on the integrity of the Ouse Washes.

7.4.26. The HRA for the adopted Local Plan for King's Lynn and West Norfolk ruled out likely significant effect and need for Appropriate Assessment for the Ouse Washes SAC/SPA/Ramsar. The screening assessment concluded that "*although a number of settlements are within 8km of the site by road, there is a significant walk-in at the northern end of the Ouse Washes before the European site is reached. More straightforward access is attainable at Welney reserve, where access is strictly controlled. No in-combination effects are predicted, despite development affecting this site outside the Borough, because of the limited access.*"

7.4.27. The HRA screening of the adopted South Cambridgeshire Local Plan considered impacts from increased public recreation but found no likely significant effects for the Ouse Washes.

7.4.28. It is therefore reasonable to rule out likely significant effects as a result of increased recreational pressure from development within neighbouring local authorities.

Avoidance and Mitigation Measures

Policies in the Fenland Local Plan

7.4.29. **Policy LP1 Settlement Hierarchy** focuses new development in the four market towns of Chatteris, March, Whittlesey and Wisbech. A strategy of focusing the majority of growth in the main urban areas will ensure new residents have access to open spaces and leisure facilities close to where they live.

7.4.30. **Policy LP31 Open Space and Recreational Facilities** requires all new residential developments of 10 dwellings or more to provide new or enhanced publicly accessible open space to meet the needs of the development in accordance with the policy and the standards set out in Appendix 5. The standards include 1.8ha per 1,000 population of accessible natural or semi natural greenspace. Developments will need to be within 300m of a small natural space (up to 2ha) and 400m of a local natural space (between 2ha and 20ha). The standards also set out requirements for parks and gardens and informal parkland and amenity space. These new open spaces and leisure facilities will provide locations for recreational activities close to home, and therefore more attractive to new residents, thus reducing the risk of increased visitor pressure on the SPAs.

7.4.31. Part D of the policy sets out requirements for development proposals which have the potential to have a significant adverse effect on the integrity of a designated international, national or local site for nature conservation as a result of additional recreational pressures on that designated site. The policy states that the development "*may be required to provide open space of sufficient size, type and quality over and above the standard requirements set out in Appendix 5 in order to mitigate that pressure*".

7.4.32. Policy LP31 is supported by evidence in the form of the Open Space Standards report (December 2021) prepared by Land Use Consultants. The report found that despite being a predominantly rural area, the amount of accessible and useable open space available per head of population in Fenland overall is below the national standard. The report identifies those areas in the district deficient in different types of open space in terms of quantity, quality and accessibility. The areas which contain the Nene Washes and Ouse Washes (the west and the south) have above the district average of 1.64ha public open space per 1,000 head of population, based on the 2021 population however, the west of the district is likely to be below the district average by 2040. A large proportion of the growth proposed within the Local Plan will occur in the southern area which has a higher level of open space provision than the other analysis areas.

7.4.33. **Policy LP29 Green Infrastructure** sets out a strategic approach to green infrastructure, seeking to maintain and improve the existing green infrastructure network in Fenland. All development proposals should ensure that existing and new green infrastructure is considered and integrated into the scheme's design from the outset. Where new green infrastructure is proposed, the design should maximise the delivery of ecosystem services and support healthy and active lifestyles. This policy requirement should provide opportunities to mitigate increases in recreational pressure arising from new housing development by providing alternative provision for recreational activities.

7.4.34. **Policy LP30 Local Green Space and Other Existing Open Spaces** protects existing open spaces from being lost to development, therefore protecting existing provision for recreational activities for current and future residents.

7.4.35. **Policy LP24 Natural Environment** states that the highest level of protection will be afforded to internationally protected sites. Proposals having an adverse impact on the integrity of such areas, either alone or in combination, that cannot be avoided or adequately mitigated to remove any adverse effect, will not be permitted other than in very exceptional circumstances. Development will only be permitted where the Council is satisfied that any necessary avoidance and / or mitigation measures are included to ensure there are no adverse effects on integrity either alone or in combination. The policy goes on to list potential measures, including access and visitor management measures within the designated site, improvement of existing greenspace and recreational routes and provision of alternative natural greenspace.

7.4.36. **Policy LP38 March Community Regeneration** sets out requirements for the development of site allocation LP38.01. The policy states that March experiences a deficit of open space and sports provision and that development proposals for new development should prioritise open space and sports provision within their schemes.

7.4.37. **Policy 41: Land north of Knight's End Road and East of the A141** sets out requirements for the development of site allocation LP39.01. Development proposals must provide new on-site public open spaces to meet the needs of residents of the site. This will ensure suitable sites for recreation are provided close to where people live.

Recommendations to ensure no LSE resulting from the Local Plan

7.4.38. Residential development should deliver new and enhanced green infrastructure and public open space in line with policies LP29 Green Infrastructure and LP31 Open Space and Recreational Facilities and the standards set out in Appendix 5 of the Local Plan.

However, in light of the above assessment of likely significant effects alone of the residential site allocations, this HRA recommends additional policy wording to provide sufficient certainty that the Local Plan will not result in adverse effects on the integrity of the Nene Washes SPA or Ouse Washes SPA.

LP43.01 (40300) Land at Eastrea Road, Whittlesey
LP43.02 (40335) Land rear of 98 -112 Drybread Road, Whittlesey
LP51.01 (40265) Land north of March Road, Coates
LP51.02 (40328) Land South of 104 -178 March Road, Coates

7.4.39. For these sites, it is recommended wording is added to the policy requirements for each site as follows:

"*Proposals will be required to mitigate any evidenced recreational impacts on the Nene Washes SPA.*"

LP49.01 (40223) West Field, Manea
LP49.02 (40185) Land to rear of No.15 Westfield Road, Manea

7.4.40. For these sites, it is recommended wording is added to the policy requirements for each site as follows:

"*Proposals will be required to mitigate any evidenced recreational impacts on the Ouse Washes SPA.*"

7.4.41. ***It can reasonably be concluded, providing that the above policy wording is incorporated into the Local Plan, and implemented successfully, that there will be no likely significant effects, alone or in combination, on the integrity of the Nene Washes SPA or Ouse Washes SPA as a result of disturbance from increased recreation and visitor pressure.***

7.5. Hydrological Changes:

Introduction

7.5.1. Many European Sites and qualifying species are dependent on water quality and appropriate water levels and flows to remain in favourable condition. Wetland habitats rely on hydrological connections with other surface waters, such as rivers, streams and lakes.

7.5.2. Impacts on water quality, i.e., water pollution, can come from various sources including:

- Point source pollution – permitted discharges, e.g., from wastewater treatment
- Pollution incidents – one off incidents or accidents
- Diffuse pollution – unplanned and unlicensed pollution from various sources, including farming, homes and roads.

7.5.3. The main ways in which development may impact adversely on water levels in European Sites are:

- Increased abstraction of water from surface water and ground water bodies, which may reduce water levels in European Sites sharing the same catchment;
- The increase in impermeable surfaces increases the volume and speed of surface water runoff. Accelerated run-off could result in the discharge of excess water directly into watercourses, impacting on water levels of wetland habitats.

7.5.4. Screening identified the following European sites potentially at risk of adverse hydrological changes as a result of development proposed within the Local Plan:

- Nene Washes SPA and Ramsar
- Nene Washes SAC
- Ouse Washes SPA and Ramsar
- Ouse Washes SAC
- The Wash and North Norfolk Coast SAC
- The Wash SPA and Ramsar

7.5.5. Water pollution has been identified as a pressure or threat in 87 SIPs (63% of SIPs covering water dependent European Sites). Water pollution mainly affects freshwater Natura 2000 sites (71 SIPs) though marine and estuary sites are also affected (16 SIPs). In the majority of cases (92%), diffuse water pollution is specifically identified.[51] A range of measures have been identified in SIPs to address diffuse water pollution, including investigation, diffuse water pollution plans, catchment sensitive farming, water industry asset management plans and regulation.

7.5.6. The Nene Washes is a Water Framework Directive (WFD) protected site, with a number of WFD waterbodies hydrologically connected to the site, and therefore likely significant effects as a result of changes in water quantity and/or water quality is particularly relevant. The site falls under the Anglian River Basin Management Plan and the SIP and supplementary advice set out the priorities and measures required to meet the conservation objectives for the site. The SIP identifies hydrological changes as a priority threat to the SPA and water pollution as a threat for spined loach within the SAC.

[51] IPENS (2015) Diffuse water pollution theme plan - developing a strategic approach to diffuse water pollution for England's Natura 2000 site

7.5.7. Changes in water supply or flow within the SPA can have significant impacts on qualifying bird species. Flooding on the Nene Washes can lead to difficulties in managing the wet grassland habitats and may result in low numbers of target bird species successfully breeding. It may also impact the numbers of wintering birds at the site. Deteriorations in water quality could have an indirect impact on population abundance if macrophyte diversity for dabbling/ surface feeding species reduces, food availability and the capacity of the site declines.

7.5.8. Fluctuations in water quality and quantity can affect the structure and function of wetland habitats within the SAC, which are vitally important for spined loach. This includes dissolved oxygen, ammonia, biochemical oxygen demand and phosphorus. Changes to the physical, chemical or hydrological conditions of the SAC could impact on the sites ability to maintain the abundance of spined loach and contribute to achieving Favourable Conservation Status across the species spatial range in the UK.

7.5.9. The main hydrological issues associated with the Nene Washes SPA and SAC therefore are around high water levels from flooding and phosphate levels from diffuse pollution.

7.5.10. The Ouse Washes is also a WFD protected site. It also falls under the Anglian River Basin Management Plan. The SIP identifies inappropriate water levels and water pollution as priority threats to this protected site. The Ouse Washes is a designated flood water storage reservoir, and levels of flooding have been increasing for several decades.

7.5.11. Qualifying bird species are being adversely affected in a number of ways by increased flooding throughout the year. Over winter, deeper more extensive floods impact on the numbers of qualifying species that require shallow water in the Washes for feeding. Flood water that persists into the breeding season causes unsuitable conditions for nesting. Deep, long-lasting floods may also reduce the soil invertebrates that are important food for waders in the breeding season. Changes in water supply or flow, and water area and or depth within the SPA can have significant impacts on qualifying bird species. Targets to ensure flooding does not cover >30% of the site during the nesting season have been implemented as well as targets to maintain water levels in ditches, scrapes and natural water depressions.

7.5.12. The supplementary conservation advice states that water quality data from 2015 showed that phosphate concentrations in the field drains were too high and phosphorus and nitrogen concentrations in the Bedford Ouse River supplying water to the Washes also remain high. Inappropriate levels of nutrients from diffuse pollution in combination with inappropriate water levels from flooding have adversely affected the extent and composition of vegetation communities on the washes. Resulting changes to the grassland mosaic has potential to affect the notified bird interests by destroying habitat suitable for many of the birds that visit or breed at the site.

7.5.13. Water quality is also a key issue for the qualifying species of the Ouse Washes SAC. Nutrient enrichment can lead to a decline in substrate condition for spined loach due to benthic algal growth and associated enhanced siltation. It also increases the risk of impacts on the cover of the submerged plant community, which the spined loach uses for cover. The spined loach is susceptible to both episodic and chronic organic pollution. Episodic pollution causes direct mortalities whilst chronic pollution affects substrate condition through the build-up of sediment oxygen demand and excessive microbial populations. If the organic content of the substrate becomes too high, reduced oxygen availability near the sediment/water interface may lead to enhanced egg and juvenile

mortality. The supplementary conservation advice for the SAC sets targets relating to water quality and nutrients, organic and other pollutants and flow. These targets all relate to maintenance of the current conditions.

7.5.14. The main hydrological issues associated with the Ouse Washes SPA and SAC therefore are around high water levels from flooding and high nutrient levels from diffuse pollution.

7.5.15. The Wash SPA and The Wash & North Norfolk Coast SAC are also WFD protected sites which fall under the Anglian River Basin Management Plan. The SIP identifies inappropriate water levels as a priority threat to these protected sites. It states structures which control water along the North Norfolk Coast have fallen into disrepair. The issue is preventing appropriate water level controls for breeding birds. Supplementary advice sets targets for maintaining hydrological flow and water quality. Changes in source, depth, duration, frequency, magnitude and timing of water supply or flow can have important implications for qualifying bird species. Water pollution can adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats.

7.5.16. The main hydrological issues associated with the Wash SPA and The Wash & North Norfolk Coast SAC are water levels and water quality.

7.5.17. The current condition and ecological status of the water dependent European sites screened into the Appropriate Assessment are summarised in **Table 7.13** below.

Table 7.13: Condition of SSSIs underpinning the Nene Washes SPA/SAC and Ouse Washes SPA/SAC

Current condition of SSSI underpinning European site[52]	**Area of SSSI underpinning European Site (ha)**
Nene Washes SPA/SAC	
Nene Washes SSSI	
Total area	1,522.11
WFD favourable	303.84
WFD unfavourable recovering	1,218.27
WFD unfavourable no change	0
WFD unfavourable declining	0
WFD destroyed/partially destroyed	0
Adventurers' Land SSSI	
Total area	10.12
WFD favourable	10.12
WFD unfavourable recovering	0
WFD unfavourable no change	0
WFD unfavourable declining	0
WFD destroyed/partially destroyed	0
Name of WFD Waterbody[53]	**Current Ecological Status[54]**
Mortons Leam	Moderate

[52] Natural England Designated Sites View – accessed on 21.4.2022
[53] As identified in Natural England Site Improvement Plans
[54] DEFRA Catchment Data Explorer – accessed on 21.4.2022

Current condition of SSSI underpinning European site[52]	**Area of SSSI underpinning European Site (ha)**
Stanground Lode	Moderate
Nene – Islip to tidal	Moderate
North Level Pumped Areas 2 and 3	Moderate
Middle Level	Moderate
Ouse Washes SPA/SAC	
Ouse Washes SSSI	
Total area	2,518.67
WFD favourable	396.25
WFD unfavourable recovering	89.67
WFD unfavourable no change	2,032.76
WFD unfavourable declining	0
WFD destroyed/partially destroyed	0
Name of WFD Waterbody	**Current Ecological Status**
Counter Drain (Sutton and Mepal IDB incl. Cranbrook Drain)	Moderate
Counter Drain (Manea and Welney IDB)	Moderate
Counter Drain (Upwell and Outwell IDB) Water Body	Moderate
Old Bedford River / River Delph (inc. The Hundred Foot Washes)	Moderate
The Wash and North Norfolk Coast SAC	
The Wash SSSI	
Total area	62,045.63
WFD favourable	42,177.66
WFD unfavourable recovering	19,611.49
WFD unfavourable no change	0
WFD unfavourable declining	256.48
WFD destroyed/partially destroyed	0
North Norfolk Coast SSSI	
Total area	7,862.29
WFD favourable	7,691.25
WFD unfavourable recovering	171.04
WFD unfavourable no change	0
WFD unfavourable declining	0
WFD destroyed/partially destroyed	0
Gibraltar Point SSSI	
Total area	598.24
WFD favourable	360.89
WFD unfavourable recovering	186.71
WFD unfavourable no change	0
WFD unfavourable declining	50.64
WFD destroyed/partially destroyed	0
Name of WFD Waterbody	**Current Ecological Status**
Ingol	Moderate
Heacham River	Poor

Current condition of SSSI underpinning European site[52]	**Area of SSSI underpinning European Site (ha)**
Burn	Moderate
East & West Fen Drains	Bad
Whaplode River	Moderate
Kirton Marsh Drain	Good
The Wash SPA	
The Wash SSSI (as above)	

Assessment of Effects

7.5.18. Stage 1 Screening identified that the Nene Washes SPA is *potentially* at risk of adverse effects as a result of hydrological changes as a result of the following policies and site allocations:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development
- LP43.02 Land rear of 98 -112 Drybread Road, Whittlesey
- LP43.05 158 Stonald Road, Whittlesey
- LP61.01 Land at Gull Drove, Guyhirn
- LP61.02 Land at Selwyn Lodge Farm, Guyhirn
- LP62.01 Front Road, Murrow
- LP68.01 6 March Road, Ring's End
- LP69.01 Land at Willock Farm, Tholomas Drove
- LP44.01 Land to the southwest of the proposed realignment of the A605 at Kings Dyke, Whittlesey
- LP44.02 Churchfield Farm, Kings Dyke, Whittlesey
- LP44.04 Vacant site, Kings Dyke, Whittlesey
- LP52.01 Land East of Ben Burgess, Coates

7.5.19. Stage 1 Screening identified that the Nene Washes SAC is *potentially* at risk of adverse effects as a result of hydrological changes as a result of the following policies and site allocations:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development
- LP43.02 Land rear of 98 -112 Drybread Road, Whittlesey
- LP43.05 158 Stonald Road, Whittlesey
- LP61.01 Land at Gull Drove, Guyhirn
- LP61.02 Land at Selwyn Lodge Farm, Guyhirn
- LP62.01 Front Road, Murrow
- LP68.01 6 March Road, Ring's End
- LP69.01 Land at Willock Farm, Tholomas Drove
- LP44.01 Land to the southwest of the proposed realignment of the A605 at Kings Dyke, Whittlesey
- LP44.02 Churchfield Farm, Kings Dyke, Whittlesey
- LP44.04 Vacant site, Kings Dyke, Whittlesey
- LP52.01 Land East of Ben Burgess, Coates

7.5.20. Stage 1 Screening identified that the Ouse Washes SPA is *potentially* at risk of adverse effects as a result of hydrological changes as a result of the following policies:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

7.5.21. Stage 1 Screening identified that the Ouse Washes SAC is *potentially* at risk of adverse effects as a result of hydrological changes as a result of the following policies:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

7.5.14. Stage 1 Screening identified that The Wash SPA is *potentially* at risk of adverse effects as a result of hydrological changes as a result of the following policies:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

7.5.15. Stage 1 Screening identified that The Wash and North Norfolk Coast SAC is *potentially* at risk of adverse effects as a result of hydrological changes as a result of the following policies:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

7.5.16. In 2013, the Environment Agency undertook an assessment to determine areas of water stress in the UK. The assessment classified Anglian Water supply regions as areas of "serious" water stress.[55] In 2021, this assessment was updated to take account of the publication of the National Framework for Water Resources and the Water Resource Management Plans published in 2020.

7.5.17. Water supply in Fenland is supplied by Anglian Water. Water companies have a statutory duty to establish how planned development in their area can be serviced. In terms of planning for growth and use of water, the Water Resources Management Plan (WRMP) for Anglian Water demonstrates that Anglian Water has a long-term plan in place to accommodate the impacts of population growth, drought, environmental obligations and climate change uncertainty in order to balance supply and demand. As part of the statutory approval process, the WRMP must be approved by both the Environment Agency (EA) and Natural England (as well as other regulators), and therefore the outcomes of the plans can be used to inform whether growth levels can be supplied with a sustainable source of water supply.

7.5.18. In terms of the Anglian Water WRMP[56], the water supply area is divided into 28 Water Resource Zones (WRZs). WRZs share the same raw resources for supply and are interconnected by supply pipes, treatment works and pumping stations. Fenland is located within the South Fenland WRZ. Water is abstracted from a combination of groundwater in the Norfolk Chalk aquifers and the River Nar. The South Fenland WRZ has been forecast

[55] Serious water stress is defined in the Water Industry (Prescribed Conditions) Regulations 1999 as where 'the current household demand for water is a high proportion of the current effective rainfall which is available to meet that demand; or the future household demand for water is likely to be a high proportion of the effective rainfall which is likely to be available to meet that demand'.

[56] Anglian Water (2019) Water Resources Management Plan, December 2019

a deficit in supply of -19.53Ml/d by 2045 without intervention. This deficit is driven by sustainability and drought impacts. Anglian Water aims to use a combined strategy of smart metering, water efficiency and leakage reduction to reduce demand. The preferred scheme to improve supply security is potable water transfer between Ruthamford North WRZ and South Fenland WRZ (40Ml/d). The WRMP also identifies the potential for a new reservoir in the adjacent North Fenland Water Resource Zone which could have a positive impact on water supply in the district in the longer term. The WRMP was subject to its own HRA during its preparation[57]. The HRA concluded that the preferred scheme in the South Fenland WRZ would not result in adverse effects on the integrity of a European Site.

7.5.19. Anglian Water provides wastewater services to Fenland, which is served by 9 Water Recycling Centres (WRC). As the sewerage undertaker under Section 94 of the Water Industry Act 1991, Anglian Water has a duty to provide sewerage and treat wastewater arising from new development.

7.5.20. Anglian Water's Water Recycling Long-Term Plan (WRLTP)[58] describes the investment needed to balance the supply and demand for water recycling services over a 25-year period. The report includes county summaries of the number of homes planned to 2025 and 2045, population growth to 2025 and 2045 and the expected investment required in water recycling infrastructure required over the period 2020 to 2045.

7.5.21. **Table 7.14** shows Anglian Water's strategy for investment in WRCs within the Fenland Local Plan area. The current growth risk assessments for the WRCs serving Fenland District indicates that further capacity is likely to be required within the current Asset Management Plan period (2020-2025). Further details on investment plans will be available over the next year as the Anglian Water Drainage and Wastewater Management Plan (DWMP) is developed and consulted on.

Table 7.14: Planned water recycling investments for drainage catchments in Fenland

Location	**Investment Strategy**	**£M Asset Management Plan Period**				
		AMP7 2020-25	AMP8 202530	AMP9 2030-35	AMP10 2035-40	AMP11 2040-45
Benwick	None	0	0	0	0	0
Chatteris	None	0	0	0	0	0
Doddington	Additional WRC flow capacity	0	3.367	0	0	0
Manea	Additional WRC flow capacity	0	1.271	0	0	1.500
March	Combined Sewer Overflows (CSO) investigations	0.019	0	0	0	0
	CSO improvements	0	0.416	0	0	0
	Increase drainage capacity	0	3.059	0	0	0
Parsons Drove	None	0	0	0	0	0
Tips End Green Lane	No information provided					

[57] Mott MacDonald (2019) Anglian Water - Water Resources Management Plan Habitats Regulations Assessment, Task II Appropriate Assessment, December 2019
[58] Anglian Water (2018) Water Recycling Long-Term Plan, September 2018

Location	Investment Strategy	£M Asset Management Plan Period				
		AMP7 2020-25	AMP8 202530	AMP9 2030-35	AMP10 2035-40	AMP11 2040-45
Wisbech – West Walton	Increase drainage capacity	0.725	0.725	0	0	0
Whittlesey	Increase drainage capacity – SuDS & upsizing	2.747	0.767	0	0	0

Source: Anglian Water WRLTMP (2018)

7.5.22. The Fenland Outline Water Cycle Study (2022) undertook an assessment of WRC capacity in terms of new development proposed within the emerging Fenland Local Plan. The assessment concluded that most WRCs have some headroom available for future development. However, Doddington, Manea and Whittlesey WRCs will exceed their current Dry Weather Flow (DWF) permitted value as a result of future growth. March and Parson Drove WRCs will be within 10% of their permitted DWF. These WRCs will require additional investment and treatment capacity upgrades to meet the requirements of the proposed development in the emerging Local Plan.

7.5.23. The levels of water that Anglian Water can abstract is controlled by the Environment Agency's permitting system. The Environment Agency regulate existing licences and grant new ones. To do this they use: the catchment abstraction management strategy (CAMS) process and abstraction licensing strategies (ALS). This Environment Agency management approach to water abstraction licensing and protecting European Sites (e.g., arising from water company abstraction requests) means that water level management is strictly controlled by the CAMS and licensing regimes.

7.5.24. CAMS set out how the Environment Agency will manage water resources in each catchment, how much is available and how it is licensed, taking into account what the environment needs. The Environment Agency has an obligation to protect all sites designated under the Habitat Regulations. Under these Regulations, the Environment Agency will consider the impact of proposed abstractions on designated sites and will assess existing abstraction licences and any new applications to make sure they are not impacting on internationally important nature conservation sites.

7.5.25. Flood Risk Management Plans (FRMPs) explain the risk of flooding from rivers, the sea, surface water, groundwater and reservoirs. FRMPs set out how risk management authorities will work with communities to manage flood and coastal risk. The Anglian River Basin District FRMP[59] covers Fenland and an updated version is currently being prepared. The FRMP provides a range of objectives and programmes of measures identified to address risks from all flood sources. These are drawn from the many risk management authority plans already in place but also include a range of further strategic developments for the FRMP 'cycle' period of 2015 to 2021.

7.5.26. RBMPs and FRMPs provide an integrated approach to catchment planning for water. The RBMPs set out: the current state of the water environment, pressure affecting the water environment, environmental objectives for protecting and improving the waters and, a programme of measures and actions needed to achieve the objectives. The Environment

[59] Environment Agency (2016) Anglian Flood Risk Management Plan 2015-2021

Agency has routine monitoring programmes in place for assessing compliance with Habitats Directive sites.

7.5.27. Given the protective measures established through the review of consent/licensing of abstraction, and management of water quality as controlled by the statutory agencies, the overall growth proposed within the Local Plan is unlikely to impact on flood water levels or general water quality at the identified European sites. Stage 1 screening highlighted site allocations where significant effects could not be ruled out in relation to the Nene Washes SAC, SPA and Ramsar. These sites are either in close proximity to the Nene Washes, and/or in areas identified by Natural England's SSSI IRZ where development has the potential to impact on water quality sensitive features. The main risks relating to these sites could relate to contamination of water quality during construction on site and in the long term, run-off/drainage issues affecting nearby ditches and freshwater habitat.

7.5.28. Site allocations LP43.05, LP44.02 and LP44.04 have extant planning permission at the time of preparing the Local Plan. The Local Plan does not include any specific policy requirements for these sites as it is expected that sites will be developed in accordance with their planning permission. This HRA assumes that any necessary project level HRA was undertaken as part of these planning applications. ***Sites LP43.05, LP44.02 and LP44.04 can therefore be ruled out from further consideration in the appropriate assessment.***

7.5.29. The Local Plan states that a flood risk assessment will be required for the following sites: LP44.01, LP52.01, LP61.01, LP61.02 and LP68.01. The Local Plan states that consideration of contamination will be required for the following sites: LP43.02, LP44.01 and LP61.01. Issues of run-off/drainage and contamination can be identified and resolved at the project level, for example, through careful design and construction management. This HRA recommends an amendment to the policy requirement wording for the site allocations set out in paras 7.5.18 and 7.5.19 as a precautionary measure to ensure that there will be no adverse effects on the site integrity arising from water quality issues (see "Recommendations to ensure no LSE resulting from the Local Plan" below).

In-Combination Effects

7.5.30. Growth proposed within other Local Authorities' Local Plans may act in-combination with that proposed within the Fenland Local Plan to increase the demand for water and therefore potentially leading to significant adverse effects. However, as Anglian Water's WRMP explicitly accounts for the growth predicted by Fenland and other LPAs, 'in combination' effects between the Fenland Local Plan and other Local Plans due to the amount of growth proposed are unlikely to occur.

7.5.31. The HRAs of the Local Plans of neighbouring administrative areas have considered the issue of water quality and hydrological issues.

7.5.32. Existing water abstraction licenses held by Anglian Water have been subject to assessment by the Environment Agency and deemed acceptable. Any further water abstraction licence applications will be subject to HRA by the Environment Agency as a Competent Authority.

Avoidance and Mitigation Measures

Policies in the Fenland Local Plan

7.5.33. **Policy LP24 Natural Environment** states that the highest level of protection will be afforded to internationally protected sites. Proposals having an adverse impact on the integrity of such areas, either alone or in combination, that cannot be avoided or adequately mitigated to remove any adverse effect, will not be permitted other than in very exceptional circumstances. Development will only be permitted where the Council is satisfied that any necessary avoidance and / or mitigation measures are included to ensure there are no adverse effects on integrity either alone or in combination.

7.5.34. The Local Plan includes a protection policy which would ensure that water quality and water levels of the Nene Washes and Ouse Washes are not adversely impacted by new development. **Policy LP32 Flood and Water Management** requires development proposals to protect the water environment and must demonstrate that "*water is available to support the development*"…" "*the development contributes positively to the water environment and its ecology where possible and does not adversely affect surface and ground water"… and "adequate foul water treatment and disposal already exists or can be provided in time to serve the development".* These measures will ensure that infrastructure improvements to manage increased wastewater and sewage effluent produced by new development are delivered in a timely manner, and that, as required by the Water Framework Directive, there is no deterioration to water quality and the environment.

7.5.35. The policy also sets out requirements in relation to water efficiency, requiring all new dwellings to achieve the Optional Technical Housing Standard of 110 litres per day for water efficiency as described by Building Regulation G2. This will help to reduce the demand for water and maximise the efficient use of water across Fenland.

7.5.36. **Policy LP33 Development on Land affected by Contamination** requires all new development to take account of the potential environmental impacts on people, buildings, land, air and water arising from the development itself; and any former use of the site, including, in particular, adverse effects arising from pollution. The policy would ensure preliminary assessments adhere to the Environment Agency's Land Contamination Risk Management.

7.5.37. **Policy LP43 Residential site allocations in Whittlesey** requires any proposals for site allocation LP43.02 to undertake an assessment of potentially contaminated land.

7.5.38. **Policy LP44: Site allocations for non-residential development in Whittlesey** requires any proposals for site allocation LP44.01 to provide an assessment of flood risk which reflects the recommendations of the SFRA Level 2 assessment and to investigate potential for contaminated land and provide remediation where necessary.

7.5.39. **Policy LP52 Employment allocations in Coates** requires any proposals for site allocation LP52.01 to provide an assessment of flood risk which reflects the recommendations of the SFRA Level 2 assessment

7.5.40. **Policy LP61 Residential site allocations in Guyhirn** requires any proposals for site allocation LP61.01 to provide an assessment of flood risk which reflects the recommendations of the SFRA Level 2 assessment and appropriate mitigation of potential land contamination. The policy requires proposals for site allocation LP61.02 to also provide an assessment of flood risk.

7.5.41. **Policy LP68: Residential site allocations in Ring's End** requires any proposals for site allocation LP68.01 to provide an assessment of flood risk which reflects the recommendations of the SFRA Level 2 assessment.

Other mitigation measures

7.5.42. Mitigation and monitoring are already in place, namely the Environment Agency's assessment and monitoring of water abstraction licences to ensure they will not have an adverse effect on European Sites, and Anglian Water's and Severn Trent water's WRMPs, which include a commitment to reducing the demand for water and water efficiency measures.

7.5.43. There is an Environment Agency Water Level Management Plan for the Ouse Washes that details the water levels required to maintain good conditions for the breeding bird qualifying features. There is also a Diffuse Water Pollution Plan, which is currently under review.

7.5.44. The Nene Washes also has a Water Level Management Plan and water quality data in relation to Moreton's Leam is monitored by the Environment Agency.

Recommendations to ensure no LSE resulting from the Local Plan

7.5.45. Avoiding adverse effects on water quality and quantity is primarily the responsibility of the Water Companies (through resource planning) and the Environment Agency (abstraction licensing). However, the Local Plan can direct requirements for efficiency of water use in new developments and require that issues relating to water supply and discharge (including potential effects on European sites) are in place prior to the implementation of development proposals.

7.5.46. As demonstrated above, the Local Plan includes a strong policy framework that will ensure new development takes into account potential environmental impacts, maximises the efficient use of water, and demonstrates that water infrastructure can be provided in time to support the development. It also includes strong policy safeguards to secure measures that may be required to protect water quality and European sites to meet the requirements of the Water Framework Directive.

7.5.47. In light of the above assessment of likely significant effects alone of the site allocations within the Local Plan, this HRA recommends additional policy wording to provide sufficient certainty that the Local Plan will not result in adverse effects on the integrity of the Nene Washes SPA, SAC and Ramsar.

LP43.02 (40335) Land rear of 98 -112 Drybread Road
LP44.01 (40270) Land to the southwest of the proposed realignment of the A605 at Kings Dyke
LP52.01 (40321) Land East of Ben Burgess
LP61.01 (40147) Land at Gull Drove
LP61.02 (40303) Land at Selwyn Lodge Farm
LP62.01 (40150 Front Road, Murrow
LP68.01 (40241) 6 March Road, Ring's End
LP69.01 (40307) Land at Willock Farm, Tholomas Drove

7.5.48. For these sites, it is recommended wording is added to the policy requirements for each site as follows:

"*The council will require the submission of sufficient information from the applicant to enable the completion of a project-level screening exercise under the Habitats*

Regulations Assessment process and, if that screening concludes that full Appropriate Assessment is needed, sufficient information to enable it to complete that Appropriate Assessment. This process will need to demonstrate that the development will not have a significant adverse effect on the integrity of the Nene Washes SAC, SPA and Ramsar."

7.5.49. ***It can reasonably be concluded, after taking into account the above mitigation measures and consideration of other plans, that there will be no likely significant effects, alone or in combination, on the Nene SAC, SPA and Ramsar or Ouse Washes SAC, SPA and Ramsar, resulting from water quality or water level changes through the implementation of the Local Plan.***

7.6. Atmospheric pollution

Introduction

7.6.1. Transport is a significant source of emissions of air pollution, with road transport responsible for 34% of Nitrogen oxides (NO_x) (80% of NO_x concentrations at the roadside).[60] High levels of NO_x can affect biodiversity in sensitive habitats and is one of the main pollutants affecting vegetation and ecosystems, as well as sulphur dioxide (SO_2) and ammonia (NH_3)[61]. These pollutants have both direct and indirect effects. Adverse impacts include: increase in Nitrogen loving species and the loss of sensitive species, increased sensitivity to drought, changes to habitat structure and function, changes in soil chemistry, and an increased sensitivity to abiotic and biotic stresses (such as pests and climate).[62] Critical thresholds, beyond which plant communities may change in response to pollutants, have been developed for a range of habitat types, and are available from the Air Pollution Information Service (APIS) [63]. APIS holds data specifically in relation to habitat sensitivity.

7.6.2. Screening identified the following European sites potentially affected by air pollution as a result of development proposed within the Local Plan:

- Nene Washes SPA and Ramsar
- Nene Washes SAC
- Ouse Washes SPA and Ramsar
- Ouse Washes SAC

7.6.3. The SIPs for the Nene Washes SPA and SAC and Ouse Washes SPA and SAC do not identify atmospheric pollution as a priority threat, however Natural England's supplementary advice[64] on conserving and restoring site features sets targets for air quality. They state that the structure and function of the habitats which support the qualifying species of both SPAs and SACs may be sensitive to changes in air quality, in particular nitrogen and acidity. For Spined loach and the SPA qualifying bird features, the supplementary conservation advice sets a target is to maintain concentrations and deposition of air pollutants at or below the site-relevant Critical Load or Level values. The SPA advice for the Ouse Washes notes that air quality is currently within acceptable limited for the notified features and their habitats.

Assessment of Effects

7.6.4. Stage 1 Screening identified that the Nene Washes SPA and Ramsar is *potentially* at risk of adverse effects as a result of increased traffic and therefore atmospheric pollution from the following policies:

[60] DEFRA (2019) Clean Air Strategy 2019
[61] Holman et al (2019). A guide to the assessment of air quality impacts on designated nature conservation sites – version 1.0, Institute of Air Quality Management, London. www.iaqm.co.uk/text/guidance/airquality-impacts-on-nature-sites-2019.pdf
[62] IPENS (2015) Atmospheric nitrogen theme plan - developing a strategic approach for England's Natura 2000 sites
[63] www.apis.ac.uk
[64] Natural England (2019) European Site Conservation Objectives: supplementary advice on conserving and restoring site features Nene Washes Special Protection Area (SPA) Site code: UK9008031 and European Site Conservation Objectives: Supplementary Advice on conserving and restoring site features Ouse Washes Special Protection Area (SPA) Site Code:UK9008041

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

7.6.5. Stage 1 Screening identified that the Nene Washes SAC is *potentially* at risk of adverse effects as a result of increased traffic and therefore atmospheric pollution from the following policies:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

7.6.6. Stage 1 Screening identified that the Ouse Washes SPA and Ramsar is *potentially* at risk of adverse effects as a result of increased traffic and therefore atmospheric pollution from the following policies:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

7.6.7. Stage 1 Screening identified that the Ouse Washes SAC is *potentially* at risk of adverse effects as a result of increased traffic and therefore atmospheric pollution from the following policies:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

7.6.8. There are no LSE on air quality to be expected from individual allocations within the Local Plan. This HRA therefore considers the cumulative development across Fenland district and the overall growth of adjoining authorities with respect to in-combination effects for this impact pathway.

7.6.9. There are approximately 101,500[65] people living within the Fenland area, with around 70% of the population living within one of the four market towns. The Fenland Local Plan sets out to provide 10,525 new homes and 225haha of employment land up to the year 2040. This represents a significant increase in population, and associated increases in road traffic which have the potential for significant effects on air quality.

7.6.10. Fenland District Council has declared 4 Air Quality Management Areas (AQMA). Three have been declared in Wisbech for Sulphur dioxide (from an industrial coal-fired boiler at a large factory), Particulate matter (from an industrial coal-fired boiler at a large factory) and Nitrogen Dioxide (from traffic emissions in a congested stretch of road in the town centre). The fourth is an area west and northwest of Whittlesey brickworks and to the east of Whittlesey brickworks for Sulphur dioxide (from industrial chimneys in Whittlesey).

7.6.11. APIS is an online resource providing data on the sensitivity of habitats, species and statutory designated sites to air pollution. Site critical loads of nitrogen deposition for the Nene Washes SPA and Ouse Washes SPA are provided on APIS. Critical loads and levels are thresholds below which harmful effects on sensitive UK habitats will not occur to a noteworthy level, according to current levels of scientific understanding. Critical loads and levels are subject to regular review.

[65] Mid 2018 (https://cambridgeshireinsight.org.uk/wp-content/uploads/2020/04/2018-Based-Population-Forecasts-1.xlsx)

7.6.12. A review of APIS data for the Nene Washes SPA indicates that nitrogen deposition levels are exceeding the critical load of 20-30 kg N/ha/yr for SPA qualifying features. Nitrogen deposition levels for the SPA are 19.2kg N/ha/yr as the minimum load and 86.4kg N/ha/yr as the maximum load. Average nitrogen deposition falls within the critical load at 30 N/ha/yr[66]. For the Nene SAC, there are no critical loads available for Spined loach, however this does not necessarily imply that the feature is not sensitive to nitrogen.

7.6.13. For the Ouse Washes, nitrogen deposition levels are within the critical load of 20-30 kg N/ha/yr for SPA qualifying features. Nitrogen deposition levels for the SPA are 16.6kg N/ha/yr as the minimum load and 22.2kg N/ha/yr as the maximum load. Average nitrogen deposition falls within the critical load at 18.1 N/ha/yr. As per the Nene Washes SAC, there are no critical loads available for Spined loach.

Table 7.15: Air quality data from APIS for relevant qualifying features of the Nene Washes and Ouse Washes

Site and Qualifying Feature		Nitrogen Deposition kg N/ha/yr	Acid Deposition Nitrogen | Sulphur keq/ha/yr	Ammonia Concentration µg/m3	NOx Concentration µg/m3	SO2 Concentration µg/m3
Nene Washes SPA						
Eurasian wigeon Broad Habitat: Neutral grassland Littoral sediment	Max	86.4	6.2/0.3	11.75	24.69	4.57
	Min	19.2	1.4/0.2	2.24	10.55	1.59
	Average	30	2.1/0.2	3.81	12.35	2.8
Eurasian teal Broad Habitat: Neutral grassland Littoral sediment	Max	86.4	6.2/0.3	11.75	24.69	4.57
	Min	19.2	1.4/0.2	2.24	10.55	1.59
	Average	30	2.1/0.2	3.81	12.35	2.8
Northern pintail Broad Habitat: Littoral sediment	Max	86.4	6.2/0.3	11.75	24.69	4.57
	Min	19.2	1.4/0.2	2.24	10.55	1.59
	Average	30	2.1/0.2	3.81	12.35	2.8

[66] APIS site relevant critical loads available at Site Relevant Critical Loads and Source Attribution | Air Pollution Information System (apis.ac.uk), accessed on 4.5.2022

Site and Qualifying Feature		Nitrogen Deposition kg N/ha/yr	Acid Deposition Nitrogen | Sulphur keq/ha/yr	Ammonia Concentration µg/m3	NOx Concentration µg/m3	SO2 Concentration µg/m3
Garganey Broad Habitat: Neutral grassland	Max	86.4	6.2/0.3	11.75	24.69	4.57
	Min	19.2	1.4/0.2	2.24	10.55	1.59
	Average	30	2.1/0.2	3.81	12.35	2.8
Northern shoveler Broad Habitat: Standing open water and canals	Max	11.3	0.8 | 0.3	11.75	24.69	4.57
	Min	8.3	0.6 | 0.2	2.24	10.55	1.59
	Average	9.2	0.7 | 0.2	3.81	12.35	2.8
Tundra swan Broad Habitat: Standing open water and canals	Max	11.3	0.8 | 0.3	11.75	24.69	4.57
	Min	8.3	0.6 | 0.2	2.24	10.55	1.59
	Average	9.2	0.7 | 0.2	3.81	12.35	2.8
Gadwall Broad Habitat: Standing open water and canals	Max	11.3	0.8 | 0.3	11.75	24.69	4.57
	Min	8.3	0.6 | 0.2	2.24	10.55	1.59
	Average	9.2	0.7 | 0.2	3.81	12.35	2.8
Nene Washes SAC						
Spined loach Broad Habitat: Rivers and streams	Max	11.2	0.8 | 0.3	11.75	19.86	4.57
	Min	8.3	0.6 | 0.2	2.24	10.55	1.59
	Average	9.3	0.7 | 0.2	4.69	12.57	2.56
Ouse Washes SPA						
Hen harrier Broad Habitat: Dwarf shrub heath, Fen, marsh and swamp, Littoral sediment	Max	22.2	1.6 | 0.2	2.91	12.03	1.21
	Min	16.6	1.2 | 0.1	1.82	9.06	0.88
	Average	18.1	1.3 | 0.1	2.12	9.38	0.97
	Max	22.2	1.6 | 0.2	2.91	12.03	1.21

Site and Qualifying Feature		Nitrogen Deposition kg N/ha/yr	Acid Deposition Nitrogen | Sulphur keq/ha/yr	Ammonia Concentration µg/m3	NOx Concentration µg/m3	SO2 Concentration µg/m3
Eurasian Wigeon Broad Habitat: Neutral grassland, Littoral sediment	Min	16.6	1.2 | 0.1	1.82	9.06	0.88
	Average	18.1	1.3 | 0.1	2.12	9.38	0.97
Eurasian teal Broad Habitat: Neutral grassland, Littoral sediment	Max	22.2	1.6 | 0.2	2.91	12.03	1.21
	Min	16.6	1.2 | 0.1	1.82	9.06	0.88
	Average	18.1	1.3 | 0.1	2.12	9.38	0.97
Mallard Broad Habitat: Standing open water and canals	Max	9.3	0.7 | 0.2	2.91	12.03	1.21
	Min	8	0.6 | 0.1	1.82	9.06	0.88
	Average	4.5	0.3 | 0.2	2.12	9.38	0.97
Northern pintail Eurasian teal Broad Habitat: Littoral sediment	Max	22.2	1.6 | 0.2	2.91	12.03	1.21
	Min	16.6	1.2 | 0.1	1.82	9.06	0.88
	Average	18.1	1.3 | 0.1	2.12	9.38	0.97
Garganey Broad Habitat: Neutral grassland	Max	22.2	1.6 | 0.2	2.91	12.03	1.21
	Min	16.6	1.2 | 0.1	1.82	9.06	0.88
	Average	18.1	1.3 | 0.1	2.12	9.38	0.97
Northern shoveler Broad Habitat: Standing open water and canals	Max	9.3	0.7 | 0.2	2.91	12.03	1.21
	Min	8	0.6 | 0.1	1.82	9.06	0.88
	Average	4.5	0.3 | 0.2	2.12	9.38	0.97
	Max	9.3	0.7 | 0.2	2.91	12.03	1.21

Site and Qualifying Feature		Nitrogen Deposition kg N/ha/yr	Acid Deposition Nitrogen | Sulphur keq/ha/yr	Ammonia Concentration µg/m3	NOx Concentration µg/m3	SO2 Concentration µg/m3
Common pochard Broad Habitat: Standing open water and canals	Min	8	0.6 | 0.1	1.82	9.06	0.88
	Average	4.5	0.3 | 0.2	2.12	9.38	0.97
Tufted duck Broad Habitat: Standing open water and canals	Max	9.3	0.7 | 0.2	2.91	12.03	1.21
	Min	8	0.6 | 0.1	1.82	9.06	0.88
	Average	4.5	0.3 | 0.2	2.12	9.38	0.97
Ruff Broad Habitat: Neutral grassland, Littoral sediment	Max	22.2	1.6 | 0.2	2.91	12.03	1.21
	Min	16.6	1.2 | 0.1	1.82	9.06	0.88
	Average	18.1	1.3 | 0.1	2.12	9.38	0.97
Great cormorant Broad Habitat: Standing open water and canals	Max	9.3	0.7 | 0.2	2.91	12.03	1.21
	Min	8	0.6 | 0.1	1.82	9.06	0.88
	Average	4.5	0.3 | 0.2	2.12	9.38	0.97
Mute swan Broad Habitat: Standing open water and canals	Max	9.3	0.7 | 0.2	2.91	12.03	1.21
	Min	8	0.6 | 0.1	1.82	9.06	0.88
	Average	4.5	0.3 | 0.2	2.12	9.38	0.97
Tundra swan Broad Habitat: Improved grassland, Arable and horticulture	Max	22.2	1.6 | 0.2	2.91	12.03	1.21
	Min	16.6	1.2 | 0.1	1.82	9.06	0.88
	Average	18.1	1.3 | 0.1	2.12	9.38	0.97
Whooper swan	Max	22.2	1.6 | 0.2	2.91	12.03	1.21
	Min	16.6	1.2 | 0.1	1.82	9.06	0.88
	Average	18.1	1.3 | 0.1	2.12	9.38	0.97

Site and Qualifying Feature		Nitrogen Deposition kg N/ha/yr	Acid Deposition Nitrogen | Sulphur keq/ha/yr	Ammonia Concentration µg/m3	NOx Concentration µg/m3	SO2 Concentration µg/m3
Broad Habitat: Improved grassland						
Gadwall	Max	9.3	0.7 | 0.2	2.91	12.03	1.21
	Min	8	0.6 | 0.1	1.82	9.06	0.88
Broad Habitat: Standing open water and canals	Average	4.5	0.3 | 0.2	2.12	9.38	0.97
Common coot	Max	9.3	0.7 | 0.2	2.91	12.03	1.21
	Min	8	0.6 | 0.1	1.82	9.06	0.88
Broad Habitat: Standing open water and canals	Average	4.5	0.3 | 0.2	2.12	9.38	0.97
Ouse Washes SAC						
Spined loach	Max	9.3	0.7 | 0.2	2.91	12.03	1.19
	Min	8	0.6 | 0.1	1.82	9.06	0.88
Broad Habitat: Rivers and streams	Average	4.2	0.3 | 0.2	2.14	9.46	0.99

Source: APIS

7.6.14. The apportionment of nitrogen deposition and sulphur deposition by source is set out in **Table 7.16** and **Table 7.17** below for the Nene Washes and in **Table 7.18** and **Table 7.19** for the Ouse Washes. The data shows that the most significant source of nitrogen deposited onto both the Nene Washes SPA and SAC is 'Europe import', which accounts for 27% of the total contributions on the SPA and 31.4% on the SAC. The next biggest contributor is 'Livestock' at 16.5% on the SPA and 18.1% of the SAC. Road transport accounts for 14.6% of total contributions on the SPA and 12.9% on the SAC.

7.6.15. For both the Ouse Washes SPA and SAC, 'Europe import' is also the largest source of nitrogen deposition. Road transport accounts for 8.29% of total contributions on the SPA and 8.28% on the SAC.

Table 7.16: Contributions from all sources to nitrogen deposition on the Nene Washes

Type of Source	Nitrogen Deposition (KgN/ha/yr)(2018)	% of Total Contribution
Nene Washes SPA		
Europe import	3.25	27
Livestock	2.00	16.5

Type of Source	Nitrogen Deposition (KgN/ha/yr)(2018)	% of Total Contribution
Road transport	1.77	14.6
Others	0.22	11.4
Fertiliser application	1.32	10.9
International shipping	0.88	7.32
Non-agricultural non-abatable	0.56	4.61
Other transport	0.55	4.51
Non-agricultural abatable	0.36	3.01
Nene Washes SAC		
Europe import	3.07	31.4
Others	0.25	18.1
Livestock	1.44	14.9
Road transport	1.25	12.9
Fertiliser application	0.92	9.37
International shipping	0.83	8.47
Other transport	0.48	4.89

Source: APIS

Table 7.17: Contributions from all sources to sulphur deposition on the Nene Washes

Type of Source	Sulphur Deposition (Kg S/ha/yr)(2018)	% of Total Contribution
Nene Washes SPA		
Others	0.16	25.2
Commercial Industry and Residential Combustion	1.06	17.8
Whittlesey Brickworks	0.74	16.9
Europe import	0.96	16.2
Industrial combustion	0.71	11.9
International Shipping	0.70	11.9
Nene Washes SAC		
Others	0.15	23.6
Commercial Industry and Residential Combustion	1.04	18.2
Whittlesey Brickworks	1.00	17.6
Europe import	0.96	16.9
Industrial combustion	0.69	12
International Shipping	0.67	11.8

Table 7.18: Contributions from all sources to nitrogen deposition on the Ouse Washes

Type of Source	Nitrogen Deposition (KgN/ha/yr)(2018)	% of Total Contribution
Ouse Washes SPA		
Europe import	3.4	34.4
Livestock	1.55	15.4
Fertiliser application	1.08	10.8
International shipping	0.87	8.59
Road transport	0.83	8.29
Other transport	0.37	3.7
Ouse Washes SAC		
Europe import	3.5	34.5
Livestock	1.58	15.6
Fertiliser application	1.08	10.7
International Shipping	0.87	8.58
Road transport	0.83	8.28
Other transport	0.37	3.69

Source: APIS

Table 7.19: Contributions from all sources to sulphur deposition on the Ouse Washes

Type of Source	Sulphur Deposition (Kg S/ha/yr)(2018)	% of Total Contribution
Ouse Washes SPA		
Europe import	0.69	22.4
International Shipping	0.46	14.9
Commercial Industry and Residential Combustion	0.45	14.7
Whittlesey Brickworks	0.41	13.5
Industrial Combustion	0.28	9.2
Ouse Washes SAC		
Europe import	0.69	22.3
International Shipping	0.46	14.8
Commercial Industry and Residential Combustion	0.45	14.7
Whittlesey Brickworks	0.41	13.4
Industrial Combustion	0.28	9.1

Source: APIS

7.6.16. The A1139, A141 and A47 roads are within 200m of the Nene Washes SAC, SPA and Ramsar.

7.6.17. Approximately 960m of the A141 and A47 run within 200m of the Nene Washes SPA and 780m within 200m of the Nene Washes SAC. The A47 is a key route into and out of Peterborough, Wisbech and Kings Lynn. The A141 links March to Peterborough and Wisbech via the A47.

7.6.18. The broad habitat types within the SPA and SAC within 200m of the A141 and A47 are fen, marsh and swamp and improved grassland[67]. Fen, marsh and swamp habitats receive potentially nutrient rich or polluted water from the surrounding area as surface runoff and precipitation. Thus, atmospheric Nitrogen deposition may not be the only source of Nitrogen eutrophication in these systems. According to APIS, improved grasslands receive high doses of Nitrogen in fertilisers and manures and therefore atmospheric Nitrogen deposition is unlikely to result in negative effects on this habitat type.

7.6.19. Approximately 200m of the A1139 is within 200m of the Nene Washes SPA. The A1139 is located within Peterborough but connects to the A605 and A47, two main routes from Fenland into Peterborough. Using Natural England's Habitat Map, the broad habitat type within the SPA within 200m of the A1139 is rivers and streams. According to APIS, in most lowland rivers, nitrogen inputs from catchment land-use, not deposition from the atmosphere, are likely to be much more significant. This appears to be the case for the River Nene. The Environment Agency's Catchment Explorer data[68] shows that the River Nene in this location is not achieving good ecological status primarily due to high levels of phosphate.

7.6.20. A review of records held on the NBN atlas database revealed the presence of low numbers of SPA qualifying bird species in close proximity to the A141, A47 and A1139. Many of the species appear to prefer areas further into the SPA site, such as the RSPB nature reserve, and avoid the areas in close proximity to these roads, most likely due to disturbance from traffic noise (McClure et al., 2013).

7.6.21. The A1123 at Earith, A1101 at Welney and A142 at Mepal are within 200m of the Ouse Washes SAC, SPA and Ramsar. The A1122 is within 200m of the Ouse Washes SAC.

7.6.22. A section of the A1122 runs for about 530m within 200m of the Ouse Washes SAC towards the north-eastern end of the site, close to Downham Market. The A1123, east of Earith is located outside of Fenland in Huntingdonshire. The A1101 runs perpendicular to the Ouse Washes and crosses near Welney in Kings Lynn and West Norfolk. These areas can be screened out from further consideration in the appropriate assessment as they are located outside the administrative boundary of Fenland and traffic flows originating from Fenland using these stretches of road are likely to be low.

7.6.23. The A142 connects Chatteris to Ely and runs through both the SPA and SAC sites. Approximately 500m of the A142 is within 200m of the SPA and SAC. Similar to the Nene Washes, the NBN atlas database revealed the presence of low numbers of SPA qualifying species within 200m either side of the A142. The qualifying species of the SAC, the spined loach, is more widely distributed and there are a number of records in this area.

7.6.24. The habitats within the SPA and SAC within 200m of the A142 are fen, marsh and swamp, improved grassland and rivers and streams (Old Bedford River and Counter Drain). Catchment Explorer data for the Old Bedford River[69] shows that the river in this location is not achieving good ecological status due to physical modification and low flow,

[67] Using Natural England's Living England Habitat Map, available at www.magic.defra.gov,uk, accessed in 5.5.2022
[68] https://environment.data.gov.uk/catchment-planning/WaterBody/GB105032050381
[69] https://environment.data.gov.uk/catchment-planning/WaterBody/GB205033000060

with further investigation underway for levels of perfluorooctane sulphonate (PFOS) and dissolved oxygen.

In-Combination Effects

7.6.25. The HRA of the adopted Peterborough Local Plan considered the impact of reduced air quality on the Nene Washes SAC, SPA and Ramsar. Screening identified the overall growth proposed within the Local Plan, as well as a small number of individual site allocations, which could have the potential to result in likely significant effects and required further consideration in the Appropriate Assessment. It concluded that the incorporated mitigation in the Local Plan would be sufficient to ensure no likely significant effects, alone or in combination, on the integrity of Nene Washes site.

Avoidance and Mitigation Measures

Policies in the Fenland Local Plan

7.6.26. **Policy LP1 Settlement Hierarchy** focuses new development in the four market towns of Chatteris, March, Whittlesey and Wisbech. This strategy will help to reduce the need to travel by car and reduce the distance travelled to access services, facilities and employment, which will contribute to minimising nitrogen emissions associated with transport.

7.6.27. **Policy LP20 Accessibility and Transport** seeks to ensure new development is accessible, being well located in relation to existing or proposed services and facilities and seeks to improve walking and cycling inks into and within market towns and other settlements. **LP21 Public Rights of Way** protects the existing public rights of way network from development and seeks to enhance the network through the development management process. The implementation of these policies should help to minimise any increase in private car use associated with residential and employment development promoted through the Local Plan.

Policy LP34 Air Quality will ensure proposals for major development are accompanied by an Air Quality Assessment. The policy states that where an Air Quality Assessment is required, it should assess "*how biodiversity could be affected by changes in air quality as a result of the proposal*". A proposal will need to be accompanied by a Low Emissions Strategy where the Air Quality Assessment shows that the proposal would "*lead to a designated nature conservation site or protected species that is sensitive to poor air quality being adversely affected by changes in air quality*".

7.6.28. **Policy LP29 Green Infrastructure**, **LP30 Local Green Spaces and Other Existing Open Spaces** and **LP31 Open Space and Recreational Facilities** protect existing open space and provide enhanced or new provision, which will help to provide opportunities for recreation close to where people live, minimising the need to travel by car to access such facilities.

Conclusion

7.6.29. Overall, the Local Plan is not expected to result in significant adverse effects on the integrity of the Nene Washes SAC, SPA and Ramsar or Ouse Washes SAC, SPA and Ramsar as a result of air pollution from increased traffic. The potentially affected areas of habitat are a very small part of the overall SACs and SPAs. For the qualifying SPA species, there is a large area of suitable habitat available elsewhere within the SPA and

beyond the site boundaries, for species such as swans for example, and this is reflected in the data on bird records, which shows a preference for other areas within the SPA than areas adjacent to the roads.

7.6.30. Dealing with poor air quality is a priority issue for the Government. They aim to reduce emissions of nitrogen oxides against the 2005 baseline by 73% by 2030 and as part of this, the Government is phasing out the sale of new petrol and diesel cars and vans by 2030, with all new cars and vans to be 100% zero emission by 2035[70]. Zero emission vehicles will improve local air quality and complement other strategies. There has also been a noticeable change in how people use their cars as a result of the COVID19 pandemic, with more people adopting a mix of office and home working, resulting in less commuting.

7.6.31. The Local Plan contains a range of policy measures to help improve air quality through planning requirements, such as provision of electric vehicle charging points, and includes a specific policy on air quality. The requirements set out in LP34 will ensure that air quality is a material consideration and that mitigation measures are in place for any development that may have a significant adverse effect on air quality, including proposals which may lead to a designated nature conservation site or protected species that is sensitive to poor air quality being adversely affected by changes in air quality.

7.6.32. ***Given the above assessment and integrated mitigation measures included in the Plan, it can be concluded that the Local Plan would not lead to a likely significant effect on the Nene Washes SAC, SPA and Ramsar or Ouse Washes SAC, SPA and Ramsar as a result of air pollution.***

[70] HM Government (2021) Transitioning to zero emission cars and vans: 2035 delivery plan

7.7. Disturbance: urbanisation effects

Introduction

7.7.1. Urbanisation effects relate to issues where development takes place close to the boundary of a European site. Proximity to new development, both during construction and once operational, can result in adverse effects on protected habitats and species as a result of dust, noise and vibration impacts, lighting and visual disturbance. Antisocial behaviour such as littering, fires and other activities, can damage sensitive habitats. The impact of domestic cat predation on ground nesting birds is a recognised risk associated with new residential development.

7.7.2. Where strategic mitigation schemes are in place elsewhere, a number of European sites (for example, Thames Basin Heaths, the Dorset Heaths and Burnham Beeches) have an exclusion zone, typically 400m, around the boundary where there is a presumption of no further development which would result on a net increase in residential dwellings. The presumption reflects the issues with urbanisation and the lack of suitable avoidance and mitigation measures.

7.7.3. The Stage 1 screening for likely significant effects applied a precautionary approach and used 500m to any European site to screen in site allocations for further consideration in Stage 2 appropriate assessment.

7.7.4. Screening identified the following European Sites at risk of adverse effects as a result of disturbance from urbanisation:

- Nene Washes SPA and Ramsar
- Ouse Washes SPA and Ramsar

Assessment of Effects

7.7.5. Stage 1 Screening identified that the Nene Washes SPA and Ramsar is *potentially* at risk of adverse effects as a result of urbanisation effects as a result of the following policies and site allocations (distance from the European site in brackets):

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development
- LP43.05 (40526) 158 Stonald Road, Whittlesey (252m)
- LP68.01 (40241) 6 March Road, Ring's End (20m)

7.7.6. Stage 1 Screening identified that the Ouse Washes SPA and Ramsar is *potentially* at risk of adverse effects as a result of urbanisation effects as a result of the following policies:

- Policy LP2: Spatial Strategy for the Location of Residential Development
- Policy LP3: Spatial Strategy for Employment Development

Residential Site Allocations

7.7.7. Site allocation LP43.05 is located within 252m of the Nene Washes SPA and Ramsar. It is a mixed brownfield/greenfield site with a proposed capacity of 18 dwellings and benefits from outline planning permission[71]. The site is located within the built-up area of

[71] F/YR19/0186

Whittlesey. There is existing residential development on three of its four boundaries and a public open space with children's play area to the fourth. The site is separated from the Nene Washes SPA and Ramsar by existing residential development. Given the existing urban nature of the surrounding land uses, and land between the site allocation and the European site, it is highly unlikely that development of LP43.05 would result in likely significant effects.

7.7.8. Additionally, in response to the planning consultation for the application, Natural England did not object to the proposals in relation to statutorily protected nature conservation sites: "*Based on the plans submitted, Natural England considers that the proposed development will not have likely significant effects on statutorily protected sites and has no objection to the proposed development. To meet the requirements of the Habitats Regulations, we advise you to record your decision that a likely significant effect can be ruled out*." ***LP43.04 158 Stonald Road, Whittlesey will therefore not result in LSE arising from urbanisation effects.***

7.7.9. Site allocation LP68.01 is located only 20m at its closest from the Nene Washes SPA and Ramsar. It is a brownfield site with a proposed capacity of 8 dwellings. The site is located within the built footprint of Ring's End, a small village with an estimated population of 110 people (mid 2018). There is existing, low-density development on two of its four boundaries. The A141 forms the eastern boundary. To the west, between the site and the Nene Washes, is improved grassland[72], which falls within the indicative Goose & Swan Functional Land IRZ.

7.7.10. Despite the small-scale nature of this development, the proximity to the SPA and Ramsar, and associated Goose & Swan Functional Land IRZ, means it is not possible to rule out likely significant effects at the Local Plan level. ***Any development proposal for site LP68.01 will, therefore, require project level assessment at the planning application stage***.

Strategic Policies

7.7.11. Policy LP2: Spatial Strategy for the Location of Residential Development sets out the overall quantum of new housing growth over the plan period 2021-2040 and directs the majority of new residential development to the four market towns of Wisbech, March, Whittlesey and Chatteris, large villages and medium villages. However, the policy makes allowance for 1,500 or 15% of the total housing requirement to come forward over the plan period as 'windfall'.

7.7.12. Policy LP3 Spatial Strategy for Employment Development sets out the spatial strategy for employment growth, which mirrors the strategy for housing growth in focusing new employment development on the market towns. Individual site allocations for employment are set out in Part D of the Local Plan. The policy safeguards Established Employment Areas (EEA) for future employment use. Any sites coming forward for employment during the plan period are therefore likely to be predominantly within the main urban areas or within an EEA and therefore in areas where there is a high level of urban development. Any employment development outside of these areas is expected to be strictly controlled by the requirements of polices LP15 Employment and LP18 Rural Economy (Part F) and is likely to be small scale.

[72] According to Natural England's Living England Habitat Map, available on Magic Map: https://magic.defra.gov.uk/

7.7.13. Policy LP24 Natural Environment will ensure that any windfall development that may come forward during the plan period urbanisation satisfies the requirements of the Habitats Regulations were applicable. ***Policy LP2 and LP3 will therefore not result in LSE arising from urbanisation effects.***

In-Combination Effects

7.7.14. Site allocation LP68.01 6 March Road is the only site to be allocated in the Local Plan in Ring's End. Windfall development that may come forward during the plan period is likely to be small scale infill and brownfield development within the village. The risk of cumulative effects arising as a result of new development within Ring's End is therefore low.

7.7.15. The HRA for the Peterborough Local Plan considered disturbance as a result of urbanisation on the Nene Washes SPA, SAC and Ramsar. The appropriate assessment concluded that the integrated mitigation measures proposed with the policies of the Local Plan were sufficient to conclude that there will be no likely significant effects, alone or in combination, on the integrity of the Nene Washes SPA, SAC and Ramsar resulting from urbanisation effects, through the implementation of the Peterborough Local Plan.

Avoidance and Mitigation Measures

Policies in the Fenland Local Plan

7.7.16. The Local Plan contains policies which will help to mitigate potential urbanisation effects arising from new development.

7.7.17. **Policy LP24 Natural Environment** affords the highest level of protection to international sites designated for their nature conservation importance. The policy requires development proposals that are likely to have an adverse impact on the integrity of a European site to be subject to the requirements of the Habitat Regulations, determining site specific impacts (which could be off-site as well as on-site) and avoiding or mitigating against impacts where identified.

7.7.18. **Policy LP33 Development on land affected by contamination** requires all new development to take into account the potential environmental impacts on people, buildings, land, air and water arising from the development itself.

7.7.19. **Policy LP68 Residential site allocations in Ring's End** allocates LP68.01 for housing and sets out supporting policy requirements. The third bullet point requires "*Significant compensation measures to ensure biodiversity net gain is achieved*" and the fourth states "*Evidence of consultation with Natural England due to the sites proximity of designated habitats, and location within the Goose & Swan Functional Land Impact Risk Zone".* This HRA recommends modifying this text to provide stronger mitigation and assurance that site LP68.01 will not result in likely significant effects on the Nene Washes SPA and Ramsar. This is discussed in the recommendations section below.

Recommendations to ensure no LSE resulting from the Local Plan

7.7.20. The following modification to policy LP68 Residential site allocations in Ring's End is recommended to ensure no adverse effects on site integrity as a result of urbanisation impacts:

Replace fourth bullet point with the following text:

"*The council will require the submission of sufficient information from the applicant to enable the completion of a project-level screening exercise under the Habitats*

Regulations Assessment process and, if that screening concludes that full Appropriate Assessment is needed, sufficient information to enable it to complete that Appropriate Assessment. This process will need to demonstrate that the development will not have a significant adverse effect on the integrity of the Nene Washes SPA, SAC and Ramsar."

7.7.21. ***It can reasonably be concluded, providing that the above policy wording is incorporated into the Local Plan, and implemented successfully, that there will be no likely significant effects, alone or in combination, on the integrity of the Nene Washes SPA and Ramsar as a result of urbanisation effects.***

8. Conclusion and Recommendations

8.1.1. This HRA Report presents the findings of the HRA for the Consultation Draft Fenland Local Plan (August 2022), which has been subject to Stage 1 Screening and Stage 2 Appropriate Assessment in accordance with the Habitats Regulations 2017 (as amended).

8.1.2. Stage 1 Screening identified the potential for likely significant effects as a result of:

- Loss and/or fragmentation of supporting habitat/functionally linked habitat on the Nene Washes SPA and Ramsar, and the Ouse Washes SPA and Ramsar
- Physical damage and/or disturbance to species Nene Washes SPA and Ramsar, and the Ouse Washes SPA and Ramsar
- Disturbance: recreation and visitor pressure on the Nene Washes SPA and Ramsar, and the Ouse Washes SPA and Ramsar
- Hydrological changes impacting on the Nene Washes SPA, SAC and Ramsar, Ouse Washes SPA, SAC and Ramsar, The Wash and North Norfolk Coast SAC and, The Wash SPA and Ramsar
- Atmospheric pollution on the Nene Washes SPA, SAC and Ramsar and Ouse Washes SPA, SAC and Ramsar
- Disturbance: urbanisation effects on the Nene Washes SPA and Ramsar

8.1.3. The Appropriate Assessment considered these impact pathways further. The recommendations and additional mitigation measures are summarised as follows:

Loss and/or fragmentation of supporting habitat/functionally linked habitat

8.1.4. The Appropriate Assessment identified three sites (LP49.01(40223), LP51.01 (40265) and LP52.01(40321)) where adverse effects could not be ruled out and recommended new policy wording as an additional safeguard to check for impacts from loss of potentially functionally linked land and to ensure adequate mitigation is in place. With the proposed protective wording in place, adverse effects can be ruled out alone and in combination on the Nene Washes SPA and Ramsar and Ouse Washes SPA and Ramsar.

Physical damage and/or disturbance to species

8.1.5. No recommendations or additional mitigation measures proposed. The integrated mitigation measures included in the Local Plan would ensure no likely significant effects on the Nene Washes SPA and Ramsar or Ouse Washes SPA and Ramsar as a result of physical damage and/or disturbance to species.

Disturbance: recreation and visitor pressure

8.1.6. Adverse effects could not be ruled out for 6 sites (LP43.01 (40300), LP43.02 (40335), LP51.01, LP51.02 (40328), LP49.01 and LP49.02 (40185). The Appropriate Assessment therefore recommended wording is added to the policy requirements for each site as an additional safeguard requiring proposals to mitigate any evidenced recreational impacts on either the Nene Washes SPA or Ouse Washes SPA.

Hydrological changes

8.1.7. A number of the European Sites screened into the HRA have water dependent qualifying features which could be affected by development proposed within the Local Plan. Adverse effects of all growth within the plan and in combination with neighbouring authorities was

ruled out for The Wash SPA and Ramsar, The Wash and North Norfolk Coast SAC, the Nene Washes SPA, SAC and Ramsar and the Ouse Washes SPA, SAC and Ramsar due to the protective policy wording in place within the proposed Local Plan policies and the statutory framework in which water companies and developers must operate.

8.1.8. However, for site allocations LP43.02, LP44.01 (40270), LP52.01, LP61.01 (40147), LP61.02 (40303), LP62.01 (40150), LP68.01 (40241) and LP69.01 (40307) the Appropriate Assessment recommends additional policy wording to provide sufficient certainty that the Local Plan will not result in adverse effects on the integrity of the Nene Washes SPA, SAC and Ramsar as a result of hydrological changes. These sites are either in close proximity to the Nene Washes or fall within Natural England's SSSI IRZ where development has the potential to impact on water quality sensitive features. The wording identifies the need for sufficient information from the applicant to enable the completion of a project-level screening exercise under the Habitats Regulations Assessment process. This will ensure the necessary hydrological checks are made and any issues relating to run-off/drainage are adequately resolved in the site design before the development can proceed.

Atmospheric pollution

8.1.9. No recommendations or additional mitigation measures proposed. The integrated mitigation measures included in the Local Plan would ensure no likely significant effects on the Nene Washes SAC, SPA and Ramsar or Ouse Washes SAC, SPA and Ramsar as a result of reduced air quality.

Disturbance: urbanisation effects

8.1.10. Adverse effects resulting from urbanisation could not be ruled out in relation to site allocation LP68.01 6 March Road, Ring's End on the Nene Washes SPA and Ramsar. This residential site allocation is located only 0.02km from the Nene Washes. It lies within the indicative Goose & Swan Functional Land IRZ and there is no existing built development between the proposed site allocation and the Nene Washes. The Appropriate Assessment therefore recommended modified wording to policy LP68 Residential site allocations in Ring's End to ensure no adverse effects on site integrity as a result of urbanisation impacts arising from developing land at LP68.01.

8.1.11. ***To conclude, provided the recommendations made in this Report are (where applicable) incorporated into the Local Plan, it is possible to conclude that the Consultation Draft Fenland Local Plan is compliant with the Habitats Regulations and will not result in likely significant effects on any of the European Sites identified, either alone or in combination with other plans and projects.***

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