# North Lincolnshire Local Plan Publication Draft Addendum

## Shadow Habitats Regulations Assessment

**May 2022**

**www.jbaconsulting.com**

North Lincolnshire Council

www.northlincs.gov.uk

## JBA Project Manager

Laura Thomas
JBA Consulting
Epsom House, Chase Park
Redhouse Interchange
Doncaster, DN6 7FE

## Revision History

| Revision Ref/Date | Amendments | Issued to |
|---|---|---|
| February 2021 / V1.0 | Draft Shadow Habitats Regulations Assessment Report for Publication Draft | Andrew Willerton - North Lincolnshire Council |
| February 2021 / V1.1 | Minor update to include more detailed analysis of minerals sites | Andrew Willerton - North Lincolnshire Council |
| April 2021 / V2.0 | Update to report to include additional proposed housing sites and a small number of amendment policies | Andrew Willerton - North Lincolnshire Council |
| May 2021 / V2.1 | Minor updates following client review | Andrew Willerton - North Lincolnshire Council |
| September 2021 / V2.2 | Update to report to include minor changes to a small number of policies | Andrew Willerton - North Lincolnshire Council |
| October 2021 / V2.3 | Update to report to include minor changes to a small number of policies | David Boreham - North Lincolnshire Council |
| April 2022 / V2.4 | Minor updates following issue of an addendum report following the Regulation 19 Publication Draft consultation between October and December 2021 | Elizabeth Pearson, North Lincolnshire Council |
| April 2022 / V2.5 | Minor updates following Council review | Elizabeth Pearson, North Lincolnshire Council |
| May 2022 / V2.6 | Minor updates to policies TC1, T6 and T7 and removal of allocation EC1-7 | James Durham, North Lincolnshire Council |
| May 2022 / V2.7 | Minor updates to Appendix A | James Durham and Elizabeth Pearson, North Lincolnshire Council |

## Contract

This report describes work commissioned by Chris Barwell, on behalf of North Lincolnshire Council, by a letter dated 2nd March 2017. North Lincolnshire Council's representatives for the contract were Chris Barwell, Andrew Willerton and Kate Mills. Laura Thomas, Catherine Porter and Adam Jones of JBA Consulting carried out this work.

Prepared by ..... Catherine Porter BSc MSc Grad CIEEM

Ecologist

..... Laura Thomas BA MRes PGCert CEcol MCIEEM

Principal Ecologist

Reviewed by ..... Catherine Rodd BSc MRes MCIEEM

Senior Ecologist

## Purpose

This document has been prepared as a Draft Report for North Lincolnshire Council. JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared. JBA Consulting has no liability regarding the use of this report except to North Lincolnshire Council.

## Copyright

## Executive summary

North Lincolnshire Council is currently preparing a new Local Plan for the authority area. The Local Plan will set out the strategic priorities and detailed policies that will guide development in the area up to 2038. The development of the Local Plan is currently at the Publication Draft Addendum stage.

To support the development of the Local Plan, North Lincolnshire Council is carrying out a Habitats Regulations Assessment (HRA) in line with requirements set out by the Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019). The purpose of this is to ensure that appropriate consideration is given to the protection of European sites (i.e. Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and, as a matter of government policy, also Ramsar sites) during the preparation of the Local Plan.

The first stage of the HRA process is the preparation of a Screening Assessment, which assesses whether the Local Plan is likely to have a significant effect on a European site, either directly or indirectly, and/or in-combination with other plans and projects. If the Screening Assessment concludes that the Local Plan is likely to have a significant effect on the conservation objectives of a European site, or that such an effect cannot be ruled out (adopting a precautionary approach), then a more-detailed Appropriate Assessment must be carried out.

Seven European sites have been identified within North Lincolnshire and a 15km buffer around it. This includes the Humber Estuary SAC, SPA and Ramsar Site, Hatfield Moor SAC, Thorne Moor SAC, Thorne and Hatfield Moor SPA and the River Derwent SAC. In addition, sites identified/required as compensatory measures to offset adverse effects on European sites from other schemes are given the same protection as the sites themselves and consequently, the managed realignment schemes at Chowder Ness and Alkborough have been considered as part of the Humber Estuary designated site.

Development for housing, business, infrastructure, services and recreational/tourism promoted as part of a Local Plan can potentially have adverse impacts on the habitats and species for which European sites are designated. These impacts can be direct, such as habitat loss, fragmentation or degradation, or indirect such as disturbance or pollution from transportation. They can include long-term effects associated with the operational phase of proposed developments or general population growth, and short-term effects arising from construction phases. A number of potential impact pathways have been identified as having the potential to significantly impact on the European sites in and around North Lincolnshire, including:

- Recreational pressure
- Urbanisation
- Atmospheric pollution
- Water resource use and flow regulation
- Water pollution/siltation
- Flooding and water level management

Furthermore, a series of individually modest effects may in combination produce effects that are likely to have a significant effect on one or more European sites. Consequently, a review of other plans and projects with the potential to result in significant effects on European sites, in-combination with the North Lincolnshire Local Plan, has also been conducted as part of this appropriate assessment.

The first Screening stage of the assessment is done as a two-stage process. The pre-screening stage undertakes a preliminary assessment of the nature of policies contained within the plan, and undertakes a high-level Screening Assessment of the site allocations and identifies whether or not they could give rise to a significant impact. This is based on the

nature of the policies, for example whether they just relate to general design principles or whether they are environmental protection options. The following Screening stage considers each European site and whether those policies and site allocations in the North Lincolnshire Local Plan, identified at the first stage could impact upon the site. A conclusion is then made as to whether the policies and site allocations, are likely to have significant effects alone or in-combination with other plans and projects.

The Screening Assessment determined that the policies and allocated sites in the Publication Draft Addendum of the North Lincolnshire Local Plan could potentially have significant effects, both alone and in-combination with other plans and projects, on the following sites:

- Humber Estuary SAC
- Hatfield Moor SAC
- Thorne Moor SAC
- Humber Estuary SPA
- Thorne and Hatfield Moors SPA
- Humber Estuary Ramsar Site

Therefore, an Appropriate Assessment was required to assess in more detail the likely nature of the effects on the integrity of these European sites.

The assessment further determined, that due to its distance from the North Lincolnshire boundary, and it being situated upstream, the Local Plan is not likely to have significant effects, either alone or in-combination with other plans or projects, on the following European site:

- River Derwent SAC

It should be noted that changes to early drafts of a plan, for example the removal of a policy with likely significant effects, are considered as pre-screening decisions. The HRA formal Screening is undertaken prior to the adoption of the Plan. Therefore, any changes on earlier iterations of the draft plan are in effect changes to the essential features or characteristics of the plan itself and are therefore (usually) not considered to be avoidance measures requiring consideration at the Appropriate Assessment stage.

The Appropriate Assessment identified that the existing policies and provisions in the North Lincolnshire Local Plan Publication Draft Addendum, in relation to recreational pressures, urbanisation, atmospheric pollution, water pollution/siltation and flood and water management will ensure that the Local Plan will have no adverse effects on the European sites screened into the assessment.

## Contents

## List of Figures



## List of Tables

## Abbreviations

| | |
|---|---|
| AADT | Annual Average Daily Traffic |
| AAP | Area Action Plan |
| AONB | Area of Outstanding Natural Beauty |
| APIS | Air Pollution Information System |
| BASC | British Association for Shooting and Conservation |
| CJEU | Court of Justice of the EU |
| DCLG | Department for Communities and Local Government |
| DPD | Development Plan Document |
| DRMB | Design Manual for Roads and Bridges |
| HRA | Habitats Regulations Assessment |
| IROPI | Imperative Reasons of Overriding Public Interest |
| JNCC | Joint Nature Conservation Committee |
| LNR | Local Nature Reserve |
| NPPF | The National Planning Policy Framework |
| NPPG | National Planning Practice Guidance |
| MSA | Mineral Safeguarding Area |
| RBMP | River Basin Management Plan |
| SAC | Special Area of Conservation |
| SHAJC | South Humber Area Joint Council |
| SIP | Site Improvement Plan |
| SPA | Special Protection Area |
| SSSI | Site of Special Scientific Interest |
| SuDS | Sustainable Drainage Systems |
| WRMP | Water Resources Management Plan |

# 1 Introduction

## 1.1 Background

North Lincolnshire Council is preparing a new single Local Plan for North Lincolnshire. The Local Plan will set out the strategic priorities and detailed policies that will guide development in the area up to 2038. The development of the Local Plan is currently at the Publication (Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations 2012) stage, and this was consulted on between October and December 2021. The Publication Version of the Local Plan was the preferred strategy, and the plan that it is intended to submit to the Planning Inspectorate for examination. However, in response to a handful of representations made during the consultation a focussed number of changes are proposed to the Local Plan. The proposed changes are to be published for consultation on the same basis as the Regulation 19 consultation that was undertaken between October and December 2021. As such, they should be considered as an Addendum to the Publication Plan. The Addendum is not a fully revised version of the Publication Plan. It only contains the proposed focussed changes and any associated modifications to boundaries on the Policies Map. This updated Habitats Regulations Assessment reassesses the Publication Plan taking into account the changes detailed within the Addendum and addresses comments raised during the initial consultation phase on the Publication Draft.

Prior to the Publication Plan, an initial (Regulation 18) Consultation document was published (late February to mid-April 2017) in order to raise awareness of the Local Plan and this was followed by consultation on an Issues and Options (Regulation 18) Report in February and March 2018. Following this, a Preferred Options (Regulation 18) report was produced, with site allocations, and consulted on between February and March 2020.

To support the development of the Local Plan, North Lincolnshire Council is carrying out a Habitats Regulations Assessment (HRA) in line with requirements set out by the Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019). The purpose of this assessment is to ensure that appropriate consideration is given to the protection of the national site network of nature conservation sites (i.e. Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and, as a matter of Government Policy, also Ramsar sites) during the preparation of the Local Plan. The Issues and Options Report was accompanied by a HRA Screening Report which was issued for consultation in March 2018 (JBA Consulting, 2018), and the Preferred Options and Site Allocations stage was accompanied by a HRA (JBA Consulting, 2020). The Publication Plan was also accompanied by a HRA during its consultation between October and December 2021 (JBA Consulting, 2021).

The first stage of the HRA process is the preparation of a Screening Assessment, which assesses whether the Local Plan is likely to have a significant effect on the national site network, either directly or indirectly, and/or in-combination with other plans and projects. If the Screening Assessment concludes that the Local Plan is likely to have a significant effect on the conservation objectives of a site within the national site network, or that such an effect cannot be ruled out (adopting a precautionary approach), then a more-detailed Appropriate Assessment must be carried out.

This report details the findings of the shadow HRA Screening Assessment and Appropriate Assessment for the North Lincolnshire Local Plan Publication Plan (North Lincolnshire Council, 2021) and its Addendum Report.

## 1.2 North Lincolnshire Local Plan

The North Lincolnshire Development Plan comprises the Core Strategy (adopted in June 2011) together with 'saved' policies retained from the North Lincolnshire Local Plan (adopted May 2003) (North Lincolnshire Council, 2003), the Housing and Employment Land Allocations Development Plan Document (DPD) (North Lincolnshire Council, 2016a) adopted in March 2016,

and the Lincolnshire Lakes Area Action Plan (AAP) adopted in May 2016 (North Lincolnshire Council, 2016b).

North Lincolnshire Council is now preparing a new single Local Plan for North Lincolnshire, covering the period 2020 to 2038, replacing the saved policies from the 2003 Local Plan, the Core Strategy DPD, the Housing and Employment Land Allocations DPD, and Lincolnshire Lakes AAP. The Council approved a new Local Development Scheme in April 2021 (currently under review), which sets out the plan documents that will be prepared and a timetable for their preparation.

The new single Local Plan will set out a clear vision and objectives for the future development of the area, addressing needs and opportunities in relation to housing, the economy, community facilities and infrastructure. It will also be a basis for securing the environment, adapting to climate change and securing good designs. Its policies and proposals will be used to guide decisions and investment on development and regeneration up to 2038.

## 1.3 Legislative Context

The Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019), also known as the 'Habitats Regulations', provide legal protection to habitats and species of national importance. The regulations also secure an ecological network of protected sites, consisting of SACs and SPAs. Government guidance also requires that Ramsar sites (which support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance [Ramsar Convention]) are given the same level of protection as SACs and SPAs.

Prior to the UKs withdrawal from the EU, SACs were designated and protected under domestic legislation transposed from European Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive), and SPAs under European Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive). Together these sites formed a European-wide Natura 2000 network of protected sites. Since 31 December 2020, SACs and SPAs within the UK no longer fall within the Natura 2000 network, and instead form a National Site Network. SPAs and SACs continue to be referred to collectively as 'European sites' within the context of the Habitats Regulations, reflecting their international importance for the conservation of biodiversity.

SACs and SPAs within the National Site Network are also still designated for habitats listed on Annex I and for species listed on Annex II of the Habitats Directive, and criteria listed under the Birds Directive, and it is these Annex I habitats, Annex II species and Birds Directive Criteria against which assessments under the Habitats Regulations are still made.

It is a requirement of Regulation 105 of the Habitats Regulations that where a plan is likely to have a significant effect on a European site, either alone or in-combination with other plans or projects, and where it is not directly connected with or necessary to the management of the site "*the plan-making authority for that plan must, before the plan is given effect, make an appropriate assessment of the implications for the site in view of that site's conservation objectives*".

Therefore, for all plans that are not wholly directly connected with, or necessary to, the conservation management of the site's qualifying features, a formal Screening for any Likely Significant Effects (either alone or in-combination with other plans or projects) on a European site is required. This Screening Assessment is based on available ecological information on the designated site(s), other plans, projects and policies relevant to the area and details of the proposed development/policy.

If the Screening Assessment concludes that the plan is likely to have a significant effect on the conservation objectives of the site(s), or that such an effect cannot be ruled out (adopting a precautionary approach) an Appropriate Assessment must be carried out. An Appropriate Assessment involves an assessment of the potential effects of the plan on the conservation

objectives of the site(s). If significant effects are identified, avoidance measures or mitigation to reduce impacts can be applied.

If it cannot be concluded that the plan will not adversely impact upon the integrity of the site(s), the development will not be able to proceed without further conditions and/or assessment. The plan will need to prove that there are imperative reasons of overriding public interest (IROPI) that outweigh the potentially damaging impacts that the plan may have before it can proceed and in this case compensatory measures will be required.

Planning documents, such as the North Lincolnshire Local Plan, are required to undergo HRA if there is the potential for significant impacts and they are not directly connected with or necessary to the management of a European site. As the Plan is not connected with or necessary to the management of SACs, SPAs or Ramsar sites, it is necessary to undertake a HRA of the Plan. The whole document, including the strategies, sub-points and supporting text have been considered as part of this HRA.

This report comprises a Screening Assessment and Appropriate Assessment of the North Lincolnshire Local Plan Publication Draft Addendum and is based on an examination of information on the sites within the National Site Network of relevance prepared by Natural England and the Joint Nature Conservation Committee (JNCC) as well as other readily accessible internet resources concerning the nature and wildlife value of the designated sites. It also takes account of Court of Justice of the EU (CJEU) caselaw made before 31 December 2020 (e.g. *People over Wind & Sweetman v Coillte Teoranta* Case C-323/17 and *Holohan v An Bord Pleanala* case C-462/17).

# 2 HRA Methodology

## 2.1 Introduction

It is accepted best-practice for the HRA of strategic planning documents to be run as an iterative process alongside the plan development, with the emerging policies, sites or options continually assessed for their possible effects on European sites and modified or abandoned (as necessary) to ensure that the subsequently adopted plan is not likely to result in significant effects on any European sites, either alone or 'in-combination' with other plans. This is undertaken in consultation with Natural England and other appropriate consultees.

## 2.2 HRA Process

The HRA will follow a four-stage process, based on that detailed in the Department for Communities and Local Government (DCLG) guidance *Planning for the Protection of European sites: Appropriate Assessment* (2006) and subsequent Government Guidance on the Use of Habitats Regulations Assessment (2019). These stages are described in Table 2-1.

**Table 2-1: The HRA Process**

| Stage/Task | Description |
|---|---|
| **HRA Stage 1: Screening** | This process identifies the likely impacts upon a European site of a project or plan, either alone or in-combination with other projects or plans, and determines whether these impacts are likely to be significant.<br>If no likely significant effect is determined, the project or plan can proceed. If a likely significant effect is identified, stage 2 is commenced.<br>Following the People over Wind & Sweetman v Coillte Teoranta Case C-323/17, the assessment does not consider protective, avoidance or mitigation measures for stage 1 Screening. These measures are carried forward and considered as part of the stage 2.<br>However, any changes to early drafts of a plan, for example the removal of a policy with likely significant effects, are considered as pre-screening decisions. The HRA formal Screening is undertaken prior to the adoption of the Plan. Therefore, any changes on earlier iterations of the draft plan are in effect changes to the essential features or characteristics of the plan itself and are therefore (usually) not considered to be avoidance measures requiring consideration at Stage 2 (DTA, 2021). |
| **HRA Stage 2: Appropriate Assessment** | This assessment determines whether a project or plan would have an adverse impact on the integrity of a European site, either alone or in-combination with other projects or plans.<br>This assessment is confined to the effects on the important habitats and species for which the site is designated (i.e. the qualifying interests of the site).<br>Appropriate Assessments, in line with CJEU: Case C-461/17 Holohan v An Bord Pleanála, must also consider impacts upon habitats and species within or outside of a site boundary if they support a qualifying feature and could impact upon the conservation objectives of the site.<br>If no adverse impact is determined, the project or plan can proceed.<br>If an adverse impact is identified, Task 3 is commenced. |
| **HRA Stage 3: Assessment where no alternatives and adverse impacts remain (Mitigation and Alternatives)** | Where a plan or project has been found to have adverse impacts on the integrity of a European site, potential avoidance/mitigation measures or alternative options should be identified.<br>If suitable avoidance/mitigation or alternative options are identified, that result in there being no adverse effects from the project or plan on European sites, the project or plan can proceed.<br>If no suitable avoidance/mitigation or alternative options are identified, as a rule the project or plan should not proceed. However, in exceptional circumstances, if there is an 'imperative reason of overriding public interest' |

| Stage/Task | Description |
|---|---|
| | for the implementation of the project or plan, consideration can be given to proceeding in the absence of alternative solutions. In this case, compensatory measures must have to be put in place to offset negative impacts (stage 4). |
| **HRA Stage 4: Compensatory measures** | Stage 4 comprises an assessment of the compensatory measures where, in light of an assessment of imperative reasons of overriding public interest, it is deemed that the project should proceed. |

Other guidance documents have been used to help inform the methodology of this assessment, including:

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission 2002)
- The Habitats Regulations Assessment Handbook. DTA Publications (2021)
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (European Communities, 2018)
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (European Communities, 2007)
- The National Planning Policy Framework (2021) (NPPF) and National Planning Practice Guidance (NPPG)
- The Planning Inspectorate PINS Note 05/ 2018: Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman, v Coillte Teoranta (The Planning Inspectorate, 2018)
- NEA001 Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (Natural England, 2018)
- UK Government Guidance on the use of Habitats Regulations Assessment (July 2019) [https://www.gov.uk/guidance/appropriate-assessment]
- Nutrient neutrality principles and use of Diffuse Water Pollution Plans and Nutrient Management Plans (Natural England, 2022a)
- Nutrient Neutrality A Summary Guide (Natural England, 2022b)
- Nutrient Neutrality Generic Methodology (Natural England 2022c)

## 2.3 HRA Stage 1: Screening Methodology

The principles of 'Screening' are applied to a plan or its components (i.e. policies and site allocations) to allow the assessment stage to focus on those aspects that are most likely to have potentially significant effects on European sites, as well as shape the emerging strategy. Screening aims to determine whether the plan will have any 'likely significant effects' on any European site as a result of its implementation. It is intended to be a coarse filter for identifying effects (positive and negative) that may occur, to allow the assessment stage to focus on the most important aspects. A plan should be considered 'likely' to have an effect if it is not possible (on the basis of objective information) to exclude the likelihood that the plan could have significant effects on any European site, either alone or in-combination with other plans or projects; an effect will be 'significant' if it could undermine the site's conservation objectives.

Screening can be used to 'screen-out' European sites and plan components from further assessment, if it is possible to determine that significant effects are unlikely (e.g. if sites or interest features are clearly not vulnerable (exposed and / or sensitive) to the outcomes of a plan due to the absence of any reasonable impact pathways).

In order to complete the Screening Assessment of the Local Plan Publication Draft Addendum it is necessary to:

- Identify the European sites within and outside the plan area likely to be affected, reasons for their designation and their conservation objectives.
- Describe the plan/strategy and its aims and objectives and also those of other projects or plans that in-combination have the potential to impact upon the European sites.
- Identify the potential effects on the European sites.
- Assess the significance of these potential effects on the European sites.

### 2.3.1 Precautionary Principle

The HRA process is underpinned by the precautionary principle, especially in the assessment of potential impacts and their resolution. If there is any uncertainty, and it is not possible, based on the information available, to confidently determine that there will be no significant effects on a site then the precautionary principle will be applied, and the plan will be subject to an Appropriate Assessment (HRA Stage 2).

### 2.3.2 Pre-screening decisions

It should be noted that, for plan level HRA, the early stages of checking and testing the plan through an iterative process, in light of the People over Wind Judgement, are documented as pre-screening decisions (DTA, 2021).

When the plan is to be published, a single formal Screening decision is then taken, which excludes all mitigation measures to avoid or reduce impacts. Pre-screening changes to the plan in the early stages will then either become essential features or characteristics of the plan or will be considered as mitigation and carried forward to the Appropriate Assessment.

As noted in Table 2-1, the draft Screening report includes pre-screening decisions as an early record of the checking and testing of the plan. For this draft report, these decisions are therefore referred to as pre-screening decisions.

## 2.4 HRA Stage 2 & 3: Appropriate Assessment and Assessment of Alternatives

For those European sites screened in to the HRA, it is necessary to undertake an Appropriate Assessment to explore the potential adverse effects on their integrity and develop measures to avoid these effects entirely, or if not possible, to mitigate the impacts sufficiently that effects on the European sites are rendered effectively insignificant.

The stages involved in the Appropriate Assessment are to:

- Explore the reasons for the designation of the "screened in" European sites.
- Explore the environmental conditions required to maintain the integrity of the "scoped in" European sites and become familiar with the current trends in these environmental processes.
- Gain a full understanding of the policies and site allocations within the Draft Local Plan and consider each within the context of the environmental processes – would the policies lead to an impact on any identified process?
- Decide whether the identified impact will lead to an adverse effect on the integrity of the European site.
- Identify other plans that might affect European sites in-combination with the policies and allocated sites within the Draft Plan and decide whether there are any adverse effects that might not result from the strategy in isolation will do so in-combination.

- Develop measures to avoid the effect entirely, or if not possible, to mitigate the impact sufficiently such that its effect on the European site is rendered effectively insignificant.

In evaluating significance, JBA Consulting relies on its professional judgement, which will be further reinforced through consultation with Natural England, through the development of the Draft Plan, Site Allocations and their associated appraisal processes.

## 2.5 Consultation

It is a requirement of the Habitat Regulations to consult the appropriate nature conservation statutory body (i.e. Natural England).

The North Lincolnshire Local Plan has been subject to consultation with all statutory consultees and the general public at all stages of its development, including the Issues and Options Report and its HRA Screening and the Preferred Options and its Appropriate Assessment. The comments received will be addressed within this HRA.

# 3 European Sites

## 3.1 Introduction

As discussed in section 1.3, European sites collectively form the National Site Network. The objectives of the National Site Network are to:

a) maintain at, or where appropriate restore habitats and species listed in Annexes I and II of the Habitats Directive to a favourable conservation status in their natural range (so far as it lies in the United Kingdom's territory, and so far as is proportionate).

b) contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds listed in Annex I to the new Wild Birds Directive which naturally occur in the United Kingdom's territory and regularly occurring migratory species of birds not listed in that Annex which naturally occur in the United Kingdom's territory, and so securing compliance with the overarching aims of the Wild Birds Directive.

The National Site Network consists of:

- *Special Areas of Conservation (SACs)* - these are designated to protect those habitat types and species that are considered to be most in need of conservation (excluding birds).
- *Special Protection Areas (SPAs)* - these are designated to protect rare and vulnerable birds, and also regularly occurring migratory species.

Although not included in the legislation, as a matter of policy, Ramsar sites in England and Wales are protected in the same way as European sites, and therefore considered in the HRA process. For simplicity in this report, SACs, SPAs and Ramsar sites are collectively referred to as European sites.

The vast majority are also classified as SPAs and Sites of Special Scientific Interest (SSSIs). All SPAs and terrestrial SACs in England and Wales are also designated as SSSIs under the Wildlife and Countryside Act (1981) as amended.

## 3.2 European Sites in and around North Lincolnshire

Best practice guidance suggests that sites occurring within the plan area, along with a wider area of approximately 10km to 15km from the boundary of the area directly affected by a plan, should be identified and assessed as part of the HRA Screening process. However, it is important to consider the possibility of impacts for any European site which might be affected, whatever their location, given the activities included in the plan and their range of influence. This may extend some distance from the area within the immediate influence of a plan.

For assessment of the North Lincolnshire Local Plan, a 15km buffer has been applied[1]. Seven European sites have been identified within the plan area and the 15km buffer. No sites beyond this 15km buffer are deemed relevant to the HRA as it is considered that no pathways, including hydrological connections, exist that would impact upon any European sites beyond this extent.

The seven sites identified are summarised in Table 3-1 below and shown on Figure 3-1. It should be noted that several of these designations are overlapping and relate to the same geographical area, although there are some differences in site extent and boundaries.

**Table 3-1: European Sites Summary**

| Site | Designation | Distance to Plan Area |
|---|---|---|
| **Humber Estuary** | SAC | Within plan area |
| | SPA | Within plan area |

[1]Analysis of HRAs conducted in England by Therivel (2009) showed that the average buffer distance applied in relation to Local Plans is 15km.

| Site | Designation | Distance to Plan Area |
|---|---|---|
| | Ramsar | Within plan area |
| **Hatfield Moor** | SAC | 0km to west (directly abuts plan area) |
| **Thorne Moor** | SAC | Within plan area |
| **Thorne and Hatfield Moor** | SPA | Within plan area |
| **River Derwent** | SAC | 14.4km to north-west |

In addition to the sites identified in Table 3-1, paragraph 181 of the National Planning Policy Framework (NPPF) states that sites identified, or required, as compensatory measures for adverse effects on European sites, potential SPAs, possible SACs, and proposed Ramsar sites should be given the same protection as European sites. Consequently, the managed realignment schemes alongside the Humber Estuary at Chowder Ness and Alkborough (see Figure 3-1) will be considered as part of the Humber Estuary designated site, as compensatory habitat creation schemes for projects elsewhere around the Humber.

Table 3-2 below provides further details on each of the European sites identified in Table 3-1. This includes information on qualifying features, conservation objectives and site vulnerabilities. Data on the European site interest features, their distribution, and their sensitivity to potential effects associated with the plan were obtained from various sources and reports, including the JNCC and Natural England websites (citations, boundaries, management plans, site improvement plans etc.) (Natural England 2015, 2014a-h; JNCC 2017a-d; JNCC 2016a-e; JNCC 2008).

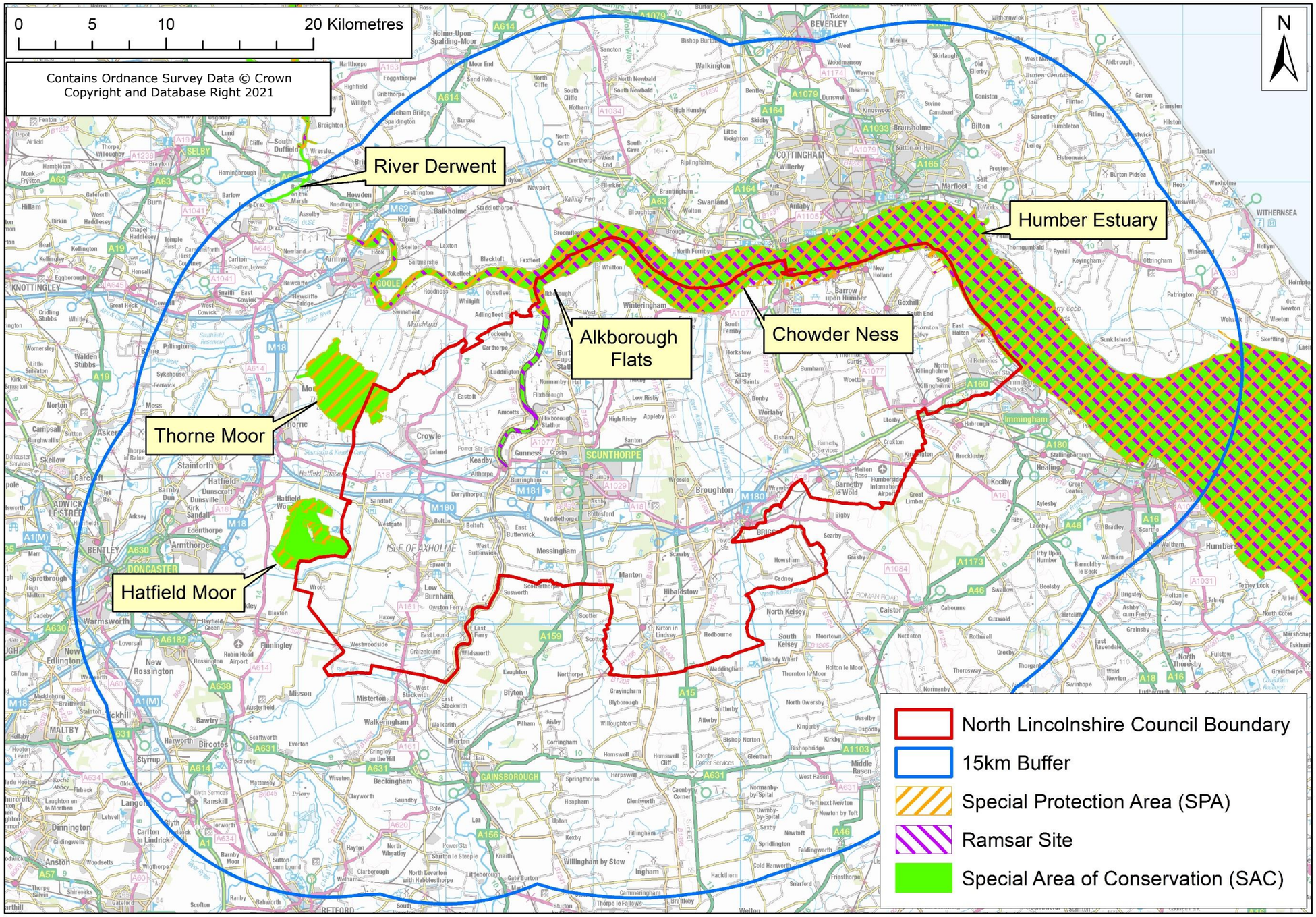


**Figure 3-1: European sites relevant to the HRA for the North Lincolnshire Local Plan**

**Table 3-2: European sites, qualifying features, conservation objectives and site vulnerability**

| Site | Qualifying Feature (Broad Habitat/Species Groupings) | Qualifying Features | Conservation Objectives | Site Vulnerability |
|---|---|---|---|---|
| **Humber Estuary SAC** | Coastal habitats<br>Coastal habitats (sensitive to abstraction)<br>Estuarine and intertidal habitats<br>Submerged marine habitats<br>Anadromous fish<br>Marine Mammals | Sandbanks which are slightly covered by sea water all the time [1110]<br>Estuaries [1130]<br>Mudflats and sandflats not covered by seawater at low tide [1140]<br>Coastal lagoons [1150] (Priority Habitat)<br>*Salicornia* and other annuals colonizing mud and sand [1310]<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") [2120]<br>Fixed coastal dunes with herbaceous vegetation ("grey dunes") [2130] (Priority Habitat)<br>Dunes with *Hippophae rhamnoides* [2160]<br>Grey Seal *Halichoerus grypus* [1364]<br>River Lamprey *Lampetra fluviatilis* [1099]<br>Sea Lamprey *Petromyzon marinus* [1095] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>- The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>- The structure and function (including typical species) of qualifying natural habitats<br>- The structure and function of the habitats of qualifying species<br>- The supporting processes on which qualifying natural habitats and habitats of qualifying species rely<br>- The populations of qualifying species, and,<br>- The distribution of qualifying species within the site. | Human induced changes in hydraulic conditions<br>Changes in abiotic conditions<br>Pollution to groundwater (point sources and diffuse sources)<br>Industrial or commercial areas<br>Abiotic (slow) natural processes |
| **Hatfield Moor SAC** | Bogs and wet habitats (sensitive to acidification) | Degraded raised bogs still capable of natural regeneration [7120] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>- The extent and distribution of the qualifying natural habitat<br>- The structure and function (including typical species) of the qualifying natural habitat, and,<br>- The supporting processes on which the qualifying natural habitat rely | Human induced changes in hydraulic conditions (i.e. drainage)<br>Air pollution, air-borne pollutants (i.e. atmospheric nitrogen deposition)<br>Biocenotic evolution, succession<br>Invasive non-native species<br>Other human intrusions and disturbances (e.g. public access/disturbance, cumulative impacts from development)<br>Inappropriate scrub control |
| **Thorne Moor SAC** | Bogs and wet habitats (sensitive to acidification) | Degraded raised bogs still capable of natural regeneration [7120] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>- The extent and distribution of qualifying natural habitats<br>- The structure and function (including typical species) of qualifying natural habitats, and<br>- The supporting processes on which qualifying natural habitats rely | Human induced changes in hydraulic conditions (i.e. drainage)<br>Air pollution, air-borne pollutants (i.e. atmospheric nitrogen deposition)<br>Biocenotic evolution, succession<br>Invasive non-native species<br>Other human intrusions and disturbances (e.g. public access/disturbance, cumulative impacts from development)<br>Inappropriate scrub control |
| **River Derwent SAC** | Riverine habitats and running waters<br>Anadromous fish<br>Non-migratory fish and invertebrates of rivers<br>Mammals of riverine habitats | Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]<br>River Lamprey - *Lampetra fluviatilis* [1099]<br>Sea Lamprey *Petromyzon marinus* [1095]<br>Bullhead *Cottus gobio* [1163]<br>Otter *Lutra lutra* [1355] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>- The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>- The structure and function (including typical species) of qualifying natural habitats<br>- The structure and function of the habitats of qualifying species | Human induced changes in hydraulic conditions<br>Invasive non-native species<br>Modification of cultivation practices<br>Pollution to groundwater (point sources and diffuse sources) |

| Site | Qualifying Feature (Broad Habitat/Species Groupings) | Qualifying Features | Conservation Objectives | Site Vulnerability |
|---|---|---|---|---|
| | | | - The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely<br>- The populations of qualifying species, and,<br>- The distribution of qualifying species within the site. | |
| **Humber Estuary SPA** | Birds of coastal habitats<br>Birds of estuarine habitats | The site qualifies under article 4.1 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season:<br>Avocet *Recurvirostra avosetta* (breeding and wintering)<br>Bittern *Botaurus stellaris* (breeding and wintering)<br>Hen Harrier *Circus cyaneus* (wintering)<br>Golden Plover *Pluvialis apicaria* (wintering)<br>Bar-tailed Godwit *Limosa lapponica* (wintering)<br>Ruff *Philomachus pugnax* (passage)<br>Marsh Harrier *Circus aeruginosus* (breeding)<br>Little Tern *Sterna albifrons* (breeding)<br><br>The site qualifies under article 4.2 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed in Annex I) in any season:<br>Shelduck *Tadorna tadorna* (wintering)<br>Knot *Calidris canutus* (wintering and passage)<br>Dunlin *Calidris alpina* (wintering)<br>Black-tailed Godwit *Limosa limosa* (wintering and passage)<br>Redshank *Tringa totanus* (wintering and passage)<br><br>The site qualifies under article 4.2 of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season: In the non-breeding season, the area regularly supports 153,934 individual waterbirds (five-year peak mean 1996/97 – 2000/01), including:<br>Dark-bellied Brent goose *Branta bernicla bernicla*, Shelduck *Tadorna tadorna*, Wigeon *Anas penelope*, Teal *Anas crecca*, Mallard *Anas platyrhynchos*, Pochard *Aythya ferina*, Scaup *Aythya marila*, Goldeneye *Bucephala clangula*, Bittern *Botaurus stellaris*, Oystercatcher *Haematopus ostralegus*, Avocet *Recurvirostra avosetta*, Ringed Plover *Charadrius hiaticula*, Golden Plover *Pluvialis apricaria*, Grey Plover *P. squatarola*, Lapwing *Vanellus vanellus*, Knot *Calidris canutus*, Sanderling *C. alba*, Dunlin *C. alpina*, Ruff *Philomachus pugnax*, Black-tailed Godwit *Limosa limosa*, Bar-tailed Godwit *L. lapponica*, Whimbrel *Numenius phaeopus*, Curlew *N. arquata*, Redshank *Tringa totanus*, Greenshank *T. nebularia* and Turnstone *Arenaria interpres*. | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>- The extent and distribution of the habitats of the qualifying features<br>- The structure and function of the habitats of the qualifying features<br>- The supporting processes on which the habitats of the qualifying features rely<br>- The population of each of the qualifying features, and,<br>- The distribution of the qualifying features within the site. | Invasive non-native species<br>Changes in abiotic conditions<br>Changes in biotic conditions<br>Abiotic (slow) natural processes<br>Outdoor sports and leisure activities, recreational activities |
| **Thorne and Hatfield Moors SPA** | Birds of lowland heaths and brecks<br>Birds of lowland freshwaters and their margins | This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:<br>Nightjar *Caprimulgus europaeus* (breeding)<br><br>In addition, it is Natural England's view that the site would also meet SPA designation criteria in relation to Common Crane *Grus grus*, as the current level of use by this species (i.e. three breeding pairs) constitutes more than 1% of the UK population (Natural England, pers. comm). Whilst a formal re-designation of the site to include Common Crane as a qualifying feature has not been undertaken, this HRA will consider this species as a qualifying feature for the site. | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>- The extent and distribution of the habitats of the qualifying features<br>- The structure and function of the habitats of the qualifying features<br>- The supporting processes on which the habitats of the qualifying features rely<br>- The population of each of the qualifying features, and,<br>- The distribution of the qualifying features within | Other urbanisation, industrial and similar activities<br>Outdoor sports and leisure activities, recreational activities |

| Site | Qualifying Feature (Broad Habitat/Species Groupings) | Qualifying Features | Conservation Objectives | Site Vulnerability |
|---|---|---|---|---|
| | | | the site. | |
| **Humber Estuary Ramsar Site** | n/a | Ramsar Criterion 1 – a wetland should be considered internationally important if it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region - *The Humber Estuary qualifies as it is a representative example of a near-natural estuary with a range of component habitats, including dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes and coastal brackish/ saline lagoons*.<br><br>Ramsar Criterion 3 – a wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region – *The Humber Estuary qualifies because it supports a breeding colony of Grey Seals (Halichoerus grypus) at Donna Nook, the second largest Grey Seal colony in England. The dune slacks at Saltfleetby-Theddlethorpe support the most north-easterly breeding site in GB of Natterjack Toad Epidalea calamita.*<br><br>Ramsar Criterion 5 – A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds – *The Humber Estuary qualifies as during the non-breeding season it has a peak count of 153,934 waterfowl (5-year peak mean 1996/97-2000/01).*<br>Ramsar Criterion 6 – A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird – *The Humber Estuary qualifies as it contains populations of a number of species at levels of international importance, including:*<br>*On passage:*<br>*- Golden Plover Pluvialis apricaria altifrons NW Europe W Continental Europe NW Africa population (17,996 individuals, representing an average of 2.2% of the population, 5-year peak mean 1996 - 2000)*<br>*- Red Knot Calidris canutus islandica (18,500 individuals, representing an average of 4.1% of the population, 5-year peak mean 1996-2000)*<br>*- Dunlin Calidris alpina alpina Western Europe (non-breeding) population (20,269 individuals, representing an average of 1.5% of the population, 5-year peak mean 1996-2000)*<br>*- Black-tailed Godwit Limosa limosa islandica (915 individuals, representing an average of 2.6% of the population, 5-year peak mean 1996-2000)*<br>*- Common Redshank Tringa totanus brittanica (7,462 individuals, representing an average of 5.7% of the population, 5-year peak mean 1996-2000)*<br><br>*Over winter:*<br>*- Common Shelduck Tadorna tadorna North-western Europe (breeding) population (4,464 individuals, representing an average of 1.5% of the population, 5-year peak mean 1996/7-2000/1)*<br>*- Golden Plover Pluvialis apricaria altifrons NW Europe, W Continental Europe, NW Africa population (30,709 individuals, representing an average of 3.8% of the population, 5-year peak mean 1996/7-2000/1)*<br>*- Red Knot Calidris canutus islandica (28,165 individuals, representing an average of 6.3% of the population, 5-year peak mean 1996/7-2000/1)*<br>*- Dunlin Calidris alpina alpina Western Europe (non-breeding) population (22,222 individuals, representing an average of 1.7% of the population, 5-year peak mean 1996/7-2000/1)*<br>*- Black-tailed Godwit Limosa limosa islandica (1,113 individuals, representing an average of 3.2% of the population, 5-year peak mean 1996/7-2000/1)*<br>*- Bar-tailed Godwit Limosa lapponica lapponica (2,752 individuals, representing an average of 2.3% of the population, 5-year peak mean 1996/7-2000/1)*<br>*- Common Redshank Tringa totanus brittanica (4,632 individuals, representing* | None available. | Disturbance to vegetation through cutting / clearing<br>Vegetation succession<br>Water diversion for irrigation/domestic/industrial use<br>Overfishing<br>Pollution – domestic sewage<br>Pollution – agricultural fertilisers<br>Recreational/tourism disturbance (unspecified)<br>Coastal squeeze causing loss of intertidal habitats and saltmarsh due to sea level rise and fixed defences. |

| Site | Qualifying Feature (Broad Habitat/Species Groupings) | Qualifying Features | Conservation Objectives | Site Vulnerability |
|---|---|---|---|---|
| | | *an average of 3.6% of the population, 5-year peak mean 1996/7-2000/1)*<br><br>Ramsar Criterion 8 – A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of wetland-dependent non-avian animal species – *The Humber Estuary qualifies because it acts as an important migration route for both river lamprey Lampetra fluviatilis and sea lamprey Petromyzon marinus between coastal waters and their spawning areas.* | | |

# 4 Potential Impacts and Pathways

## 4.1 Introduction

Development for housing, business, infrastructure, services and recreation/tourism promoted as part of a Local Plan can potentially have adverse impacts on the habitats and species for which European sites are designated. These impacts can be direct such as habitat loss, fragmentation or degradation, or indirect such as disturbance or pollution from construction, transportation etc. They can include long-term effects associated with the operational phase of proposed developments or general population growth, and short-term effects arising from construction phases.

This chapter identifies the potential impacts and their pathways to European sites within and adjacent to North Lincolnshire which may arise as a result of the Publication Draft Addendum of the North Lincolnshire Local Plan. It then goes on to identify the types of impact/pathway to which the qualifying features present upon the European sites are particularly sensitive.

## 4.2 Potential Impacts and Pathways

The main potential pathways of impact likely to arise as a result of the Publication Draft Addendum of the North Lincolnshire Local Plan are described below, with local context provided where possible.

### 4.2.1 Recreational Pressure

Housing development and population increases can result in additional recreational pressures on European sites through activities such as walking, dog walking, jogging, cycling, horse riding, motorbike scrambling, boating and other water-based recreational activities. The impacts generated by recreational use in or around European sites are usually accidental or incidental, but typically include:

- Physical damage, for example from trampling and erosion
- Disturbance to species, such as ground-nesting birds and wintering wildfowl, from walking, dog walking, cycling, and water sports, and also from increased traffic associated with these activities. This can result in increased mortality, reduced nesting success, and displacement.
- Air pollution (dealt with under section 4.2.3) from increased traffic

The impacts of recreational pressures are complex and depend on the specific species and habitat tolerance levels. For example, certain bird species are more sensitive to disturbance from dog walkers than others, and some habitats are more sensitive to trampling than others. In addition, some species can become habituated to some disturbance, such as noise, particularly if it is regular or continuous; it is often unpredictable disturbance that is most problematic. The level and locations of accessibility of the site to the public will also affect how recreational pressures impact upon it. In addition, where sites are close to urban areas and new developments, recreational pressures can be exacerbated by other damaging activities such as rubbish tipping, vandalism, arson, and predation, particularly by cats (see section 4.2.2).

The Thorne and Hatfield Moors SAC/SPA complex is accessible to the public and intersected by a network of paths and trails. Inevitably, visitors may stray off these paths (although not extensively owing to the wet conditions underfoot and remote nature of the site) and hence trample the peatland communities. The plant communities of peatland ecosystems are especially susceptible to trampling and are easily damaged at even low levels of disturbance. A shift in species composition follows, with a decrease in *Sphagnum*, liverworts and lichen cover and richness. Furthermore, trampling exposes the bare peat which is susceptible to erosion with impeded re-colonisation. For lichens, this is because growth is inhibited where thalli are broken. Whilst some species benefit from trampling (e.g. Common Sundew *Drosera rotundifolia*, Fen Bedstraw *Galium uliginosum* and Grass-of-Parnassus *Parnassia palustris*), this only occurs at low levels of disturbance such as those caused by deer (the wet depressions caused by ungulate hooves for example create humid conditions which favour sundew species). Once trampling is

initiated, the zone of impact widens as new areas of peatland become vulnerable to trampling (Pellerin *et al*., 2006). Nightjar and Common Crane populations are also vulnerable to disturbance for recreational activities.

The Humber Estuary SAC, SPA and Ramsar site is also susceptible to recreational disturbance, but in contrast to Thorne and Hatfield Moors, disturbance of avian fauna rather than botanical interest is most at risk here. Public access is available to most of the SPA boundary via footpaths and bridleways along the sea wall, access to beaches and saltmarsh, and compared to other estuarine SPA sites in England, the Humber has particularly large areas of intertidal habitat, most of which is well away from the footpath network. However, there is a relatively high level of sand in the substrate, at least in places, meaning that people can easily walk over the intertidal areas in some parts of the site (Ross and Liley, 2014). A survey by Fearnley *et al*. (2012) identified that 18.5% of visitors strayed from path onto mudflats/ beaches. Straying off the path (and associated noise disturbance) poses a threat to nests and young, increasing stress levels. Recreational disturbance has been reported to change bird behaviour and can be particularly detrimental over winter when bird numbers are higher and temperatures are lower, but resources are scarcer. This stress can force birds to leave a given designated site and ultimately can increase mortality (Le Corre *et al*. 2013). Whilst the estuary represents a complex system (making it difficult to pin-point causation), there is evidence to suggest that key designation features (e.g. Little Tern *Sternula albifrons* colonies) have declined locally due to recreational disturbance.

Whilst recreational activities are diverse on the Humber, it is thought that shore-based activities are most likely to cause disturbance (Cruickshanks *et al*., 2010). A survey identified the main recreational activity on the Humber as dog walking (Fearnley *et al*., 2012). Cruickshanks *et al.* (2010) highlight a range of recreational activities that are associated with the Humber Estuary, and summarise the impact of these and key locations, as described in Table 4-1.

**Table 4-1: Recreational Activities Associated with the Humber Estuary (From: Cruickshanks *et al*., 2010)**

| Recreational Activity | Description | Key Locations |
|---|---|---|
| **Shore-based Activities** | | |
| **Walking** | A popular pursuit along much of the Humber banks, including general walking, dog walking and organised groups which make use of the trails around the estuary (e.g. Trans Pennine Trail, The Viking Way). | Takes place at all areas where there is access to the shore around the Humber with a focus on the larger settlements of Hull, Grimsby and Cleethorpes. |
| **Horse riding** | A popular activity around the Humber, focussed around long-distance trails (e.g. Heritage Ride) and beach riding. | The busiest areas for horse riding are Spurn Head, North Ferriby, Blacktoft Sands, Grimsby, Cleethorpes and Immingham and Saltfleet on the outer estuary. |
| **Cycling** | An informal activity on the Humber. Users make use of the Trans Pennine trail on the northern shore. Occurs more frequently in summer. | The busiest areas for cycling are Spurn Head, Hull and Hessle foreshore, Broomfleet, Barton-upon-Humber, Grimsby, Immingham and Cleethorpes. |
| **Bird and seal watching** | A popular activity on the Humber often resulting in large numbers of visitors to see rare birds and the seals at Donna Nook. | Spurn Point, Blacktoft, Tetney, Far Ings Nature Reserves, Welwick, Brough, Donna Nook, Saltfleetby, Killingholme and Easington are all popular locations for birding.<br>Donna Nook is the focus for seal watching, supporting one of the largest grey seal breeding colonies in England. Other seal watching sites include Easington and |

| Recreational Activity | Description | Key Locations |
|---|---|---|
| | | Cleethorpes. |
| **Beach recreation** | Beach recreation attracts large numbers of visitors in the summer. | This activity is focussed around Cleethorpes and along the Lincolnshire coast (e.g. Mablethorpe) and also at Spurn. |
| **Wildfowling** | Currently regulated by 13 associations, clubs and syndicates - all of whom are affiliated to British Association for Shooting and Conservation (BASC). | Licensed at around 27 locations on the estuary. The South Humber Area Joint Council (SHAJC) consists of representatives from eight clubs on the South Bank. |
| **Motorised access** | Motorised access and recreation has increased on the beaches and intertidal habitats with the use of quad bikes, four-wheel drive vehicles and motorbikes causing disturbance to birds. | The north bank wildfowling refuge has frequent issues with illegal motorised access. Other locations include South Ferriby, Barton, east of Barton, Blacktoft, Saltfleet, Easington and Welwick. |
| **Samphire collection** | Collection of samphire for personal use from the saltmarsh. There is some concern than commercial harvesting could increase the number of people in quieter areas of the SPA. | Occurs at Cleethorpes, Donna Nook, Tetney and Saltfleet on the south bank, and Spurn on the north bank. |
| **Angling** | Recreational angling (involving the use of rod and line) takes place around the estuary shore in restricted locations due to poor access. There are more than 20 angling clubs.<br>Recreational fishing also occurs from boats on the Humber. | This occurs in restricted locations due to poor access, with a concentration of activity around the Humber Bridge. The busiest areas for angling are Spurn Head and Bight, Cherry Cobb Sands, Hull and Hessle foreshore to North Ferriby, Barton Cliff, Immingham, Pyewipe and Saltfleet. |
| **Bait digging** | Bait digging for recreational fishing purposes. Bait diggers mainly target lugworm (*Arenicola* sp.) and ragworm (*Nereis* sp.). There is some concern that bait digging is increasing. | Occurs around Cleethorpes on the south bank, and Spurn and Easington on the north shore. |
| **Waterborne Activities** | | |
| **Motor cruising & personal watercraft** | This includes motor cruising, jet skiing, water skiing, canoeing and sea kayaking. The estuary is busier in the summer and the activities, particularly jet skiing, are difficult to regulate. | Motor cruising is mainly centred around the main marinas and slipways (for smaller craft) (e.g. Goole, Hull, Grimsby and Cleethorpes).<br>Jet skiing takes place at Saltfleet and from the slipway at the Humber Bridge; water skiing takes place at Hessle; canoeing takes place at Grimsby and Cleethorpes Canoe Club at the mouth of the River Freshney; and sea kayaking is becoming increasingly popular at Kilnsea. |
| **Yachting and sailing** | Yachting is a popular recreational activity on the Humber. Activity peaks in the summer months. | Concentrated activity around Hull Marina, Brough, Goole, Winteringham, Ferriby, Barrow Haven, East Halton, Grimsby and Saltfleet. |
| **Kite surfing** | Kite flying and surfing on water and land using kite buggies is an increasing activity on the Humber. | There are currently two focal areas at Humberston Beach/Humberston Speed strip and Cleethorpes. |
| **Airborne Activities** | | |
| **Air-borne** | Flying pleasure aircraft, microlights | Most activity is based around the 13 flying |

| Recreational Activity | Description | Key Locations |
|---|---|---|
| **recreation** | and paragliders is popular and increasing around the Humber. | clubs and Humberside International Airport. The key areas for pleasure aircraft include Goxhill, Faxfleet to Brough Haven on the North Shore, Barton and Blacktoft Sands. Use of microlights in these areas is also reported, along with regular activity at Mablethorpe and Saltfleetby. |

Overall, Cleethorpes, Donna Nook, Hessle and the tip of Spurn attract the highest numbers of visitors and from a review of visitor questionnaire data collected by Fearnley *et al*. (2012), 50% of visitors, on average, who arrived at their destination by foot lived within 0.95km of the site, and, on average, 50% of visitors who arrived at their destination by car lived within 8.4km of the site. Overall, Fearnley *et al*. (2012) concluded that 88% of visitors to the Humber Estuary were local residents, with the majority living within 4.42km of the site.

When comparing the impacts of recreational disturbance on the Humber Estuary in comparison to other estuarine sites across England, Ross and Liley (2014) highlight that the Humber has large areas of intertidal habitat, most of which are some distance from footpaths, but many of which have a high level of sand in the substrate allowing easy access for walkers into some parts of the site. The level of surrounding housing (indicating the number of people) is comparable to that of other estuarine SPAs, but the number of car parks (shown on standard Ordnance Survey maps) is relatively high per kilometre of estuary shoreline. Ross and Liley (2014) therefore conclude that these metrics indicate that the Humber Estuary is not likely to be as vulnerable to disturbance impacts as some other sites, or at least that some other estuary sites around England are considered to be under greater recreational pressure. Despite this, on a local scale there may be areas of the estuary that are more vulnerable to disturbance than others, for example where high tide roosts are located near to a car park. The large areas of exposed soft intertidal habitat mean that there are a range of options that birds have to feed and these are so far from the shore that redistribution may be easier (although displacement of birds for a significant period of time is likely to be a significant effect regardless so whether alternative habitat is available). Concern is therefore focused around particularly sensitive locations where birds may congregate, such as roost sites, and to some extent in the areas where access may be diffuse and spread out across important habitat to a level where there is significant habitat lost to the birds (Ross and Liley, 2014).

In relation to the River Derwent SAC, the Site Improvement Plan (Natural England, 2014h) does not identify recreational pressures, or other impacts potentially associated with it, as a key threat to this site.

An additional complication when trying to assess the impacts of recreational disturbance on European sites is that most recreational activities are 'casual' and pursued opportunistically (e.g. walking, walking dogs, riding) which makes it difficult to quantify or predict the impacts, and harder to control or manage. It also means it is difficult to explore in detail all of the potential impacts of recreational pressures at the strategic level. However, it is possible for plans and strategies to influence recreational use of European sites through the planning process, for example, by increasing the amount of green/open space and leisure/recreational facilities required within or near developments if potentially vulnerable European sites are located nearby.

A further consideration is that the population of North Lincolnshire is currently just over 170,000 people, and is expected to grow by around 2.4% to reach just over 177,000 by 2038. By far the biggest increase in population is projected to take place in people of pensionable age (65+), with a projected increase of 35%, with 28.3% of the North Lincolnshire population projected to be aged over 65 by 2038 (North Lincolnshire Council, 2021). This is the section of

the population with the greatest amount of leisure time, potentially further increasing recreational pressures on European sites.

This HRA will consider the potential for recreational pressures on a European site by taking into consideration the vulnerability of their interest features to such pressures, the accessibility of the site to the public, the likely attractiveness of the site and its habitats/species to visitors, and the proximity of the site to proposed development sites.

### 4.2.2 Urbanisation

Urbanisation is a broad term that can act as a pathway to produce a number of often disparate impacts to European sites. This can include:

- Habitat loss should the development occur within the boundaries of a European site. Loss of supporting habitats, such as high tide roosts used by wetland birds that are not within the boundaries of the designated site but that provide important functional habitat linkages, can also be a significant impact.
- Physical damage, for example from trampling and erosion, and also activities such as fly-tipping, littering, vandalism, arson, and predation, particularly by cats.
- Habitat fragmentation, whereby new development results in the separation of available habitats or splits extensive areas of suitable habitat. It is most likely to impact upon species.
- Disturbance (noise and visual) associated with both the construction phase (e.g. from plant movements, machinery) and also the operational phase (e.g. from users of the development undertaking activities such as walking or water sports which generate disturbance as described in section 4.2.1). This typically affects sensitive species such as birds and mammals causing them to deviate from their normal preferred behaviour.
- Air pollution (dealt with under section 4.2.3) from increased traffic both during the construction and operational phases.

Recreational pressure, as discussed in section 4.2.1, is also frequently associated with urbanisation and often generates the greatest impacts, however, in contrast to other urbanisation impacts, it is less associated with proximity to development, and is consequently discussed separately in this report.

Given the link between proximity to development and urbanisation impacts impacting on European sites, development buffers are often applied. Within these zones, development (typically specified as housing development) should not be allocated due to the potential effects of urbanisation. These buffer zones are typically of around 500m, such as that used for the Thames Basin Heaths SPA.

Both the Humber Estuary and Thorne and Hatfield Moors have interest features which are susceptible to urbanisation. The Humber Estuary is noted for significant populations of wading birds which are vulnerable to predation associated with the influx of domestic cats and other large predators found in urban areas. Likewise, Thorne and Hatfield Moors hold significant populations of breeding Nightjar *Caprimulgus europaeus*. There is some evidence, however, to suggest that the reverse is true. The so called 'Predation Paradox' proposes that predation is reduced in urban areas owing to the surplus of anthropogenic food sources which provide an alternative food source to large predators. Furthermore, anthropogenic food supplies can benefit prey (Fischer *et al.,* 2012). More recent studies have revealed that this is not the case for all urban areas and that there are other variables at play depending on the nature of the urban area (Rivera-López & MacGregor-Fors, 2016).

The north shore of the Humber Estuary is slightly more populated than the south shore, when looking at property within 5km of the centre of the estuary. It should be noted, however, that relative to other estuaries, the Humber is more sparsely populated, so at present, urbanisation

poses a lower threat (Cruickshanks *et al*., 2010). However, future development pursued under the North Lincolnshire Local Plan, and neighbouring plans, has the potential to exacerbate urbanisation pressures on European sites. Therefore, this HRA will consider the potential for urbanisation pressures to be generated in relation to the European sites identified in section 3, taking into account the vulnerability of their interest features and the proximity of the site to proposed development sites.

Given its distance from North Lincolnshire itself, urbanisation is not considered to pose a threat to the River Derwent SAC, and Natural England (2014h) do not identify any direct threats to the site from urbanisation pathways in the Site Improvement Plan for the SAC. However, urbanisation could lead to indirect threats such as water pollution (see section 4.2.5) and water abstraction (see section 4.2.4) which are identified by Natural England (2014h) as particular issues for this site.

This HRA will consider the potential for the range of disparate impacts that can arise as a result of urbanisation and affect a European site, taking into account the vulnerability of the interest features to such pressures, and the proximity of the site to proposed development sites.

### 4.2.3 Atmospheric Pollution

A range of pollutants can have a negative effect on air quality. However, the most significant pollutants in relation to habitats and species (in particular plants) are:

- Sulphur dioxide ($SO_2$) which is typically generated from combustion of coal and heavy fuel oils. The energy industry was the primary source of this pollutant, however, as the use of coal for power generation has declined, so have levels of $SO_2$.
- Nitrogen oxides ($NO_x$) which are mainly generated from vehicle emissions, with road transport being a key source. $NO_x$ emissions have decreased with increased fuel efficiency and catalytic converters.
- Ammonia ($NH_3$) which is primarily associated with agriculture, such as through the decomposition of manure and slurry.

The above pollutants primarily impact on habitats and species through acidification and eutrophication. Acidification increases the acidity of soils, which can directly affect some species, but can also lead to leaching of some important base chemicals, such as calcium. It can also result in the mobilisation and uptake of toxins by plants, such as metals including aluminium. Over recent years, due to improvements in vehicle technology and fuel efficiency, combined with declines in the use of coal for energy production, acidification levels in the UK have decreased, and are expected to continue to decrease in the future (Defra, 2016). Eutrophication increases the amounts of available Nitrogen (N) which is a particular problem in low-nutrient systems where available nitrogen is often a limiting factor to plant growth. Therefore, eutrophication can often result in the slow-growing, low-nutrient demanding species being out-competed by faster growing species that take advantage of the elevated levels of available Nitrogen. However, as with $SO_2$, technological improvements, such as the three-way catalytic converter, have resulted in a dramatic reduction in $NO_x$ emissions from petrol-fuelled vehicles, although this decrease has been slowed in recent years with the increased number of higher $NO_x$ emitting diesel vehicles on the road (Defra, 2016 & 2018). Determining trends in $NH_3$ emissions is difficult due to their typically diffuse sources, however, compared to other air quality pollutants there has been relatively little reduction in total emissions since the 1990s. Where slight reductions have been observed, this is largely due to a decrease in UK cattle numbers (the largest of the livestock emitters), where better farming practices have improved efficiencies (Defra, 2016 & 2018).

New developments progressed under the Local Plan, and an associated increase in population, have the potential to result in an increased use of the road network by vehicles which could have adverse effects on air quality. This could have subsequent effects on habitats sensitive to air quality changes and higher deposits of Nitrogen oxides, particulates and Sulphur Dioxide.

For example, there is the potential for effects on the health of *Sphagnum* (which is critical to the ability of the degraded raised bog to re-establish actively growing peat within the site, such as on Thorne and Hatfield Moors).

It should be noted that the likelihood of this effect is greatly reduced as the distance increases between the deposit area (typically the road network) and the European site. Ricardo-AEA (2016) report that, in relation to $NO_x$ and $NO_2$ associated with vehicle emissions, levels are greatest within the first 50-100m from the road, but may be discernible at greater distances. However, heavy metals from vehicle emissions decline rapidly within the first 5-10m and may not be discernible beyond 50m from the roadside. Due to this decline in pollutants from the roadside, Highways England (2019) recommend considering designated sites and habitats within 200m of the affected road network when undertaking an air quality assessment, and this approach is supported by Natural England (2018) based on current literature.

One of North Lincolnshire's major strengths and opportunities is its high quality transport network, with easy access to the UK's motorway and trunk road network (i.e. M180, M181, A180, A160 link and A15), a well-connected rail network, Humberside airport, four inland ports (i.e. Flixborough Wharf, Grove Port, Gunness and Keadby) and close proximity to the South Humber Gateway ports at Grimsby, Immingham and Killingholme.

An additional consideration is that the vast majority of new vehicles on the road generally emit fewer emissions than older vehicles. This has become more apparent over the last 5 years as the car industry has responded to increasing climate change (carbon reduction) pressures. However, recent investigations have indicated that the published laboratory emissions data from manufacturers may not in fact reflect actual independent on-road emissions levels (AIR, 2017). Road tax bands were also amended by the Government in 2020 to ensure that the most polluting cars are penalised more heavily than previously. These measures have helped to increase the demand for cleaner more fuel-efficient vehicles; this trend will likely increase further in the future as cars continue to become even greener.

The Humber Estuary is vulnerable to atmospheric nitrogen deposition. On the Humber, coastal saltmarsh is particularly susceptible to the fertilising effects of this pollution whereby nitrogen deposits favour the growth of grasses over forbs. A shift towards later successional species is also apparent. Mature saltmarsh is most vulnerable because interspecific competition is greatest here. The effects of atmospheric nitrogen deposition are augmented by wildfowl, hence zones with high concentrations of winter-feeding geese and waders are at greatest risk of dry deposition of gaseous ammonia. Saltmarsh adjacent to power stations are also at a higher risk from dry gaseous nitrogen oxide. Finally, saltmarsh located in areas with elevated wet deposition of ammonium and nitrate are particularly vulnerable. The critical load of nitrogen deposition has been set at 20-30 kg N $ha^{-1}$ $year^{-1}$ (Air Pollution Information System (APIS), 2016a).

Lowland raised bogs are also vulnerable to atmospheric nitrogen deposition, especially the deposition of ammonia. Ammonia increases the susceptibility of plants to stress (e.g. water stress). *Sphagnum* moss and lichens are particularly susceptible to bleaching following exposure. A shift in species composition is also likely, with an increase in algal growth over *Sphagnum*. Finally, ammonia deposition may lead to oxidation and erosion of peat to the detriment of the species it supports. Ammonia pollution is associated with agriculture. For example, where livestock, fertiliser or senescing vegetation are located nearby, ammonia may be released into the atmosphere. Wildlife can also contribute to atmospheric nitrogen pollution, especially populations of birds in significant numbers within 1-3km. Lowland raised bogs are more susceptible to the effects of ammonia where the water levels are low. The critical load of ammonia deposition is 1 µg $NH_3$ $m^{-3}$ annual mean for lichens and bryophytes and 3 µg $NH_3$ $m^{-3}$ annual mean (uncertainty of 2-4 µg $NH_3$ $m^{-3}$) for higher plants (APIS, 2016b).

Natural England (2014h) does not identify atmospheric pollution as a particular risk to the River Derwent SAC in its Site Improvement Plan.

The UK Air Pollution Information System (APIS, 2019) provides detailed information on air pollution and its effects on habitats and species. Critical loads (i.e. the threshold level for the

deposition of a pollutant above which harmful indirect effects can be shown on a habitat or species) have been developed on a site-specific basis, with each interest feature assessed for each site, as summarised in Table 4-2. It should be noted that critical loads have not been specified for the interest features of Ramsar sites, but the interest features are comparable to those of the Humber Estuary SAC and SPA.

**Table 4-2: Critical Loads relating to Eutrophication and Acidification for interest features of SACs and SPAs in and around North Lincolnshire (From: APIS, 2021)**

| Site | Qualifying Features | Critical Loads | | Comment on Exceedance Impacts |
|---|---|---|---|---|
| | | Nutrient Nitrogen | Acid | |
| Humber Estuary SAC | Sandbanks which are slightly covered by sea water all the time | Not sensitive to eutrophication | Not sensitive to acidification | n/a |
| | Mudflats and sandflats not covered by seawater at low tide | No critical load assigned | Not sensitive to acidification | n/a |
| | Estuaries | 20-30kg N/ha/yr | Not sensitive to acidification | Nitrogen loading can result in an increase in late successional species. An increase in productivity can also occur which can result in an increase in graminoids. |
| | Coastal lagoons | | | |
| | *Salicornia* and other annuals colonizing mud and sand | | | |
| | Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) | | | |
| | Embryonic shifting dunes | 10-20kg N/ha/yr | Not sensitive to acidification | Nitrogen loading can result in an increase in biomass and increased N leaching. |
| | Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") | | | |
| | Fixed coastal dunes with herbaceous vegetation ("grey dunes") | Acid type - 8-10kg N/ha/yr<br>Calcareous type - 10-15kg N/ha/yr | Min Critical Load (CL)Min Nitrogen (N): 0.223keq<br>MaxCLMinN: 0.438keq<br>MinCLMax Sulphur (S): 0.420keq<br>MaxCLMaxS: 4.110keq<br>MinCLMaxN: 0.643keq<br>MaxCLMaxN: 4.548keq | Nitrogen deposition can result in an increase in tall grasses and a decrease in prostrate plants. Increased nitrogen leaching can occur from soils leading to soil acidification. Typical lichen species can often be lost.<br>Acidification can cause leaching which will cause a decrease in soil base saturation, increasing the availability of Aluminium ions (Al3+). Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct impacts on lower plants (lichens and bryophytes). |
| | Dunes with *Hippophae rhamnoides* | No critical load assigned | MinCLMinN: 0.223keq<br>MaxCLMinN: 0.438keq<br>MinCLMaxS: 0.420keq<br>MaxCLMaxS: 4.110keq | Acidification can cause leaching which will cause a decrease in soil base saturation, increasing the availability of Al3+ ions. |

| Site | Qualifying Features | Critical Loads | | Comment on Exceedance Impacts |
|---|---|---|---|---|
| | | Nutrient Nitrogen | Acid | |
| | | | MinCLMaxN: 0.643keq<br>MaxCLMaxN: 4.548keq | Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct impacts on lower plants (lichens and bryophytes) |
| | Grey Seal *Halichoerus grypus* | Species broad habitat is not sensitive to eutrophication | Species broad habitat is not sensitive to acidification | n/a |
| | River Lamprey *Lampetra fluviatilis*<br>Sea Lamprey *Petromyzon marinus* | No critical load assigned for broad habitat of this species | No critical load assigned for broad habitat of this species | Nitrogen is often co-limiting in these systems with Phosphorous (P). Other sources of N can also be significant (e.g. diffuse agricultural pollution).<br>Acidification can cause increased Al3+ concentrations which can impact on invertebrate populations and can be toxic to fish. |
| Hatfield Moor SAC | Degraded raised bogs still capable of natural regeneration [7120] | 5-10kg N/ha/yr | MinCLMinN: 0.321keq<br>MaxCLMinN: 0.321keq<br>MinCLMaxS: 0.154keq<br>MaxCLMaxS: 0.166keq<br>MinCLMaxN: 0.475keq<br>MaxCLMaxN: 0.487keq | Nitrogen loading can increase vascular plants, alter growth and species composition of bryophytes and increase N in peat and peat water.<br>Acidification can cause leaching which can cause a decrease in soil base saturation, increasing the availability of Al3+ ions. Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct effect on lower plants (bryophytes and lichens). |
| Thorne Moor SAC | Degraded raised bogs still capable of natural regeneration [7120] | | MinCLMinN: 0.321keq<br>MaxCLMinN: 0.321keq<br>MinCLMaxS: 0.141keq<br>MaxCLMaxS: 0.146keq<br>MinCLMaxN: 0.462keq<br>MaxCLMaxN: 0.467keq | |
| River Derwent SAC | Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation | No critical load assigned | No critical load assigned | Nitrogen is often co-limiting in these systems with P. Other sources of N can also be significant (e.g. diffuse agricultural pollution).<br>Acidification can cause increased Al3+ concentrations which can impact on invertebrate populations and can be toxic to fish. |
| | River Lamprey *Lampetra fluviatilis*<br>Sea Lamprey *Petromyzon marinus*<br>Bullhead *Cottus gobio*<br>Otter *Lutra lutra* | No critical load assigned for broad habitat of this species | No critical load assigned for broad habitat of this species | |

| Site | Qualifying Features | Critical Loads | | Comment on Exceedance Impacts |
|---|---|---|---|---|
| | | Nutrient Nitrogen | Acid | |
| Humber Estuary SPA | Ringed Plover *Charadrius hiaticula* (passage and wintering) | Pioneer, low-mid, mid-upper saltmarshes: 20-30kg N/ha/yr | Species is not sensitive to acidification impacts on supporting broad habitats | Nitrogen loading can result in an increase in late successional species. An increase in productivity can also occur which can result in an increase in graminoids. Eutrophication has the potential to have a positive impact on species due to impacts on food supply. Nitrogen is often co-limiting in these systems with P. Other sources of N can also be significant (e.g. diffuse agricultural pollution). |
| | Sanderling *Calidris alba* (wintering and passage) | Pioneer, low-mid-mid-upper saltmarshes: 20-30kg N/ha/yr | Species is not sensitive to acidification impacts on supporting broad habitats | Nitrogen loading can result in an increase in late successional species. An increase in productivity can also occur which can result in an increase in graminoids. |
| | Whimbrel *Numenius phaeopus* (passage) | | | |
| | Shelduck *Tadorna tadorna* (wintering) | | | |
| | Redshank *Tringa totanus* (passage and wintering) | Pioneer, low-mid, mid-upper saltmarshes: 20-30kg N/ha/yr | Species is not sensitive to acidification impacts on supporting broad habitats | Potential negative impacts from eutrophication due to adverse impacts on the broad habitat types supporting this species (e.g. increase in late successional species, increase in productivity and dominance of graminoids). Eutrophication also has the potential to have a positive impact on species due to impacts on food supply. |
| | Common Greenshank *Tringa nebularia* | | | |
| | Turnstone *Arenaria interpres* (wintering) | | | |
| | Dunlin *Calidris alpina* (wintering) | | | |
| | Bar-tailed Godwit *Limosa lapponica* (wintering) | | | |
| | Black-tailed Godwit *Limosa limosa* (wintering) | | | |
| | Knot *Calidris canutus* (wintering) | | | |
| | Grey Plover *Pluvialis squatarola* (wintering) | | | |
| | Avocet *Recurvirostra avosetta* (breeding and wintering) | | | |
| | Oystercatcher *Haematopus ostralegus* (wintering) | | | |
| | Scaup *Aythya marila* (wintering) | Species is not sensitive to eutrophication impacts on supporting broad | Species is not sensitive to acidification impacts on supporting broad habitats | n/a |

| Site | Qualifying Features | Critical Loads | | Comment on Exceedance Impacts |
|---|---|---|---|---|
| | | Nutrient Nitrogen | Acid | |
| | | habitats | | |
| | Ruff *Philomachus pugnax* (passage) | Pioneer, low-mid-mid-upper saltmarshes: 20-30kg N/ha/yr<br>Low and medium altitude hay meadows: 20-30kg N/ha/yr | Acid Grassland:<br>MinCLMinN: 0.223keq<br>MaxCLMinN: 0.438keq<br>MinCLMaxS: 0.42keq<br>MaxCLMaxS: 4.11keq<br>MinCLMaxN: 0.643keq<br>MaxCLMaxN: 4.548keq<br><br>Species is not sensitive to acidification impacts on supporting broad habitat of littoral sediment | Nitrogen loading can result in an increase in late successional species. An increase in productivity can also occur which can result in an increase in graminoids. An increase in tall grasses, and decreased diversity can also occur in meadows.<br>Acidification can cause leaching which can cause a decrease in soil base saturation, increasing the availability of Al3+ ions. Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct effect on lower plants (bryophytes and lichens). |
| | Hen Harrier *Circus cyaneus* (wintering) | Northern wet heath: Calluna dominated: 10-20kg N/ha/yr<br>Rich fens: 15-30kg N/ha/yr<br>Pioneer, low-mid-mid-upper saltmarshes: 20-30kg N/ha/yr | Dwarf shrub heath:<br>MinCLMinN: 0.499keq<br>MaxCLMinN: 0.892keq<br>MinCLMaxS: 0.42keq<br>MaxCLMaxS: 4.11keq<br><br>MinCLMaxN: 1.312keq<br>MaxCLMaxN: 4.982keq<br><br>Species is not sensitive to acidification impacts on supporting broad habitats of littoral sediment and fen, marsh and swamp | Nitrogen loading can lead to a reduction in heather, a decline in lichens and mosses and greater N leaching heathlands; dominance of tall graminoids and a decrease in bryophytes in fen habitats; and an increase in late successional species, and an increase in productivity which can result in an increase in graminoids in saltmarshes.<br>Acidification can cause leaching which can cause a decrease in soil base saturation, increasing the availability of Al3+ ions. Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct effect on lower plants (bryophytes and lichens). |
| | Bittern *Botaurus stellaris* (wintering and breeding)<br>Marsh Harrier *Circus aeruginosus* (breeding) | Rich fens: 15-30kg N/ha/yr | Species are not sensitive to acidification impacts on supporting broad habitats | Potential negative impacts from eutrophication due to adverse impacts on the broad habitat types supporting this species (e.g. increase in tall graminoids, decrease in bryophytes). |
| | Lapwing *Vanellus vanellus* (wintering) | Pioneer, low-mid, mid-upper saltmarshes: 20-30kg N/ha/yr<br>Arable and horticulture: | Species are not sensitive to acidification impacts on supporting broad habitats | Potential negative impacts from eutrophication due to adverse impacts on the broad habitat types supporting this species (e.g. increase in late successional |

| Site | Qualifying Features | Critical Loads | | Comment on Exceedance Impacts |
|---|---|---|---|---|
| | | Nutrient Nitrogen | Acid | |
| | Dark-bellied Brent Goose *Branta bernicla* | Species' broad habitat is not sensitive to eutrophication | | species, increase in productivity and dominance of graminoids). Eutrophication also has the potential to have a positive impact on species due to impacts on food supply. |
| | Goldeneye *Bucephala clangula* (wintering)<br>Wigeon *Anas penelope* (wintering)<br>Teal *Anas crecca* (wintering)<br>Pochard *Aythya ferina* (wintering)<br>Mallard *Anas platyrhynchos* (wintering) | Pioneer, low-mid, mid-upper saltmarshes: 20-30kg N/ha/yr<br>No critical load assigned for broad habitat of standing open water and canal habitats | No critical loads set for freshwater habitats.<br>Species are not sensitive to acidification impacts on supporting broad habitat of littoral sediment | Potential negative impacts from eutrophication due to adverse impacts on the broad habitat types supporting this species (e.g. increase in late successional species, increase in productivity and dominance of graminoids). Eutrophication also has the potential to have a positive impact on species due to impacts on food supply.<br>Acidification can cause increased Al3+ concentrations which can impact on invertebrate populations and can be toxic to fish. |
| | Little Tern *Sterna albifrons* (breeding) | Coastal stable dune grasslands (acid type): 8-10kg N/ha/yr<br>Coastal dune grasslands (calcareous type): 10-15kg N/ha/yr<br>Shifting coastal dunes: 10-20kg N/ha/yr | Acid Grassland:<br>MinCLMinN: 0.223keq<br>MaxCLMinN: 0.438keq<br>MinCLMaxS: 0.42keq<br>MaxCLMaxS: 4.11keq<br>MinCLMaxN: 0.643keq<br>MaxCLMaxN: 4.548keq<br><br>Calcareous Grassland:<br>MinCLMinN: 0.856keq<br>MaxCLMinN: 1.071keq<br>MinCLMaxS: 4keq<br>MaxCLMaxS: 4keq<br>MinCLMaxN: 4.856keq<br>MaxCLMaxN: 5.071keq<br><br>Species are not sensitive to acidification impacts on supporting broad habitat of littoral sediment | Potential negative impacts from eutrophication due to adverse impacts on the broad habitat types supporting this species (e.g. increase in tall grasses, decrease in prostrate plants, increased N leaching from soils, soil acidification, loss of typical lichen species, biomass increase).<br>Acidification can cause leaching which can cause a decrease in soil base saturation, increasing the availability of Al3+ ions. Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct effect on lower plants (bryophytes and lichens). |
| | Golden Plover *Pluvialis apicaria* (wintering and breeding) | Low and medium altitude hay meadows: 20-30kg N/ha/yr<br>Pioneer, low-mid, mid-upper saltmarshes: 20-30kg N/ha/yr<br>Improved | | Potential negative impacts from eutrophication due to adverse impacts on the broad habitat types supporting this species (e.g. increase in late successional species, increase in productivity and dominance of graminoids, increase in tall |

| Site | Qualifying Features | Critical Loads | | Comment on Exceedance Impacts |
|---|---|---|---|---|
| | | Nutrient Nitrogen | Acid | |
| | | grassland: Species' broad habitat is not sensitive to eutrophication | | grasses, decrease in diversity). Eutrophication also has the potential to have a positive impact on species due to impacts on food supply.<br>Acidification can cause leaching which can cause a decrease in soil base saturation, increasing the availability of Al3+ ions. Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct effect on lower plants (bryophytes and lichens). |
| | Curlew *Numenius arquata* (wintering) | Pioneer, low-mid, mid-upper saltmarshes: 20-30kg N/ha/yr<br>Low and medium altitude hay meadows: 20-30kg N/ha/yr | | Potential negative impacts from eutrophication due to adverse impacts on the broad habitat types supporting this species (e.g. increase in late successional species, increase in productivity and dominance of graminoids increase in tall grasses, decrease in diversity).<br>Acidification can cause leaching which can cause a decrease in soil base saturation, increasing the availability of Al3+ ions. Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct effect on lower plants (bryophytes and lichens). |
| Thorne and Hatfield Moors SPA<br>(No data available for Common Crane) | Nightjar *Caprimulgus europaeus* (breeding) | Dwarf shrub heath: 10-20kg N/ha/yr<br>Coniferous woodland: 5-10kg N/ha/yr | Dwarf shrub heath:<br>MinCLMinN: 0.499keq<br>MaxCLMinN: 1.107keq<br>MinCLMaxS: 0.141keq<br>MaxCLMaxS: 4.09keq<br>MinCLMaxN: 0.783keq<br>MaxCLMaxN: 4.962keq<br><br>Coniferous Woodland:<br>MinCLMinN: 0.142keq<br>MaxCLMinN: 0.357keq<br>MinCLMaxS: 0.213keq<br>MaxCLMaxS: 10.768keq<br>MinCLMaxN: 0.498keq<br>MaxCLMaxN: 10.91keq | Potential negative impacts from eutrophication due to adverse impacts on the broad habitat types supporting this species (e.g. transition from heather to grass dominance, decline in lichens, changes in plant biochemistry, increased sensitivity to abiotic stress).<br>Eutrophication also capable of causing altered soil function (including mycorrhizal associations) and nutrient imbalances.<br>Acidification can cause leaching which can cause a decrease in soil base saturation, increasing the |

| Site | Qualifying Features | Critical Loads | | Comment on Exceedance Impacts |
|---|---|---|---|---|
| | | Nutrient Nitrogen | Acid | |
| | | | | availability of Al3+ ions. Mobilisation of Al3+ may cause toxicity to plants and mycorrhiza and may have direct effect on lower plants (bryophytes and lichens). Tree health may decline alongside changes to ground flora composition. There may be an associated increased susceptibility to pathogens and pests. |
| **Note: keq relates to 1,000 eq. The unit eq refers to molar equivalent of potential acidity resulting from, for example, sulphur, oxidised and reduced nitrogen, as well as base cations (APIS, 2021).** | | | | |

New development/housing and the associated increase in traffic has the potential to generate increases in atmospheric pollution, however, this is difficult to quantify. This HRA will consider the potential impact of this in relation to the European sites identified in section 3, taking into account the vulnerability of their interest features, proximity to proposed development sites and likely associated traffic increases. However, the impact of air pollution from increased traffic associated with new development/housing, will be considered applicable to areas within 200m; the distance detailed in the Design Manual for Roads and Bridges (DRMB) guidance (Highways Agency, 2019) and Natural England (2018) as the buffer within which the contribution of vehicle emissions can be considered significant. The exception to this buffer will be any new significant point-sources that the Local Plan proposes which will be considered on a policy/site-specific basis. In combination effects in relation to air quality impacts will be considered in line with Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (Natural England, 2018).

### 4.2.4 Water Resource Use and Flow Regulation

New development and population increases can result in hydrological effects to existing watercourses and groundwater resources. Such effects can include changes to surface and ground water flow, levels and quality (see section 4.2.5 in relation to water quality); this can have subsequent effects on habitats and supported species of European sites. The main types of potential hydrological effects are as follows:

- **Water abstraction** – new developments would increase the demand for water, potentially resulting in increased levels of water abstraction and subsequently affecting surface and/or ground water flow and levels. Any such effects would be more extreme during the summer as water demand will likely peak at this time. The assessment of potential effects of increased water demand will consider how the public water supply system operates and how it is regulated with other water-resource consents, in addition to policy provisions within the Local Plan to help manage demand and promote water efficiency measures.
- **Water discharges** – new developments could also result in an increase in discharges to water via foul and surface water/storm water drainage (flood risk). This could also occur during construction phases but would be short-term and of reduced significance. Such discharges can impact on surface water and ground water quantity and flows.

A large proportion of the activities which exploit water resources, such as agriculture, flood defence, recreation, power generation, fisheries or nature conservation, will not be directly controlled or influenced by options/policies contained within the Local Plan. Furthermore,

specific consenting regimes, independent of the Local Plan, tend to regulate water supply and exploitation in relation to water-resource sensitive European sites. However, development promoted or supported by the Local Plan will likely increase demand for water.

In relation to Thorne and Hatfield Moors, they are particularly sensitive to flow regulation. Abstraction of water from around this site is likely to lead to scrub development which in turn causes further water loss through evapotranspiration. This is detrimental for mire communities especially *Sphagnum* and Cotton-grass *Eriophorum* sp. Scrub further shades the peatland which inhibits the development of the bog (Natural England, 2016). In relation to the River Derwent SAC, Natural England (2014h) identify that over-abstraction can lead to reduced flows within the river with negative implications for the SAC interest features. The Humber Estuary is identified as at threat from water pollution (Natural England, 2015), but water resources or abstraction are not specifically identified as a threat.

Water supplies in North Lincolnshire are managed by Anglian Water and Yorkshire Water, with the majority of the area being within Anglian Water's area, and the Isle of Axholme area west of the River Trent falling into Yorkshire Water's area. Wastewater assets are maintained by Anglian Water and Severn Trent Water. Under the Water Act 2014, all water companies must produce a Water Resources Management Plan (WRMP) that sets out the strategy for managing water resources across their supply area over a 25-year period and estimates likely demand and forecasts supply.

Within the Anglian Water area, North Lincolnshire falls within the 'Central Lincolnshire' resource zone (which covers a much greater area than North Lincolnshire, including substantial proportions of North Lincolnshire) and the 'South Humber Bank' resource zone. Within the Central Lincolnshire resource zone, groundwater is abstracted from the Sherwood Sandstone and Lincolnshire Limestone, whilst surface water is abstracted from the River Ancholme. During the plan period (2020 to 2045), Anglian Water forecast average per-capita consumption falling to 120 l/h/d by 2045, driven by customers selecting metering (Anglian Water, 2019). However, within the Central Lincolnshire region, Anglian Water project an increase in demand between 2017 and 2045 of between 10 and 15%. As can be expected therefore, Anglian Water also predict a baseline deficit within central Lincolnshire by 2044/45. This is expected to be between -5 and -15 Ml/d within the resource zone by the end of the WRMP period (Anglian Water, 2019). In contrast, the South Humber Bank resource zone is predicted to have a surplus greater than 3 Ml/d by 2025, and remains in surplus by 2045 with the proposals in the WRMP, including a new water treatment works to treat the water currently used to supply the South Humber Bank to a potable standard (Anglian Water, 2019).

One scheme was identified from within the Central Lincolnshire and South Humber Bank resource zones in the HRA accompanying the Anglian Water WRMP as having the potential to impact upon the Humber. This was the Pyewipe Water Reuse for Non-potable Use scheme, which falls within North East Lincolnshire, and mitigation measures are proposed to avoid adverse impacts on site integrity. The South Humber Bank Water Resource Zone (WRZ) to Central Lincolnshire WRZ Transfer schemes were assessed as having no likely significant effect on the Humber Estuary, or other European sites (Mott MacDonald 2019).

Within the Yorkshire Water WRMP area, it is predicted that by the mid-2030s (despite a supply demand deficit for 2018/19) a supply deficit is not expected. This is attributed to a change in the approach to climate change, reduced leakage, ongoing reduction in household usage due to increased levels of metering and reduced non-household demand (Yorkshire Water, 2020).

In the Humber estuary, several feasible options were identified in the Yorkshire Water WRMP (2020) which have the potential to alter flow conditions in the Humber. These are the River Ouse water treatment works extension, Ouse Raw Water Transfer Scheme, the Increased River Ouse Pump Storage Capacity Option, Aquifer Storage and Recovery Scheme 1, South Yorkshire Groundwater Scheme 1, East Yorkshire Groundwater Options 1 and 2, the Reuse of Abandoned Third Party Groundwater Source Options, the Dam Raising Options, the Reservoir De-silting Option, River Calder Abstraction Option 1, River Aire Abstraction Options 1 and 3 and the East Yorkshire Coast Desalinisation Option. However, the HRA for the Yorkshire Water WRMP

concluded that except for one option, the preferred WRMP is not likely to have significant effects on the integrity of any of the designated sites, including the Humber Estuary, Thorne and Hatfield Moors and the River Derwent. The one option to which this conclusion does not apply is the North Yorkshire Groundwater Option Scheme 1 and its potential impacts on the North Pennine Dales Meadows SAC and further analysis concluded that significant adverse impacts on site integrity would not arise (Ricardo Energy & Environment, 2020).

Taking into account the assessment already conducted as part of the relevant WRMPs, this HRA will consider the potential for impacts on a European site due to changes in water levels and/or flows by taking into consideration the vulnerability of their interest features to such impacts, and the pathways i.e. the hydrological connectivity between the site and the areas proposed for development.

### 4.2.5 Water Pollution/Siltation

New development promoted under the local plan, and the likely associated population increases, can also impact on existing watercourses and groundwater resources in relation to water quality, particularly in relation to wastewater treatment. Again, this can have subsequent effects on habitats and supported species of European sites. As discussed in section 4.2.4, new developments could result in an increase in discharges via foul and surface water/storm water drainage (flood risk). This could also occur during construction phases (e.g. oil spillage or other pollution incidents from construction plant and machinery) but would be short-term and of reduced significance. Discharges can also occur during the operational phase of works, for example, from oil released from a higher number of cars using roads close to the watercourse network or through increased use of waterways by motor powered boats.

The Humber River Basin Management Plan (RBMP) (Environment Agency, 2015) identifies a number of significant water management issues across the river basin district. Within the Humber, key issues relating to water quality include:

- Pollution from waste water (e.g. from sewage treatment works, leakages from privately owned septic tanks, storm overflows) which affects 38% of water bodies within the district. Population growth, alongside changes in rainfall patterns are increasing the pressure on the sewer network.
- Pollution from towns, cities and transport (e.g. rainwater draining from roofs, roads and pavements which carries pollutants such as grot, bacteria, oils, metals, vehicle emissions, detergents and road salt), which affects 16% of water bodies in the district.
- Pollution from rural areas (e.g. from poor land management which increases the amount of soils/sediment entering watercourses; this can cause eutrophication. More intense rainfall as a result of a changing climate will likely exacerbate this), which affects 32% of water bodies in the district.
- Pollution from abandoned mines which affects 4% of water bodies in the district.

A review of data held by the Environment Agency's Catchment Data Explorer (2021) has identified a key indication of water quality within the operational catchments covered by North Lincolnshire, as shown in Table 4-3 below.

**Table 4-3: Summary of Water Quality Statistics across Operational Catchments that fall wholly or partly within North Lincolnshire (From: Environment Agency, 2021)**

| Catchment | No. of Water bodies | Ecological Status or Potential | | | | | Chemical Status | |
|---|---|---|---|---|---|---|---|---|
| | | Bad | Poor | Moderate | Good | High | Fail | Good |
| **Ancholme** | 14 | 0 | 1 | 12 | 1 | 0 | 0 | 14 |
| **Becks Northern** | 21 | 2 | 4 | 13 | 2 | 0 | 0 | 21 |

| Catchment | No. of Water bodies | Ecological Status or Potential | | | | | Chemical Status | |
|---|---|---|---|---|---|---|---|---|
| | | Bad | Poor | Moderate | Good | High | Fail | Good |
| **Trent and Trib** | 23 | 2 | 1 | 20 | 0 | 0 | 0 | 23 |
| **Isle of Axholme** | 12 | 0 | 3 | 9 | 0 | 0 | 3 | 9 |

Furthermore, nutrient pollution can be a significant issue for many freshwater habitats and estuaries, resulting in eutrophication, which can lead to sites being classified as being in 'unfavourable condition'. Sources of nutrients can include sewage treatment works, septic tanks, livestock, arable farming and industrial process, and where sites are already in unfavourable condition, extra wastewater from new housing developments can make conditions worse. 'Nutrient neutrality' is the approach to designing development alongside suitable mitigation measures so that development can be permitted without impacting on the condition of European sites. Nutrient neutrality will be needed for a range of development types, including new homes, care homes, and tourism attractions and accommodation. However, North Lincolnshire contains no sensitive catchments identified as being in unfavourable condition as a result of nutrient pollution damage, and whilst the issue of nutrient pollution from new developments will require consideration, the need for 'nutrient neutrality' is not yet restricting new development in the area.

Thorne and Hatfield Moors are largely rain-fed and hence naturally acidic (Holden *et al*., 2004). It follows that water quality is largely determined by atmospheric inputs. Hence, these lowlands raised bogs are especially susceptible to atmospheric nitrogen deposition and the factors which cause it (location of industry, agriculture, wildlife) (see section 4.2.3).

In contrast, water pollution in the Humber Estuary can follow several pathways. The main sensitivities in terms of water quality are dissolved oxygen levels which are susceptible to depletion during the summer months, particularly in the inner estuary. This may cause a barrier to Sea Lamprey when they are migrating through the area in summer months (Natural England, 2015). Likewise, Tributyltin pollution is also common in the inner estuary, and several of the clay pits on the south bank fail the total Phosphorous (P) target and have impoverished macrophyte communities (Natural England, 2014i & 2015). It is thought that habitat restoration within the catchment is likely to improve water quality in the Humber. For example, wetland creation/ enhancement can filter pollutants before they enter the estuary, and 534ha of wetland have been created/enhanced in recent years around the Humber. Conversely, habitat destruction is likely to lead to an increase in water pollution events and water quality deterioration (Environment Agency, 2015).

Natural England (2014h) highlights that water pollution is a significant issue in relation to the River Derwent SAC. This is attributed to the highly erodible soils of the catchment which are a dominant source of sediment input to the system, entering via run-off and directly supplied by agricultural drainage systems. Cattle poaching can also be a significant issue in places. However, being upstream of North Lincolnshire, any impacts the Local Plan has on water quality, are unlikely to impact upon the River Derwent SAC.

In relation to the Local Plan, the water quality effects are likely to be either controlled by existing consenting regimes, particularly in relation to point sources (which must undergo HRA), or have diffuse 'in-combination' effects that are difficult to quantify and this assessment will focus on the development of suitable mitigating policy that will minimise the impacts of development on water quality, including the potential for new development to impact upon the current nutrient status of a European Site. This HRA will therefore consider where potential water quality impacts on a European site may arise due to changes in water quality, taking into consideration the vulnerability of their interest features to such impacts, and the pathways i.e. the hydrological connectivity between the site and the areas proposed for development.

### 4.2.6 Flooding and Water Level Management

Much of the North Lincolnshire area is very low-lying and is at flood risk. Development supported by the Local Plan therefore could exacerbate this. For example, impermeable surfaces can have considerable effects on water bodies and watercourses, resulting in flow rates and volumes often exceeding the capacity of the receiving drains or watercourses, causing localised flooding and contributing to regional flood events.

With regards to European sites, all sites that are not conditioned to flooding will be sensitive to flood events, and even those which experience periodic/regular flood events could be adversely impacted upon by large-scale events, of long duration, or which introduce water quality issues. Furthermore, development of flood risk management strategies and construction of flood defences in and around European sites has the potential to result in adverse impacts, for example through direct habitat loss, changing hydrological processes, or through impacts such as 'coastal squeeze'. Coastal squeeze occurs when flood and coastal defences constrain the ability of intertidal habitats (most notably saltmarsh) to naturally move landward in response to sea level rise (Royal Haskoning, 2006). However, the Local Plan will likely have little influence over the flood defence strategy likely to be implemented across North Lincolnshire, and as part of river basin and catchment wide strategies, the likely impact of long-term flood policy on European sites will already have been assessed as part of the HRAs conducted for other plans.

However, the Humber Estuary area is sensitive to flooding. Within the Humber, the intertidal habitat (mudflats and saltmarsh) is threatened by the development of flood defences and coastal squeeze; defences may need to be re-positioned, squeezing intertidal habitat. Rising sea levels further squeeze intertidal habitat. In cases of overriding public interest, sea defences may reduce intertidal habitat, but loss of habitat must be compensated through habitat creation elsewhere. This is a criterion of the National Biodiversity Action Plan which states that the total area of intertidal habitat must be maintained. Here the focus is on establishing new habitat as soon as possible so there is no net loss. Habitat creation may involve moving sea defences inland.

Thorne and Hatfield Moors are particularly sensitive to water level management. Peat forms under saturated conditions and is dependent on rain-fed nutrients/moisture. The water table level determines whether peat is accumulating or breaking down as any shift from anaerobic to aerobic conditions enhances decomposition. Furthermore, increased oxidation leads to increased mineralisation of nitrogen and an associated loss of nutrients. Finally, bog pools represent a key habitat across the moors and hence their loss is associated with the species they support. There are a number of factors which may alter the hydrology of Thorne and Hatfield Moors. One is cutting drains to increase surface run off. This was practiced historically to harvest peat and has resulted in the widespread degradation of the moors. Moorland restoration, therefore, has sought to reverse this process by blocking drains across the sites. Another factor is afforestation which intercepts moisture and returns it to the atmosphere. Finally, water levels may be controlled directly via pumping (Holden *et al.* 2004).

Physical modification of the river, through the construction of flood embankments, which has removed connectivity between the river and floodplain, and channelisation, which has changed the natural river system and created vertical bank profiles, are identified as a key issue affecting the condition of the River Derwent SAC (Natural England, 2014h). However, being outside of North Lincolnshire, and with other plans and projects influencing flood risk management policy, the Local Plan is unlikely to impact upon water levels and flood management within this site.

This HRA will consider how the Local Plan could potentially impact on flooding regimes in and around European sites, both through increasing flood risk from inappropriate development and encouraging further implementation of flood risk management measures to allow development to proceed. It will assess how this could potentially impact on the interest features, taking into account their vulnerability.

## 4.3 Qualifying Features and Sensitivity to Impacts/Pathways

Table 4-4 shows the qualifying features of the European sites within and adjacent to North Lincolnshire and identifies the pathways of impact to which they are most sensitive. Their qualifying features have been grouped into their broad habitat and species types to facilitate the sensitivity assessment. However, this is only applicable to SACs and SPAs; it does not directly relate to the criterion under which Ramsar sites are designated.

It must be noted that during the assessment of the likely impacts of the Local Plan on a European site, all potential pathways of impact will be considered for all qualifying interest features.

### Table 4-4: Sensitivity of Qualifying Features to Potential Impacts/Pathways

| | Potential Impacts/Pathways | | | | | |
|---|---|---|---|---|---|---|
| | Recreational Pressures | Urbanisation | Atmospheric Pollution | Water Resource Use/ Flow Regulation | Water Pollution/ Siltation | Flood and Water Level Management |
| **SAC Habitat Groups** | | | | | | |
| Coastal habitats | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Coastal habitats (sensitive to abstraction) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Estuarine and intertidal habitats | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Submerged marine habitats | ✓ | | | ✓ | ✓ | ✓ |
| Bogs and wet habitats (sensitive to acidification) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Riverine habitats and running waters | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **SAC Species Groups** | | | | | | |
| Anadromous fish | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Marine mammals | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Non-migratory fish and invertebrates of rivers | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Mammals of riverine habitats | ✓ | ✓ | | ✓ | ✓ | ✓ |
| **SPA Bird Species Groups** | | | | | | |
| Birds of coastal habitats | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Birds of estuarine habitats | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Birds of lowland heaths and brecks | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Birds of lowland freshwaters and their margins | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

# 5 North Lincolnshire Local Plan and Other Relevant Plans

## 5.1 Introduction

This section gives a brief description of the North Lincolnshire Local Plan and outlines the strategic objectives, policies and allocated sites detailed in the Publication Draft Addendum.

The Habitat Regulations also require that the potential effects of the plan on European sites must be considered 'in-combination with other plans or projects'. The 'in-combination' assessment must also consider within-plan effects (i.e. between policies or strategic sites). Consideration of 'in-combination' effects is not a separate assessment, but is integral to the Screening and Appropriate Assessment stages and development of avoidance/mitigation measures. There is limited guidance available on the scope of the 'in-combination' element, particularly which plans should be considered. However, the assessment should not necessarily be limited to plans at the same level in the planning hierarchy and there is consequently a wide range of plans that could have potential 'in-combination' effects with the North Lincolnshire Local Plan due to its regional scale. This section identifies the plans that it is considered could potentially act 'in-combination' with the North Lincolnshire Local Plan to have 'significant effects' on European sites.

## 5.2 North Lincolnshire Local Plan

North Lincolnshire Council is currently preparing a new single Local Plan for North Lincolnshire. Once adopted it will replace the current North Lincolnshire Local Plan (2003), the Core Strategy (2011) and Housing and Employment Land Allocations Development Plan Document (DPD) (2016), and the Lincolnshire Lakes Area Action Plan (AAP) (2016).

None of the policies or site allocations within the Publication Draft Addendum Local Plan are directly connected with, or necessary to the nature conservation management of the sites identified in section 3 as potentially being impacted upon by the plan.

### 5.2.1 Current Status of Local Plan – Publication Draft Addendum

Development of a new Local Plan has to go through a number of stages in line with the Town and Country Planning (Local Planning) (England) Regulations (2012). The development of the new North Lincolnshire Local Plan is currently at the Publication Draft Addendum stage. An initial (Regulation 18) consultation document was published between late February and mid-April 2017 to raise awareness of the Local Plan and to get the views of local communities and others about issues that should be covered in the plan. This was followed in February and March 2018 by publication of an Issues and Options (Regulation 18) document for consultation. This Issues and Options document was supported by a HRA Screening Assessment. Following this, a Preferred Options (Regulations 18) Consultation was undertaken between February and March 2020. This, together with available evidence and national planning policy, has helped inform the Publication Draft (Regulation 19). The Publication Draft was consulted on between October and December 2021 and this was the preferred strategy, and the plan that it is intended to submit to the Planning Inspectorate for examination. However, in response to a handful of representations made during the consultation a focussed number of changes are proposed to the Local Plan. The proposed changes are to be published for consultation on the same basis as the Regulation 19 consultation that was undertaken between October and December 2021. As such, they should be considered as an Addendum to the Publication Plan. The Addendum is not a fully revised version of the Publication Plan. It only contains the proposed focussed changes and any associated modifications to boundaries on the Policies Map. This updated HRA reassesses the changes to the Publication Plan detailed within the Addendum and addresses comments raised during the initial consultation phase on the Publication Draft.

Within the Publication Draft Addendum Local Plan, a spatial vision is presented, which seeks to build on the Council's broader ambitions, emerging evidence and national policy. The spatial vision aims to meet the Council's ambitions that North Lincolnshire is safe, well, prosperous and

connected. The full text of the spatial vision can be found in the Publication Draft Addendum Local Plan (North Lincolnshire Council, 2022).

Beneath the spatial vision sit 14 Spatial Objectives, which are derived from the vision and focus on key issues that the Local Plan needs to address. They provide a broad direction for the spatial strategy and the detailed policies that will be included in the plan. The Spatial Objectives are also detailed in the Publication Draft Addendum Local Plan (North Lincolnshire Council, 2022).

Beneath the Spatial Objectives sit a number of Policies, which set out a clear and co-ordinated approach to the provision of new homes, jobs and supporting infrastructure alongside the need to protect the interests of the communities and the environment. The Publication Draft Addendum Local Plan also identifies those sites that are most appropriate to accommodate future growth and development, taking into account the need to minimise impacts on the environment and make the best use of existing or planned infrastructure. It also identified the areas/locations that could be serviced by new infrastructure or services.

### 5.2.2 The Next Steps

Following consideration of all relevant evidence and the comments received at this Publication Draft Addendum, North Lincolnshire Council will formally submit the comments received alongside the draft Local Plan and supporting evidence to the Government for an Examination in Public. An independent Planning Inspector will be appointed to examine the Local Plan through a series of public hearings. After these hearings the Inspector will consider all evidence and prepare a report setting out whether or not the Plan is 'sound'. Once this report is received, the Plan can be adopted and brought into force.

Although the formal HRA is only completed on the final Plan prior to its adoption, pre-screening decisions are made through an iterative HRA process to inform the plan making process and to influence the final characteristics and features of the Plan.

## 5.3 Other Relevant Plans and Projects that Could Act In-combination

A series of individually modest effects may in-combination produce effects that are likely to adversely affect the integrity of one or more European sites. The Habitats Regulations try to address this by taking into account the combination of effects from other plans or projects. The Regulations do not explicitly define which other plans and projects are within the scope of the combination provision. In the EU, guidance has been produced on in combination assessment under Article 6(3) of the Habitats Directive. Guidance in section 4.5.3 of '*Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC'*, published by the European Commission (2018), states:

*'When determining likely significant effects, the combination of other plans and/or projects should also be considered to take account of cumulative impacts during the assessment of the plan or project in question. The in-combination provision concerns other plans or projects which have been already completed, approved but uncompleted or actually proposed'.*

A large number of plans and projects have been identified as occurring within the plan area, and immediate surrounding area, and because of this a pragmatic approach has been adopted to their review. This includes approved but incomplete plans and projects, permitted ongoing activities and plans or projects begun/applied for but not yet approved. Table 5-1 below lists the relevant plans and projects that have been considered as having the potential to result in significant effects on European sites in-combination with the North Lincolnshire Local Plan. A more detailed review is provided in Appendix A.

### Table 5-1: Other Plans and Projects

| Plan/Project | |
|---|---|
| **Land Use Planning** | |
| Lincolnshire Lakes Area Action Plan | |
| Neighbouring Local Authority Local Plans/Local Development Frameworks | Bassetlaw Local Plan 2020-2038: Publication Version Second Addendum |
| | Doncaster Local Plan (2015-2035) – Adopted September 2021 |
| | East Riding Local Plan (2016) and draft updates |
| | New Hull Local Plan |
| | North East Lincolnshire Local Plan |
| | Central Lincolnshire Local Plan |
| Neighbourhood Plans within North Lincolnshire | Appleby Parish Neighbourhood Plan |
| | Worlaby Parish Neighbourhood Plan |
| | Other Neighbourhood Areas are in the process of formulating their own Neighbourhood Plans, including Barrow upon Humber, Barton upon Humber, Bonby, Bottesford, Brigg, Elsham, Goxhill, Haxey, Kirton in Lindsey, Saxby All Saints, Scawby, South Ferriby, Winteringham and Winterton, but have not yet been through examination so do not form part of the North Lincolnshire development plan. |
| **Development/ Economic** | |
| The Humber Strategic Economic Plan 2014-2020 | |
| Greater Lincolnshire Strategic Economic Plan 2014-2030 | |
| Able Logistics Park | |
| Able Marine Energy Park | |
| North Killingholme Power Project | |
| Green Port Hull / Paull Local Development Order | |
| Humber Gas Pipeline Replacement Project | |
| Keadby Power Stations 2 & 3 | |
| **Water Management and Flooding** | |
| Water Resource Management Plans (Anglian Water and Yorkshire Water) | |
| River Basin Management Plan (RBMP): Humber River Basin District | |
| Grimsby and Ancholme Catchment Flood Management Plan | |
| River Trent Catchment Flood Management Plan | |
| Humber Flood Risk Management Strategy | |
| Humber Estuary Coastal Authorities Group: Flamborough Head to Gibraltar Point Shoreline Management Plan 2010 | |
| **Nature Conservation** | |
| Humber Management Scheme – Action Plan 2016 | |
| Thorne and Hatfield Moors Site Improvement Plan | |
| Thorne Moors Water Level Management Plan | |
| Lincolnshire Biodiversity Action Plan 2015-20 | |
| Lincolnshire Geodiversity Strategy 2017-21 | |
| **Recreation and Tourism** | |
| North Lincolnshire Rights of Way Improvement Plan | |

| Plan/Project |
| --- |
| England Coast Path Project |
| **Other** |
| Local Transport Plan 2011 to 2026 |
| Humber Area Local Aggregate Assessment |
| Waste Strategy 2012 - 2030 |
| Action Plan for the Scunthorpe PM10 AQMA (2018) |

# 6 Screening Assessment

## 6.1 Introduction

This section considers the policies and site allocations in the North Lincolnshire Publication Draft Addendum Local Plan (North Lincolnshire Council, 2021) and identifies whether or not they are likely to have significant effects on the integrity of European sites, either alone or in-combination with other plans. This builds upon the HRA Screening Assessment conducted on the Issues and Options stage of the Local Plan (JBA Consulting, 2018) and the HRA undertaken on the Preferred Options stage (JBA Consulting, 2020).

The policies of the Publication Draft Addendum Local Plan have initially been screened following the methodology set out in DTA Publications Habitats Regulations Assessment Handbook (DTA, 2021). Each policy is allocated one or more screening category from this list shown in Table 6-1 below. The results of the initial Screening are shown in Table 6-2. Where a number of categories to screen out a policy are applicable, the most relevant categories are listed in the table. Any policies with likely significant effects and any in-combination effects are further discussed in Table 6-4. The Screening outcome in Table 6-4 includes any relevant in-combination assessment outcomes.

**Table 6-1: Pre-screening categories for the policies in the North Lincolnshire Publication Draft Addendum Local Plan (adapted from DTA, 2021)**

| Screening Category | Description | Screening Outcome |
|---|---|---|
| **A** | General statement of policy/general aspiration | Screen out |
| **B** | Policy listing general criteria for testing the acceptability/sustainability of proposals | Screen out |
| **C** | Proposal referred to but not proposed by the plan | Screen out |
| **D** | General plan-wide environmental protection/ site safeguarding/ threshold polices | Screen out |
| **E** | Policies or proposals which steer change in such as way as to protect European sites from adverse effects | Screen out |
| **F** | Policy that cannot lead to development or other change | Screen out |
| **G** | Policy or proposal that could not have any conceivable effect on a site | Screen out |
| **H** | Policy or proposal the (actual or theoretical) effects of which cannot undermine the conservation objectives (either alone or in-combination with other aspects of this or other plans or projects) | Screen out |
| **I** | Policy or proposal which may have a likely significant effect on a site alone | Screen in |
| **J** | Policy or proposal with an effect on a site but unlikely to be significant alone, so need to check for likely significant effects in combination | Dependant on in-combination test |
| **K** | Policy or proposal unlikely to have a significant effect either alone or in-combination | Screened out after the in-combination test |
| **L** | Policy or proposal which might be likely to have significant effect in-combination | Screened in after the in-combination test |
| **M** | Bespoke area, site or case-specific policies or proposals intended to avoid or reduce harmful effects on a European site | Screened in |

**Table 6-2: Pre-screening table for policies in the North Lincolnshire Publication Draft Addendum Local Plan**

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| **Spatial Strategy for North Lincolnshire** | | | | |
| SS1 | Presumption in favour of sustainable development | Creating and delivering sustainable growth lies at the heart of the spatial strategy for North Lincolnshire, with all new development contributing towards sustainable development, and bringing benefits to all sectors of the community. When considering development proposals, the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| SS2 | Spatial strategy for North Lincolnshire | The spatial vision and development needs for North Lincolnshire will be delivered through the spatial strategy. The spatial strategy will deliver and support:<br>• 7,128 new homes<br>• creation of 11,500 new jobs in priority sectors<br>• 131.7ha of employment land in key locations<br>• physical, social and environmental infrastructure<br>• protection and enhancement of the area's world-class natural and built environment<br>• North Lincolnshire's visitor economy<br>Decisions on investment in services and facilities, and location and scale of new development will be guided by the settlement hierarchy (i.e. Major sub-regional centres, principal towns, large service centres, larger rural settlements, smaller rural settlements, rural hamlets and villages). | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| SS3 | Development principles | Development in North Lincolnshire should follow a number of key principles (e.g. appropriate to area's character, encourage use of brownfield land providing they are remediated where necessary, minimise the use of non-renewable and finite resources, minimise impacts arising from climate change such as flood | **B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**D** - General plan-wide environmental protection/ site safeguarding/ threshold polices – policy contains the key principle that development planning should avoid, remedy or mitigate any | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | risk, provides good quality accessible open and green spaces, enhances the natural environment through the provision of measurable biodiversity net gain etc.). | impact on natural features and open spaces and maintain or where possible seek net gains in biodiversity<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| SS4 | Neighbourhood planning in North Lincolnshire | North Lincolnshire Council will encourage local communities to develop a Neighbourhood Plan by providing appropriate information and constructively engaging with local communities throughout the process. The Council will also set a decision-making timetable and share this with those wishing to prepare a Neighbourhood Plan. Local communities will manage the diversity of the neighbourhood forum and establish dialogue with relevant stakeholders with a programme of community engagement. | **A** – General statement policy / general aspiration<br>**G** – Policy or proposal that could not have any conceivable effect on a site<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| SS5 | Overall housing provision | Between 2020 and 2038, North Lincolnshire's housing requirement is for 7,128 new dwellings to be provided (396 new dwellings per year).<br>Of these new dwellings around 2,379 will be provided from sites that already have planning permission or are under construction.<br>It is anticipated that the sites will be delivered in accordance with the housing delivery trajectory in Appendix 7 of the Local Plan.<br>This will be a rolling five year supply of deliverable housing. For flexibility in delivery the Council will allocate an additional 198 dwellings (increasing the total to 7,326 dwellings over the plan period). | **A** – General statement policy / general aspiration – whilst this policy sets the over-arching vision for housing development in North Lincolnshire, the specific details and site allocations of how this policy will be implemented are contained within other policies, assessed elsewhere<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| SS6 | Spatial Distribution of Housing Sites | The delivery of new dwellings will be distributed across the settlement areas as follows:<br>• 51.3% of housing growth allocated to Scunthorpe & Bottesford Urban Area (including Lincolnshire Lakes)<br>• 8% to Barton on Humber<br>• 14.3% to Brigg | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | • remaining 26.4% across the other settlement areas<br>In rural areas housing development will be strictly limited with consideration for development relating to agricultural, forestry and countryside industries. All development should not have adverse impact to the on the environment and landscape. | | |
| SS7 | Strategic Site Allocation – Lincolnshire Lakes | The Lincolnshire Lakes will deliver 2,150 dwellings by 2038 in a waterside setting to transform the western gateway to Scunthorpe and bring regeneration in addition to much needed homes for North Lincolnshire. This will include 1,275 dwellings in the northern strategic allocation and 875 in the southern strategic allocation. 25ha of new employment, leisure and community land will be developed to provide jobs and promote sustainable communities. Development will be required to be comprehensively masterplanned and phased appropriately to ensure the necessary infrastructure is provided. Each allocation will deliver high quality design incorporating sustainable development principles. All proposals will be required to meet flood risk requirements, incorporate an interconnected network of good-quality, multi-functional green space, provide measurable biodiversity net gain and retain existing trees, hedgerows, drains and ditches (where practicable). Transport improvements, including de-trunking the M181 and the creation of the M181 Southern and Northern junctions and upgrading the existing B1450 Burringham Road will be supported to increase capacity.<br>Updates from the Preferred Options stage to this policy have strengthened the provisions it makes for biodiversity, through committing to the protection of existing features, and inclusion of new areas of woodland, acid grassland, neutral grassland, ditches, swales, wetland and ponds within the development, | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | integrated with strategic green linkages. | | |
| SS8 | Employment Land Requirement (including Strategic Employment Sites) | Over the period 2020 to 2038 provision will be made to deliver around 131.7 hectares of employment land. This will be provided for in line with the overall Development Strategy identified in Policy SS2 and will be delivered by the sites allocated under Policy EC1 Employment Land Supply. In addition to the Employment Sites listed under EC1, the following Strategic Employment sites have also been identified:<br>• South Humber Bank (SS10)<br>• North Killingholme Airfield (SS9) | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| SS9 | Strategic Site Allocation – Land at North Killingholme Airfield | At North Killingholme Airfield 138.21ha of land is allocated for employment use, including office/light industrial use and storage and distribution uses. A Transport Assessment and Travel Plan will be required for large developments, along with ecological surveys, heritage assessments, flood risk assessments and upgrades to existing internal infrastructure. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| SS10 | Strategic Site Allocation - South Humber Bank | The South Humber Bank employment site (900 ha-gross area) is allocated as a strategic site for port activities to take special advantage of its location, flat topography and being adjacent to a deep water channel of the River Humber as an extension to Immingham Port and Humber Sea Terminal the site has a unique employment offer.<br>Development of the site will have to meet a set of site specific criteria including employment maxims and protection of the sites ecological features. Environmental, ecological, heritage and flood risk assessments will be required for individual developments. All schemes will have to deliver measurable biodiversity net gain. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| SS11 | Development Limits | Development limits will be applied to the Scunthorpe & Bottesford urban area, Principal Towns, Large Service Centres, Larger Rural Settlements and Smaller Rural Settlements. They will not be applied to | **B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | rural settlements in the countryside. The following considerations will be taken into account (existing development patterns, capacity, existing planning consents/ development and character).<br>Development outside these defined limits will be restricted to that which is essential to the functioning of, or to meet a special need associated with the countryside. The extent of the development limits will be defined on the Policies Map and settlement insets. | | |
| **Meeting the Housing Need** | | | | |
| H1 | Site Allocations | This policy lists the sites allocated for housing development and includes for 7,937 dwellings over the life of the plan. 2,189 of these have extant planning permission for 5 dwellings or more. These sites are further assessed in Table 6-3. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| H2 | Housing Mix and Density | Development proposals for all housing should deliver a mix of house types, tenures and size to create mixed and balanced communities. New housing developments should make effective use of land and be built at a density appropriate to the character, location and setting of the area. Where an applicant considers there are significant economic viability constraints that would prevent a mix of housing in accordance with the policy, they will be required to provide full justification of the exceptional circumstances. | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals – general policy about housing types on developments with no spatial reference<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| H3 | Affordable Housing | New residential housing development of 10 or more dwellings in North Lincolnshire must make provision for 10% of affordable housing provision on site which is accessible to those unable to compete in the open housing market. The exact tenure mix for individual sites should be determined following discussions with the local planning authority and informed by latest government guidance and local housing needs assessment. In rural areas, in order to meet local community needs, affordable housing will be | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals – general policy about housing mix with no spatial reference<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | permitted where the Council is satisfied the need is required, the development is not remote and sustainable transport can be used, the number of houses reflects community need and the houses built shall remain 'affordable' in perpetuity. On rural exception sites, a small amount of market housing may be permitted, provided it is demonstrated as being necessary to enable the provision of significant additional affordable housing to meet local needs. At least 70% of the homes will be affordable homes unless the applicant can demonstrate that it would not be viable. | | |
| H4 | Specialist and Supported Housing | Planning permission will be granted for the development of specialist and supported housing, subject to a number of conditions (e.g. demonstrable need, suitable for the intended occupiers, unlikely to cause unacceptable impact on residential amenity, appropriate measures for emergency vehicles, satisfactory outside space, accessible to local shops and services/public transport etc.) | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals – general policy about housing mix with no spatial reference<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| H5 | Housing for Older People | The Council will support the provision of housing that maximises independence and choice for older people and other people with specific needs. These developments will have regard to the local need, the ability of future residents accessing essential services and ensure that an undue concentration of housing for older people does not arise. In addition to the provision of specialist accommodation, the Council aims to ensure that older people are able to secure and sustain ongoing independence either in their own homes or with the support of family members. | **B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| H6 | North Lincolnshire's Travelling Communities | The Local Plan makes provision for Gypsy, Traveller and Travelling Showperson accommodation to meet identified needs. Any proposals for new sites will have to consider the following; identified need, local character and appearance of the landscape, water, power, sewerage, drainage, waste disposal, vehicular | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | and pedestrian access, environmental and flood risk/ drainage impacts. | | |
| H7 | New Agricultural Workers or Forestry Dwellings | In the open countryside outside of the Development Limits, the erection of new dwellings in connection with a farm or other rural business will only be allowed where it satisfies other relevant policies of the Plan and meets certain criteria (e.g. applicant demonstrates no other viable option for utilising existing vacant dwellings, converting existing dwellings, local residential permission etc.). The size of the accommodation included within the proposed development should be appropriate to the needs of the enterprise rather than the occupier. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| H8 | Replacement, Alteration and Extensions to Dwellings in the Open Countryside | Proposals to replace or extend existing dwellings should not exceed the volume of the original dwelling, and all new construction should meet the current architectural design and appearance. All developments should be of a high design standard, not affect local amenity, maximise reduction in flood risk and include an ecological survey as part of the application. | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals – general policy with no reference to when or where developments would take place and gives no geographical reference to infer potential impacts to any European sites<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| H9 | Self-Build and Custom Build | The Council will support the development of self-build and custom build homes that assist in meeting the overall housing needs, and the Council will support locally proposed self-build projects identified within a Neighbourhood Plan, wherever possible.<br>Residential proposals for ten houses or more will consider making appropriate provision for plots as self– or custom-build wherever viable and achievable, based on the number of entries on the self-build register. | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals – general policy with no reference to when or where developments would take place and gives no geographical reference to infer potential impacts to any European sites<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| H10 | Flats above Shops and the Use of Vacant | The use of premises above shops for residential uses will be permitted provided that there is no conflict with existing land uses and that there is adequate | **A** – General statement policy / general aspiration<br>**K -** Policy or proposal not likely to have a | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | Buildings for Housing | access and car parking nearby. | significant effect either alone or in combination | |
| H11 | Backland and Tandem Development | Backland development or tandem development will be permitted following specific conditions (e.g. no loss of amenity area, no loss of privacy, no impact on the general quality and character of the area, no loss of important natural or man-made features etc.) | **A** – General statement policy / general aspiration<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| H12 | Houses in Multiple Occupation | Proposals for the creation of large Houses in Multiple Occupation and the sub-division of dwellings will be permitted following specific conditions (e.g. it would not result in the loss of family-sized dwellings in high density residential areas, it would not significantly harm the amenities of the occupiers of adjoining or neighbouring properties, the site has good vehicular and pedestrian access etc.) | **A** – General statement policy / general aspiration – general policy about housing type with no spatial reference<br>**G** – Policy or proposal that could not have any conceivable effect on a European site<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| H13 | Children's Homes | The development of both new and converted properties for Children's Homes will be permitted so long as they meet certain criteria (e.g. the development is located within either the Urban Area, Principle Towns or Larger Service Area, the location of these homes is considered to ensure occupants aren't put at any risk, satisfactory outside space can be achieved etc.) | **G** – Policy or proposal that could not have any conceivable effect on a European site<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| **Delivering Jobs and Supporting the Economy** | | | | |
| EC1 | Employment Land Supply | Over the period 2020 to 2038, provision will be made to deliver at least 131.7 hectares (Ha) of employment land across North Lincolnshire. The specific sites for employment land will be protected for specified employment uses only. This policy outlines the land and use allocated to each site (see Table 6-3). | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| EC2 | Existing Employment Areas | Existing employment areas as identified on the Policies Map will be safeguarded for employment uses. Proposals which promote development or reuse of vacant sites located within existing employment areas for employment use will be supported subject to other relevant policies in the Plan. Proposals for the | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | development of non-employment uses on existing employment sites will be permitted in certain situations. The following will also be considered in certain situations; other employment proposals, expansion of existing businesses, loss of employment sites and buildings to non-employment uses. | significant effect either alone or in combination | |
| EC3 | Defined Industrial Buffer Areas | Development, excluding biodiversity enhancement schemes, will not be permitted within the defined amenity buffer areas associated with the South Humber Bank, North Killingholme Airfield and the former British Sugar Site, Brigg industrial areas. Within these areas, schemes for indigenous tree and shrub planting and habitat creation will be required. | **D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| EC4 | South Humber Bank - Landscape Initiative | It is proposed that the following measures will be undertaken throughout the South Humber Bank Landscape Initiative area; softening, screening, habitat conservation, habitat creation, field boundary management, and tree and hedge planting. The use of native species is promoted throughout and any landscaping provided should be appropriate to the location and sensitivities of nearby habitats and species. | **D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| EC5 | Wharves | Proposals for new or extended port, wharf and jetty facilities on the Rivers Humber and Trent will be permitted provided that there is no adverse impact on:<br>i) designated sites and protected and priority species and also account for measurable biodiversity net gain;<br>ii) high quality agricultural land;<br>iii) the landscape of river corridors and coastal margins;<br>iv) the flood defence system;<br>v) the strategic and local road network; and<br>vi) the amenity of settlements.<br>Existing wharf and jetty facilities on the Rivers Humber and Trent are safeguarded for cargo handling | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | facilities. Any development which will prejudice the use of these sites for the handling of cargo will not be permitted. | | |
| EC6 | Supporting the Rural Economy | The Council will seek to develop a sustainable rural economy by supporting appropriate, small scale rural enterprise. Proposals to diversify the range of economic activities on a farm or in a rural area will be supported in certain situations (e.g. to benefit the local community, conserve or enhance local character, have no detrimental impact on existing village shops and business, do not increase flooding, provide measurable biodiversity net gain etc.) | **A** – General statement policy / general aspiration<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| EC7 | A Sustainable Visitor Economy | Development and activities that will deliver high quality sustainable visitor facilities such as culture and leisure facilities, sporting attractions and accommodation, including proposals for temporary permission in support of the promotion of events and festivals, will be supported. Proposals should be designed so that they respect the intrinsic natural and built environmental qualities of the area. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| **Prosperous Town Centres** | | | | |
| TC1 | Retail Hierarchy and Town Centre and District Centre Development | The Council will protect and enhance a hierarchy of Sub- Regional, Town and District Centres for retail. Some non-shopping uses will also be permitted.<br>The Council will also support proposals that would positively contribute to the evening economy. Roadside retail and other facilities essential to support the safety and welfare of motorists and lorry drivers will be permitted, where they are of an appropriate scale, meet an identified need, and can be accessed safely. | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| TC2 | Placemaking and Good Urban Design | Development proposals will be supported where they improve poor existing urban and natural environments, enhance special qualities of North Lincolnshire's settlements and better reveal the significances of the historic environment. Design detail | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | will need to consider urban structure and grain, density and massing, streets and spaces, building heights and views, and character and design standards. | significant effect either alone or in combination | |
| **Supporting Sustainable Development in North Lincolnshire's Countryside** | | | | |
| RD1 | Supporting Sustainable Development in the Countryside | Outside settlement development limits land will be regarded as the countryside and certain forms of developments will be supported (e.g. Conversion of buildings for employment, conversion of buildings to form new housing where the character and heritage of the surrounding area is reflected). Proposals will have to protect the best and most versatile agricultural land and will need to safeguard the natural environment and deliver measurable biodiversity net gain. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| **Delivering and Quality Environment** | | | | |
| DQE1 | Protection of Landscape, Townscape and Views | Development proposals that would cause unacceptable harm and do not respect and protect the distinctive character and quality of the landscape or important features or views will not be permitted.<br>Cumulative and individual impacts will be considered for proposals.<br>Priority will be given to the protection and enhancement of the landscape character and natural beauty and setting of the proposed extension to the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB). The considerations set out in this policy are particularly important when determining proposals which have the potential to impact upon the proposed extension to the Lincolnshire Wolds AONB. | **A** – General statement policy / general aspiration<br>**D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DQE2 | Landscape Enhancement | A number of landscape enhancement schemes are proposed. Development will only be permitted where it provides opportunities for landscape enhancement or creation. A variety of enhancement schemes will be supported including, such as tree and hedge planting. Such schemes will be expected to deliver multiple benefits for the environment and local communities in | **D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | order to, for example, provide shade and habitat for wildlife and aid drainage, air quality and the atmosphere. | | |
| DQE3 | Biodiversity and Geodiversity | All schemes should protect and enhance biodiversity and geodiversity; minimise, mitigate and compensate against impacts; and aim to deliver a minimum of 10% measurable biodiversity net gain. Proposals which may affect an SPA, SAC or Ramsar site will be assessed according to their implications for the site's conservation objectives. Development proposals which are likely to have an adverse effect on a Site of Special Scientific Interest will not be permitted unless the reasons for the development clearly outweigh the nature conservation value of the site. Development that results in the loss of deterioration of irreplaceable habitats will not be permitted unless for exceptional reasons. Development intended to conserve or enhance biodiversity will be supported. | **D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**E** – Policies or proposals which steer changes in such a way as to protect a European site<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DQE4 | Local Nature Reserves (LNRs) | It is proposed that a number of Currently Declared LNRs are protected. The Council currently has a target to declare and manage 2 hectares of Local Nature Reserve for every 1,000 people. Any development or land use change which is likely to have adverse impact on a LNR will not be approved unless it is demonstrated that the reasons for the proposal outweigh the nature conservation value of the site. | **D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DQE5 | Managing Flood Risk | The risk and impact of flooding will be minimised by directing new development to areas with the lowest probability of flooding, ensuring new development addresses the effecting management of all sources of flooding, ensuring development does not increase the risk of flooding elsewhere and ensuring wider environmental benefits of development in relation to flood risk. Site-specific Flood Risk Assessments will be required for all development in Flood Zones 2 and 3.<br>The Council will support development proposals within areas at risk of flooding (flood zones 2 and 3 or at risk | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | as shown on the flood hazard maps in the Strategic Flood Risk Assessment), only where it meets specific prerequisites and a flood risk assessment demonstrates the development will be safe for its lifetime. All development including proposals in flood zone 1 will be permitted providing it meets specified criteria. Development within the Lincolnshire Lakes area will be required to comply with the flood management principles set out in the Lincolnshire Lakes Flood Risk Assessment and Drainage Strategy. | | |
| DQE6 | Sustainable Drainage Systems | Development proposals should in the first instance consider (before infiltration) water re-use measures to encourage conservation before infiltration to manage surface water. Development of Major Sites (of 10 dwellings or more) or equivalent non-residential or mixed development must incorporate appropriate sustainable surface water drainage systems (SuDS) appropriate to the nature of the site, unless clearly demonstrated to be inappropriate. Development proposals must demonstrate they meet a range of criteria relating to water management and drainage systems. When redeveloping brownfield sites or proposing development including potentially contaminating uses, drainage systems must be designed to ensure there is no adverse impact on ground or surface waters. | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DQE7 | Climate Change & Low Carbon Living | Proposals for development should be designed to mitigate the impacts of climate change and reduce carbon emissions. Development proposals should also be resilient to climate change, incorporating features such as water recycling and water efficiency.<br>Developments should promote low carbon living, through promoting use of sustainable transport, reducing energy consumption, protecting habitats and recycling materials. This policy sets a series of criteria to be met by new residential, non-domestic and large scale scheme developments. | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| DQE8 | Renewable Energy Proposals | North Lincolnshire Council will support opportunities to maximise renewable energy capacity within North Lincolnshire. Proposals for renewable energy development will be supported where any significant adverse impacts are satisfactorily minimised and the residual harm is outweighed by the public benefits of the proposal. Individual developments will require their impact to be assessed considering landscape, local amenity, ecology, geology, hydrology, soils etc.<br>Proposals for wind and solar energy development will be permitted if it is located in an area that is identified as potentially suitable for wind or solar energy development in an adopted Neighbourhood Plan or the Council is satisfied that local communities are supportive of the proposal, or the development is a renewable energy proposal associated with an existing operational water/sewage treatment site.<br>Proposals for small-scale rural-based sustainable renewable energy development, which would support the rural economy and economic diversification, will be viewed positively. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| DQE9 | Local Green Space | Local Green Spaces identified on the Policies Map will be protected from development in line with NPPF.<br>North Lincolnshire Council will encourage local communities to promote Local Green Spaces through the development of a Neighbourhood Plan.<br>Development of flood resilience schemes within local green spaces will be supported, provided the schemes do not adversely impact the primary function of the green space. | **A** – General statement policy / general aspiration<br>**D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DQE10 | Important Open Space | An area identified as Important Open Space on the Policies Map will be safeguarded from development with the exception of certain circumstances.<br>Development on an area of Important Open Space will only be permitted where it would not adversely affect its open character, visual amenity or wildlife value or | **A** – General statement policy / general aspiration<br>**D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | compromise the gap between conflicting land uses.<br>Where development is permitted, measures shall be taken to minimise its impact or, where necessary, make a positive contribution to such areas. | **K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| DQE11 | Green Infrastructure Network | The Council aims to maintain and improve the green infrastructure network by enhancing, creating and managing multifunctional green space and contribute to a Nature Recovery Network. Proposals that are consistent with/ assist in delivery of this aim will be supported.<br>Proposals that cause loss or harm to this network will not be permitted unless the need for and benefits of the development demonstrably outweigh any adverse impacts. Development proposals should ensure that existing and new green infrastructure is considered and integrated into scheme design from the outset. | **A** – General statement policy / general aspiration<br>**D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DQE12 | Protection of Trees, Woodland and Hedgerows | Proposals for all new development will, wherever possible, ensure the retention of trees, woodland and hedgerows. Development resulting in the loss or deterioration of irreplaceable habitats such as ancient woodlands, aged or veteran trees, and historic hedgerows should be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists. | **A** – General statement policy / general aspiration<br>**D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| **Managing the Historic Environment** | | | | |
| HE1 | Conserving and Enhancing the Historic Environment | Development proposals must value, protect, conserve and seek opportunities to enhance the historic environment of North Lincolnshire.<br>Where a development proposal would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made to its setting, it must be informed by proportionate historic environment assessments and evaluations. | **A** – General statement policy / general aspiration<br>**D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**F** – Policy that cannot lead to development or other change<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| HE2 | Area of Special Historic | The Isle of Axholme is designated as an area of | **A** – General statement policy / general | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | Landscape Interest | Special Historic Landscape Interest.<br>Within this area, development will not be permitted which would destroy, damage or adversely affect the character, appearance or setting of the historic landscape, or any of its features.<br>Schemes to improve, restore or manage the historic landscape will be sought for any new development affecting the area of Special Historic Landscape Interest. | aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| **Creating Sustainable Communities and Better Places** | | | | |
| CSC1 | Health and Wellbeing | The Council will seek to improve health and wellbeing in North Lincolnshire through supporting proposals for developments that enhance accessibility to the historic environment, greenspaces, and green infrastructure corridors. The Council will achieve this through numerous strategies such as using Active Design, supporting integrated design of community buildings and making provision for the needs of an ageing population etc. The ten principles of Active Design will be used. | **A** – General statement policy / general aspiration<br>**B** - Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC2 | Health Care Provision | The Council will support the implementation of health care provision in North Lincolnshire, in order to modernise and improve the primary health care facilities, and to improve the health of residents through safeguarding and enhancing open space, facilities for sports and recreation and improving walking and cycling routes. | **A** – General statement policy / general aspiration– general policy about health care provision with no spatial reference in terms of potential recreational and open space safeguarding/development<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC3 | Protection and Provision of Open Space, Sports and Recreation Facilities | The Council will work with its partners, appropriate agencies and the voluntary sector to ensure the provision of good quality, well maintained sport and recreation facilities, which meet the needs of the local communities, will be secured, accessible and improved. Proposals should support local wildlife, be multifunctional, create a sense of safety, meet the obligations of the Equality Act 2010 and other measures. Where a facility is to be lost, it will only be | **A** – General statement policy / general aspiration<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | supported where there is excess or alternative provision, measurable biodiversity net gain is achieved and the ecological network is protected/enhanced. | | |
| CSC4 | Allotments | The Council will not grant planning permission for development that would result in the loss of allotments unless a suitable replacement can be provided, replacement allotments cover a greater area in an area with a shortfall or the allotment is under-used. Enhancements of nearby allotments may also be allowed. | **A** – General statement policy / general aspiration<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC5 | Golf Courses | Planning permission will be granted for the improvement of existing golf facilities and the provision of new golf courses and facilities where the proposal meets certain criteria (e.g. designed in harmony with surrounding landscape, retains important landscape features, there is no loss of versatile agricultural land, it provides measurable net gains for biodiversity, it demonstrates sustainable water use etc.) | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| CSC6 | Water Based Leisure | Planning permission will be granted for the development of recreational activities on the Rivers Ancholme, Trent and Humber, Stainforth and Keadby Canal and on inland lagoons and water areas providing the following criteria:<br>• the development does not prejudice important amenity, landscape or ecological characteristics of the waterway<br>• there is no adverse effect on the provision and improvement of access points and footpath<br>• no adverse impact on sites of archaeological value or historic importance<br>• recreational and leisure activities do not prejudice the operational requirements of rivers as commercial waterways<br>• there is no adverse effect on flood risk | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | management infrastructure, its maintenance or operation and the development incorporates measures to mitigate and where possible reduce flood risk | | |
| CSC7 | Commercial Horse Riding Establishments | Development of commercial horse riding facilities and livery stables will be permitted, subject to proposals meeting certain criteria (e.g. minimum grazing land per horse, scale and nature of proposal is appropriate to the character of the site, no adverse impact on protected or priority species or sites of nature conservation value, archaeological or historical value etc.) | **A** – General statement policy / general aspiration – general policy that contains no specific proposals, along with environmental protection policies<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC8 | Educational Facilities | It is important that a sufficient choice of school and educational places is available to meet the needs of existing and new communities and requirements of education provision can be met. The following sites are allocated for new and extended school and college facilities:-<br>• Land at Bowmandale School, Barton Upon Humber<br>• Strategic Site Allocation Lincolnshire Lakes, Scunthorpe<br>• West Common Lane, Scunthorpe | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**G** – Policy or proposal that could not have any conceivable effect on a site<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC9 | Nursery and Children's Day Care Provision | Any additional children's day nurseries, crèches and playgroups provision will be encouraged to locate within or adjacent to the Major Sub-regional Centre, Principal Towns, Larger Service Centres and Larger Rural Settlements or co-located within schools and in locations with good public transport links in order to facilitate linked trips by parents. | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC10 | Community Facilities and Services | The provision of new community facilities, or the improvement of existing community facilities, which meet the needs of local residents will be supported in | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | principle. | acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| CSC11 | Entertainment and Cultural Facilities | Planning applications for development, which increases the provision of cultural/entertainment facilities in the area will be permitted in town centres subject to there being no conflict with other policies within this Plan. | **G** – Policy or proposal that could not have any conceivable effect on a site<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC12 | Restaurants and Hot Food Takeaway Establishments | Proposals for restaurant and hot food takeaway establishments will be permitted in town, district and local centres subject to certain criteria. Plans for hot foot takeaways will need to meet specific criteria and provide a Health Impact Assessment. | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC13 | Burial Grounds and Cemetery Provision | Cemetery sites are proposed on land at Plymouth Road, Scunthorpe and Falkland Way, Barton upon Humber. If a need is identified for any other new cemeteries in North Lincolnshire, sites should be located adjacent or in close proximity to existing cemetery and crematoria facilities. Priority is placed on protecting groundwater within principal aquifers and groundwater catchments used for drinking water supply. | **G** – Policy or proposal that could not have any conceivable effect on a site<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC14 | Churches, Prayer Houses and other Places of Worship | Applications for planning permission for the change of use of properties and the extension of existing places of worship, and the construction of new buildings as places of worship will be approved subject to certain criteria. | **G** – Policy or proposal that could not have any conceivable effect on a site<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| CSC15 | Tourism and Visitor Attractions | The visitor sector is an important and resilient part of the area's economy. In order to raise the quality of the visitor experience, the provision of new visitor attractions or the expansion of existing attractions will be permitted following specific criteria on location, scale and viability etc. This includes the provision of measurable biodiversity net gain. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| CSC16 | Hotel and Guest House | Within defined settlement boundaries new hotels, guest houses and bed and breakfast accommodation | **A** – General statement policy / general aspiration – general policy that contains no | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | Accommodation | will be permitted provided that the development proposed is compatible with its surroundings in terms of siting, scale, design, materials and landscaping, and neighbouring residential amenity will not be detrimentally affected. Such accommodation will not be permitted close to the Humber Estuary attractions for reasons of high flood risk and biodiversity impact. | specific proposals<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| CSC17 | Camping and Caravan Sites | New caravan and camping facilities (both touring and static) and change of use of existing facilities will be granted planning permission following specific conditions e.g. provision of built environment is limited to essential facilities, delivery of measurable biodiversity net gain, site is not in an area with a high probability of flooding etc. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| **Planning for a Sustainable Supply of Minerals** | | | | |
| MIN1 | Mineral Supply Requirements | To support a steady and adequate supply of minerals including aggregates and industrial mineral, the Council will seek to make available sufficient land across the plan period. In doing so the Council will maintain a minimum crushed rock landbank of at least 10 years and a minimum sand and gravel landbank of at least seven years at all times. The policy states that permission will only be granted where it can be demonstrated that the extraction of minerals will not result in adverse effects on the natural environment, in accordance with policy MIN3. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| MIN2 | Mineral Safeguarding | To ensure the long-term conservation of nationally and locally important minerals in North Lincolnshire, Mineral Safeguarding Areas (MSAs) are defined to prevent their sterilisation by non-minerals development. These include; Chalk, Lincolnshire Limestone, Sand & Gravel, Silica Sand and Brick Clay. None-mineral development will be granted planning permission in MSAs in certain situations. | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| MIN3 | Mineral Extraction | Development for mineral extraction must demonstrate the extent, quality, significance and need for the | **A** – General statement policy / general aspiration – whilst this policy sets the over- | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | resources to be extracted and consideration for the impacts including in relation to the historic environment, natural environment, water, flooding, carbon emission and infrastructure. | arching vision for supply of minerals in North Lincolnshire, there are no specific site allocations or proposals<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| MIN4 | Recycled & Secondary Aggregates | The use of recycled and secondary aggregates will be supported in order to reduce the reliance on primary aggregates and contribute towards sustainable development. | **A** – General statement policy / general aspiration – whilst this policy sets the over-arching vision for supply of minerals in North Lincolnshire, there are no specific site allocations, these are contained within other polices, assessed below.<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| MIN5 | Energy Minerals (Oil & Gas/ Hydrocarbons) | Proposals for the exploration, appraisal and development of conventional and unconventional hydrocarbons will be supported where they have the appropriate licences. Support will only be given to applications that significantly benefit the economy and any cumulative and adverse impacts on the environment, such as water quality, or residential amenity, such as noise, can be avoided or mitigated. Proposals must also demonstrate how they will provide benefits to the natural environment, such as through biodiversity enhancement and where contamination has occurred as a result of extraction, measures must be employed to sufficiently remediate the site following decommissioning. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| MIN6 | Mineral Sites | Provision to meet the mineral requirements in North Lincolnshire to 2038 will come from 14 sites already with planning permission and which have the relevant mitigation put in place, including agreed restoration and aftercare plans. In addition, four new sites have | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | been identified to provide mineral resources and these are assessed further in Table 6-3. For the new mineral extraction sites, applications to progress them will need to be supported by a range of assessments to address potential environmental impacts including on air quality, biodiversity, drainage, dust, ecology, flood risk, heritage/archaeology, hydrology, landscape/ visual impact, noise and transport/highways. Environmental benefits, such as measurable biodiversity net gain, will also be required. | | |
| MIN7 | Borrow Pits & Ancillary Extraction | Permission will be granted for the development of borrow pits and extraction occurring as an ancillary activity. The proposals should demonstrate one of the following:<br>• the borrow pit is in close proximity to the construction project<br>• the extraction of the mineral can be clearly demonstrated to be ancillary<br>• the proposal is for the prior extraction of minerals within a Mineral Safeguarding Area.<br>The proposal must also demonstrate that waste is dealt with appropriately and an assessment of environmental impact will be required. Post-extraction borrow pits should provide for biodiversity enhancement. | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| MIN8 | Restoration, Aftercare & Afteruse of Mineral Extraction Sites | Proposals for minerals extraction and temporary waste management facilities will be granted where provision has been made for high standards and quality of restoration and aftercare of the site, alongside delivery of a beneficial afteruse. Restoration proposals should consider wider green infrastructure and ecological networks, promoting recreational access and make a positive contribution to the environment. | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| **Sustainable Waste Management** | | | | |
| WAS1 | Waste | Development that encourages and supports the | **A** – General statement policy / general | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | Management Principles | minimisation of waste production, and the re-use and recovery of waste materials will normally be supported, subject to adherence to a number of principles relating to impacts on heritage assets, the natural environment and landscape. | aspiration<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| WAS2 | Waste Facilities | New waste management facilities should be located in sustainable locations that are appropriate to the proposed waste management use and its operational characteristics, and where impacts on the community and the environment can be avoided or addressed appropriately. Energy from Waste Facilities are encouraged, provided they meet a number of criteria. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| WAS3 | Waste Management Provision | Net self-sufficiency in waste management will be achieved through the provision of the waste management capacity needs of North Lincolnshire. This capacity will be met through existing operation waste management facilities (and extensions, where appropriate) and new facilities. | **A** – General statement policy / general aspiration<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| WAS4 | Safeguarding Existing Waste Sites & Infrastructure | Existing and planned waste management sites and infrastructure in North Lincolnshire will be safeguarded from inappropriate development. This will ensure that existing levels of waste management capacity is maintained. | **A** – General statement policy / general aspiration<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| WAS5 | Wastewater Treatment | Proposals relating to the role, function and operation of wastewater treatment facilities, including for new or expanded waste water treatment capacity and supporting infrastructure (including renewable energy) will be supported in principle, particularly where it is required to meet wider growth proposals identified in the Local Plan provided that it can be demonstrated:<br>• it contributes to the provision of a North Lincolnshire-wide network of facilities<br>• there is a suitable watercourse to accept discharged treated water<br>• there would be no deterioration in the | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | ecological status of the affected watercourse<br>• there would be no significant adverse impact on the condition, functionality or safety of water supply and wastewater infrastructure<br>• there would be no significant adverse impact to the amenities of local communities via odours and other emissions<br>• there would be no significant adverse impact to visual amenity or landscape character | | |
| WAS6 | Waste Management in Development | Proposals for new development should support the efficient use and recovery of resources throughout its lifetime including during construction, operation and/or occupation. This should include giving due consideration to sustainable waste management. | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| WAS7 | Restoration & Aftercare | Proposals for temporary waste management development, including landfilling or land raising, will be permitted where they provide for the restoration and aftercare of the site in a phased manner during its operation and/or promptly on completion of the operation. Restoration and aftercare proposals should consider landform, landscaping and planting; details on how they would connect to green infrastructure and enhance biodiversity; manage emissions; phasing and monitoring. | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| **Connecting North Lincolnshire** | | | | |
| T1 | Promoting Sustainable Transport | To reduce congestion, improve environmental quality and encourage more active and healthy lifestyles, the Council will support measures that promote more sustainable transport choices. | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| T2 | Promoting Public Transport | To support the spatial strategy and encourage sustainable transport use the Council will support measures and actively encourage through partnership | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | working a transformed level of public transport service provision. This will include actively pursuing changes to rail franchises and timetables to improve services on the rail network to better integrate and link the key settlements. Support fixed bus services and 'JustGo North Lincs/ Demand Responsive Transport services across the area by seeking contributions from developers. | acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| T3 | New Development and Transport | In order to increase overall accessibility, minimise congestion and improve safety, new development will be supported where it is accessible, or can be made accessible, by sustainable modes of transport and addresses its likely transport impact. | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| T4 | Parking | Development proposals that generate additional parking demand should ensure that appropriate vehicle, powered two wheeler and cycle parking provision is made. Developers will be expected to have considered and incorporated measures to minimise parking provision. Parking should incorporate facilities for electric vehicle charging and other ultra-low emission vehicles where appropriate. | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| T5 | Cycle and Motorcycle Parking | Development proposals that generate additional parking demand should require that adequate cycle and motorcycle parking provision is made. | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| T6 | Freight | The existing network of rail freight routes and infrastructure will be safeguarded. Disused railway alignments will be protected from development where there is a reasonable prospect of their re-use for transport purposes. Provision of facilities to transfer freight delivery from road to rail and/or water transport will be supported, particularly in relation to movement of freight to and from the South Humber Ports and Trent Wharves. The use of the waterway network for waterbourne goods movement will be | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | encouraged. Off-road lorry parking facilities essential to support the safety and welfare of drivers will be permitted, where they are of an appropriate scale, meet an identified need, and can be accessed safely. | | |
| T7 | Safeguarding Transport Infrastructure | The Council will safeguard the routes of, and support measures which deliver, maintain and improve, key transport infrastructure. Where appropriate, schemes will be identified on the Policies Map. The schemes are as follows:<br>a. Lincolnshire Lakes road and transport infrastructure;<br>b. Brigg Link Road;<br>c. Barton Link Road;<br>d. Melton Ross Bridge;<br>e. Improved access to North Killingholme Airfield, to provide an alternative access to Lancaster Approach;<br>f. Improved access to Sandtoft Industrial Estate; and<br>g. Improvements to the A15 (South) – between Junction 4 of the M180 and A46. | **I** – Policy or proposal which may have a likely significant effect on a site alone | In |
| T8 | Safeguarding Aviation | Humberside International Airport site, Sandtoft Airfield, Hibaldstow Airfield and the landing area at the former RAF Kirton in Lindsey are safeguarded for aviation uses. Any development at, or on nearby sites which will prejudice the aviation use of these sites will not generally be permitted. | **A** – General statement policy / general aspiration<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| **Development Management** | | | | |
| DM1 | General Requirements | All new development, including extensions and alterations to existing buildings must achieve high quality sustainable design that contributes positively to local character, landscape and townscape, and supports diversity, equality and access for all. Design principles consider aspects such as landscape, natural environment, heritage assets, greenhouse gas | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | emissions and SuDS.<br>Also, the amenities which occupiers of neighbouring properties may reasonably expect to enjoy must not be harmed by or as a result of the development.<br>Planning permission for development will only be permitted where it can be demonstrated that the levels of potentially polluting emissions, including effluent, leachates, smoke, fumes, gases, dust, steam, smell or noise do not pose a danger. | | |
| DM2 | Temporary Buildings | Planning permission will be granted for temporary buildings provided the following criteria are met:<br>I. the building is not highly visible to the general public or detrimental to the amenity of the area/landscape<br>II. the development will not prejudice proposals for permanent development on the site | **A** – General statement policy / general aspiration<br>**B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DM3 | Environmental Protection | Development proposals as appropriate to their nature and scale, should demonstrate that environmental impacts on receptors have been evaluated and appropriate measures have been taken to minimise the risks of adverse impacts to air, land and water quality, whilst assessing vibration, heat, energy, light and noise pollution. | **D** – General plan-wide environmental protection/site safeguarding/threshold policies<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DM4 | Tele-communications and Broadband | Telecommunications proposals will only be permitted where appropriate in siting and appearance, and that where visually intrusive it must be demonstrated that a less visually intrusive method is not possible. The expansion of communications networks will be supported, including telecommunications and high-speed broadband. New residential and commercial developments must demonstrate they will provide sufficient digital connectivity. | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals<br>**K -** Policy or proposal not likely to have a significant effect either alone or in combination | Out |
| DM5 | Advertisements and shop fronts | Advertisements and new/alterations to shop fronts will be required to contribute to the visual appearance of | **B** – Policy listing general criteria for testing the acceptability / sustainability of proposals | Out |

| Policy No. | Policy Title | Policy Summary | Screening Category | Screening Outcome |
|---|---|---|---|---|
| | | the area's street scenes. | **K -** Policy or proposal not likely to have a significant effect either alone or in combination | |
| **Delivering Infrastructure** | | | | |
| ID1 | Delivering Infrastructure | The council will require all developments to meet the on- and off-site infrastructure requirements needed to support the development and mitigate the impact of the development on the existing community and environment to make it acceptable in planning terms. | **A** – General statement policy / general aspiration<br>**K** - Policy or proposal not likely to have a significant effect either alone or in combination | Out |

## 6.2 Site Allocations

Policies SS8 (strategic sites), H1 (residential), EC1 (employment) and MIN6 (minerals sites) allocate specific sites for development. Table 6-3 below provides an initial Screening Assessment of the potential for each site being considered to impact upon European sites, taking into account the location of the potential site allocation in relation to each of the European sites and potential pathways of impact. An assessment of whether the site could also provide functionally linked land for species for which the European sites are designated, taking into account the ECJ case of Holohan v An Bord Pleanala (C-462/17), is also detailed in Table 6-3. This is based on a number of characteristics of the site, assessed from a desk-based study and review of aerial photography. In relation the Humber Estuary, sites are considered functionally linked to the Humber Estuary if they:

1. Support >1% of the Estuary assemblage or Estuary population of a given species in the 2007-2011 South Humber Gateway surveys (a threshold <1% may be considered for species suffering major declines across the Humber, such as Curlew).
2. Are high tide roost sites identified in the Humber Estuary High Tide Roost Review 2013-2014.
3. Are large arable or grassland fields in the of Garthorpe and Fockerby, Amcotts, Gunness, Alkborough, Whitton, Winteringham, South Ferriby, Barton upon Humber, Barrow upon Humber and New Holland.
4. Are large arable or grassland fields in the Wolds (pink-footed goose only).

In relation to the Humber Estuary, sites are screened out as being functionally linked land if they are:

1. Land within 200 metres of residential built up areas.
2. Land that is significantly enclosed by woodland, tall hedgerows or tall buildings.
3. Woodland or scrub habitats.
4. Buildings, hardstanding or sealed surfaces.

In relation to Thorne and Hatfield Moors, sites are screened in if they consist of farmland or semi-natural habitats within 3.1km of the site boundary (Alexander and Creswell (1990) report that whilst some Nightjars forage up to 6km from their nesting areas, the average travelled was 3.1km). All other sites are screened out based on distance and/or habitat present. This information is then used to support the overall Screening Assessment (Table 6-4).

Taking into account the location of the European sites in relation to the sites being considered for allocation, the identified potential hazards and impact pathways associated with the developments, an assessment has been made as to whether the site allocations in the Local Plan Publication Draft Addendum, either alone or in-combination with other plans, will have likely significant effects on any European sites. This assessment is detailed in Table 6-4. Any relevant policies or site allocations that are considered to require further assessment in Table 6-2 and Table 6-3 are identified and considered in this table.

It should be noted that potential impacts from other plans and projects are only considered in the Screening Assessment where there is no likely significant effect on a designated site from the North Lincolnshire Local Plan Publication Draft Addendum alone.

**Table 6-3: Site Allocations Initial Screening Assessment**

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| SS7-3 | Lincolnshire Lakes | Lincolnshire Lakes | Employment – Strategic mixed use area | 25.15 | This site is located approximately 1.7km from the nearest European site (Humber Estuary SAC, SPA and Ramsar). This site falls within the Natural England SSSI Impact Risk Zone for the Humber Estuary and requires further assessment of potential impacts in relation to water supply. The HRA for the Lincolnshire Lakes development (URS, 2014) reports that wintering bird surveys undertaken that significant flocks of Golden Plover occur over winter within the fields within the northern part of the proposed development; this area can therefore be considered to provide functionally linked land to the Humber Estuary. The site is too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| SS9 | North Killingholme | North Killingholme Airfield | Employment – E(g), B2, B8 | 138.21 | This site is located approximately 3.5km from the nearest European site (Humber Estuary SAC, SPA and Ramsar) and it may provide functionally linked land for the birds for which the Humber SPA and Ramsar are designated. This site also falls within the Natural England SSSI Impact Risk Zone for the Humber Estuary and requires further assessment of potential impacts due to the size of the development. | In |
| SS10 | South Humber Bank | South Humber Bank | Employment – E(g), B2, B8 (estuary related including energy generation) | 900 | This site is located immediately adjacent to the Humber Estuary SAC, SPA and Ramsar. Development of this site could result in a loss of functionally linked land, atmospheric pollution and water quality/resources impacts. Cutts et al. (2016) highlight that parts of | In |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| | | | | | SS10 are used by Golden Plover and Lapwing. | |
| H1C-1 (PA/2009/0799) | Scunthorpe | Plot 29 Hebden Road | 14 | 0.48 | These proposed housing allocations for Scunthorpe are located within 4km of the Humber Estuary SAC, SPA and Ramsar. Individual sites alone may not result in significant impacts, however, in-combination there is the potential for increased recreational pressure. Other potential impact pathways include water discharge. However, these sites are not considered to provide functionally linked land to the Humber Estuary as they consist of buildings, hardstanding and sealed surfaces. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1C-2 (PA/2017/2006) | Scunthorpe | Former Crosby Primary School, Frodingham Road | 19 | 0.51 | | |
| H1C-3 (SCHU-11) | Scunthorpe | Land at the Council Depot, Station Road | 37 | 1 | | |
| H1C-4 (PA/2017/1483) | Scunthorpe | Methodist Church Frodingham Road | 14 | 0.12 | | |
| H1C-5 (PA/2018/664) | Scunthorpe | Land at 1-3 Cliff Gardens Phase 2 | 10 | 0.2 | | |
| H1C-6 (PA/2003/0962 | Scunthorpe | Lakeside | 210 | 37.91 | These sites are over 4.6km from the nearest European site (Humber Estuary SAC, SPA and Ramsar) and consequently no potential impact pathways have been identified. They are located beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, these sites are not considered to provide functionally linked land to the Humber Estuary as they consist of buildings, hardstanding and sealed surfaces and/or are on land with 200m of residential built up areas. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1C-7 (PA/2018/838) | Scunthorpe | Land south of Ashby Turn Primary Care Centre, The Link | 18 | 0.26 | | |
| H1C-8 (PA/2018/2004) | Scunthorpe | Land Rear, Ashby Link, The Link | 10 | 0.3 | | |
| H1C-9 (PA/2017/1399) | Scunthorpe | Land off Bottesford Road | 10 | 0.16 | | |
| H1C-10 (PA/2018/1021) | Scunthorpe | Site of the Lilacs Warwick Road | 25 | 0.50 | | |
| H1C-11 (SCUH-5 / PA/2017/2137) | Scunthorpe | Land off Burringham Road (Roman Way) | 22 | 2.49 | | |
| H1C-12 (PA/2018/2266) | Scunthorpe | Former Priory Lane Infants School | 21 | 0.89 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1C-13 (SCUH-C8 / PA/2018/2404) | Scunthorpe | Land at Dartmouth Road | 77 | 2.49 | This site is located within 4km of the Humber Estuary SAC, SPA and Ramsar. Whilst the individual site alone may not result in significant impacts, in-combination there is the potential for increased recreational pressure. Other potential impact pathways include water discharge, particularly in relation to the larger residential developments such as at Dartmouth Road. However, as this site is located within 200m of residential built up land it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1C-14 (PA/2019/1260) | Scunthorpe | Land Read or 38 & 40 Ville Road | 5 | 0.12 | This site is over 6.9km from the nearest European site and consequently no potential impact pathways have been identified. It is located beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, as this site is located within 200m of residential built up land it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1C-15 (PA/2019/1180) | Scunthorpe | 22-24 Cole Street | 8 | 0.04 | These sites are located within 4km of the Humber Estuary SAC, SPA and Ramsar. Whilst the individual sites alone may not result in significant impacts, in-combination there is the potential for increased recreational pressure. Other potential impact pathways include water discharge, particularly in relation to the larger residential developments | In |
| H1C-16 (PA/2018/2186) | Scunthorpe | Woods along Scotter Road | 36 | 3.55 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| | | | | | such as at Dartmouth Road. However, these sites are not considered to provide functionally linked land to the Humber Estuary as they consist of buildings, hardstanding and sealed surfaces, and H1C-16 also contains woodland and scrub habitats. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1C-17 (PA/2019/1821) | Scunthorpe | Land rear of 50-72 Bellingham Road | 12 | 0.41 | These sites are over 6.8km from the nearest European site (the Humber Estuary SAC, SPA and Ramsar) and consequently no potential impact pathways have been identified. They are located beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, as these sites are located within 200m of residential built up land they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1C-18 (PA/2019/2110) | Scunthorpe | Former Coal Yard Grange Lane South | 7 | 0.18 | | |
| H1C-19 (PA/2019/1729) | Scunthorpe | Land at Trent View House | 8 | 0.33 | These sites are located within 4km of the Humber Estuary SAC, SPA and Ramsar. Whilst the individual sites alone may not result in significant impacts, in-combination there is the potential for increased recreational pressure. Other potential impact pathways include water discharge, particularly in relation to the larger residential developments such as at Dartmouth Road. However, as these sites are located within 200m of residential built up land, they have buildings already present and/or are significantly enclosed by woodland/hedgerows they are not | In |
| H1C-20 (PA/2018/1389) | Scunthorpe | Glanford Park Football Stadium, Jack Brownsword Way | 160 | 0.70 | | |
| H1C-21 (PA/2020/1027) | Scunthorpe | Former Magistrates Court, Corporation Road | 7 | 0.12 | | |
| H1C-22 (PA/2019/1714) | Scunthorpe | 50 The Riveter Henderson Avenue | 6 | 0.03 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| | | | | | considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1C-23 (PA/2018/1049) | Barton | Land to the rear of 13-19 Pasture Road | 16 | 0.35 | These sites are within 750m of the Humber Estuary Ramsar, and within 1.2km of the Humber Estuary SAC and SPA. Potential impact pathways include water discharge and increased recreational pressure. However, as these sites are located within 200m of residential built up land, they have buildings already present and/or they consist of woodland/scrub habitats they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1C-24 (PA/2016/1763) | Barton | Coach and Horses Inn 86 - 88 High Street, Barton | 18 | 0.34 | | |
| H1C-25 (PA/2020/1612) | Barton | Land Adjacent to White Swan Butts Road | 5 | 0.15 | | |
| H1C-26 (PA/2014/0887) | Brigg | Island Carr | 60 | 1.88 | These sites are over 12km from the nearest European site and consequently no potential impact pathways have been identified. They are located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1C-27 (PA/2017/1234) | Brigg | Falcon Cycles, Bridge Street, Brigg, DN20 8NQ | 67 | 2.20 | | |
| H1C-28 (PA/2017/1234) | Brigg | Former Falcon Cycles Bridge Street Brigg Phase 2 | 20 | 0.18 | | |
| H1C-29 (PA/2004/0692) | Brigg | Silversides Lane | 44 | 1.57 | | |
| H1C-30 (PA/2018/510) | Brigg | 6 Market Place | 14 | 0.21 | | |
| H1C-31 (PA2018/510) | Barnetby le Wold | Land at Windsor Way | 9 | 0.40 | | |
| H1C-32 (PA/2019/1454) | Barnetby le Wold | Victoria Road | 23 | 0.97 | | |
| H1C-33 (PA/2018/845) | Barrow upon Humber | Former Spencer Group Mill Lane | 40 | 1.56 | These sites are located within 1.8km of the Humber Estuary SAC, SPA and Ramsar. Whilst | In |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1C-34 (PA/202/603) | Barrow upon Humber | Land off Ferry Road/Chestnut Rise | 75 | 3.05 | the individual sites alone may not result in significant impacts, in-combination there is the potential for increased recreational pressure. Other potential impact pathways include water discharge, particularly in relation to the larger residential developments such as at Dartmouth Road. However, these sites already consist of buildings, hardstanding and sealed surfaces or are on land within 200m of a residential built up area and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1C-35 | Barrow upon Humber | Land north of Ferry Road East | 9 | 0.56 | | |
| H1C-36 (PA/2018/2316) | Broughton | Land at Burnside | 10 | 0.83 | These sites are over 11km from the nearest European site and consequently no potential impact pathways have been identified. They are located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces or are on land within 200m of a residential built up area with woodland habitats, and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1C-37 | Broughton | The Red Lion | 6 | 0.35 | | |
| H1C-38 (PA/2019/1973) | Belton | Belwood Lodge, King Edward Street, Belton | 5 | 0.21 | These sites are located within 4km of Thorne and Hatfield Moors SPA and Thorne Moors SAC, but they do not fall within any of the | Out |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1C-39 (PA/2107/1975) | Belton | Westgate Road Belton | 23 | 0.2 | Natural England Impact Risk Zones where residential development is identified as a risk to this site and therefore no potential impact pathways have been identified. Furthermore, these sites are over 4km from Hatfield Moors and therefore beyond the 3.1km distance that Alexander and Creswell (1990) identified as the averaging foraging distance for Nightjar from nest sites; they are therefore not considered to provide functionally linked land. They are also located over 6km from the Humber Estuary SAC, SPA and Ramsar and beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces or are on land within 200m of a residential built up area with woodland habitats, and so they are not considered to provide functionally linked land for the Humber Estuary. | |
| H1C-40 (PA/2018/2416) | Belton | Land of King Edward Street, Belton | 11 | 0.31 | | |
| H1C-41 (PA/2019/849) | Belton | Land adjacent 1 Belgrave Close, Belton | 5 | 0.18 | | |
| H1C-42 (PA/2019/1828) | Belton | Belton Garden Centre Sandtoft Road | 5 | 0.34 | | |
| H1C-43 (PA/2019/936) | Crowle | Land adjacent 28 North Street | 8 | 0.26 | These sites are located within 1.8km of Thorne and Hatfield Moors SPA and Thorne Moors SAC and fall within the Natural England Impact Risk Zones for the SSSIs corresponding to these sites. Potential for hydrological impacts due to water discharge and recreational pressures. However, these sites already consist of buildings, hardstanding and sealed surfaces and so they are not considered to provide functionally linked land for the Humber Estuary, or Thorne and Hatfield Moors. | In |
| H1C-44 (PA/2018/1259) | Crowle | Land adjacent to 17 Low Cross Street | 9 | 0.39 | | |
| H1C-45 (PA/2017/1929) | Epworth | 3a-8 Harris View | 7 | 0.14 | These sites are located within 4km of Thorne and Hatfield Moors SPA and Thorne Moors | Out |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1C-46 (PA/2019/1804) | Epworth | The Sycamores Battle Green | 5 | 0.11 | SAC, but they do not fall within any of the Natural England Impact Risk Zones where residential development is identified as a risk to this site and therefore no potential impact pathways have been identified. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces so do not provide functionally linked land for the Thorne and Hatfield Moors.These sites are also over 9km from the Humber Estuary SAC, SPA and Ramsar and beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces and are enclosed by woodland/tall hedgerows and so do not provide functionally linked land for the Humber Estuary. | |
| H1C-47 (PA/2018/1581) | Goxhill | Land off Howe Lane and Hawthorne Gardens, Goxhill | 84 | 3.35 | These sites are located within 3.5km of the Humber Estuary SAC, SPA and Ramsar. Potential impacts could occur from increased recreational pressure. However, these sites already consist of buildings, hardstanding and sealed surfaces, are on land within 200m of a residential built up area and/or are enclosed by woodland/tall hedgerows and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1C-48 (PA/2019/841) | Goxhill | Land east of Strathdee, Barrow Road | 9 | 0.36 | | |
| H1C-49 (PA/2019/181) | Goxhill | Orchid House, Howe Lane | 8 | 0.27 | | |
| H1C-50 (PA/2019/842) | Goxhill | Land north of 6 Thornton Road | 8 | 0.34 | | |
| H1C-51 (PA/2020/538) | Goxhill | Conway Thornton Road | 6 | 0.83 | | |
| H1C-52 (PA/2014/0196) | Hibaldstow | Willow Farm, East Street | 10 | 1.25 | These sites are over 15km from the nearest European site and consequently no potential | Out |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1C-53 (PA/2018/1716) | Hibaldstow | Land to the West of Station Road | 48 | 4.2 | impact pathways have been identified. They are located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces, are on land within 200m of a residential built up area and/or are enclosed by woodland/tall hedgerows and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1C-54 (PA/2019/996) | Hibaldstow | Brook House Farm, Church Street | 14 | 0.61 | | |
| H1C-55 (PA/2020/158) | Hibaldstow | Land north of Wheelgates, Brigg Road, Hibaldstow | 5 | 0.47 | | |
| H1C-56 (PA/2016/337) | Kirton in Lindsey | Gleadells Mill Station Road | 27 | 0.82 | These sites are over 14km from the nearest European site and consequently no potential impact pathways have been identified. They are located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces, are on land within 200m of a residential built up area and/or are enclosed by woodland/tall hedgerows and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1C-57 (KIRH-1 / PA/2017/389) | Kirton in Lindsey | Land west of Station Road | 91 | 2.91 | | |
| H1C-58(P A/1999/0920) | Kirton in Lindsey | North of Spa Hill | 20 | 6.52 | | |
| H1C-59 (PA/1999/0920) | Kirton in Lindsey | Land North of Ings Road | 79 | 2.81 | | |
| H1C-60 (PA/2020/1869) | Kirton in Lindsey | 13 High Street | 6 | 0.08 | | |
| H1C-61 (PA/2018/978) | Messingham | 68 High Street, Messingham | 7 | 0.25 | These sites are over 8km from the nearest European site and consequently no potential | Out |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1C-62 (PA/2019/164) | Messingham | Land of Scotter Road Messingham | 25 | 1.42 | impact pathways has been identified. They are located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces or are on land within 200m of a residential built up area and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1C-63 (PA/2015/1390) | Winterton | Land to the rear of North Street and Cemetery Road, | 135 | 6.62 | This site is located approximately 3.3km from the Humber Estuary SAC, SPA and Ramsar. Potential impacts could occur from increased recreational pressure. However, this site is on land within 200m of a residential built up area and is enclosed by woodland/tall hedgerows and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1C-64 | Winterton | Land at Top Road | 110 | 2.90 | This site is located approximately 4.4km from the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. However, this site is on land within 200m of a residential built up area and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1C-65 | Winterton | Land south of Coates Avenue | 40 | 1.47 | This site is just over 4.5km from the nearest European site and consequently no potential impact pathways have been identified. It is located beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, this site is on land within 200m of a residential built up area and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1C-66 (PA/2019/1497 | Winterton | 5 Northlands Road | 5 | 0.41 | This site is located approximately 4.4km from the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. However, this site is on land within 200m of a residential built up area and it is enclosed by woodland/tall hedgerows and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1C-67 (PA/2017/2080) | Ulceby | Land north of Front Street, Ulceby | 14 | 0.97 | These sites are over 8km from the nearest European site and consequently no potential impact pathways have been identified. They are located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these | Out |
| H1C-68 (PA/2017/1450) | Ulceby | Land rear of new convenience store, off Church Lane, Ulceby | 9 | 0.61 | | |
| H1C-69 (PA/2019/783) | Ulceby | Land rear of Church Lane, Ulceby | 10 | 0.77 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1C-70 (PA/2018/2525) | Ulceby | Land off Station Road | 90 | 5.73 | developments is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces or are on land within 200m of a residential built up area and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1C-71 (PA/2020/794) | Ulceby | Land at Risehome Spruce Lane | 8 | 0.38 | | |
| H1C-72 (PA/2013/1256) | Ealand | 7 Lakes Industrial Estate, Crowle Wharf – Site 1 | 17 | 0.1 | These sites are located approximately 3.7km from Thorne and Hatfield Moors SPA and Thorne Moors SAC, however, they do not fall within any of the Natural England Impact Risk Zones and no potential impact pathways have been identified. Furthermore, these sites already consist of buildings, hardstanding and sealed and so they are not considered to provide functionally linked land Thorne and Hatfield Moors.<br>They are also 5.4km from the Humber Estuary SAC, SPA and Ramsar and therefore beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces and so they are not considered to provide functionally linked land for the Humber Estuary.<br>No other no potential impact pathways have been identified. | Out |
| H1C-73 (PA/2015/0481) | Ealand | 7 Lakes Industrial Estate, Crowle Wharf – Site 2 | 9 | 0.75 | | |
| H1C-74 (PA/2017/464) | Keadby | Old Railway Sidings, A18 from Althorpe to Gunness | 14 | 0.52 | These sites are less than 0.4km from the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. | In |
| H1C-75 | Keadby | Land Adjacent to | 9 | 0.23 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| (PA/2017/1323) | | Trent View Medical Centre Practice 45 Trent View | | | Furthermore, these sites are on land within 200m of a residential built up area or consist of woodland and scrub habitats and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1C-76 (PA/2018/1884) | Scawby | West street | 6 | 0.6 | This site is over 8km from the nearest European site and consequently no potential impact pathways have been identified. It is located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, this site already consist of buildings, hardstanding and sealed surfaces and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1C-77 (PA/2018/1718) | Wrawby | Land adjacent to Ridgeway House Mill Lane | 8 | 0.41 | These sites are over 12km from the nearest European site and consequently no potential impact pathways have been identified. They are located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, these sites are on land within 200m of a residential built up area and/or are enclosed by woodland/tall hedgerows and so they are not considered to provide functionally linked land | Out |
| H1C-78 (PA/2017/674) | Wrawby | Land off Applefields | 22 | 1.78 | | |
| H1C-79 (PA/2019/460) | Wrawby | Land at Kettleby Lane | 6 | 0.21 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| | | | | | for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| SSH1p, SSH2p Lincolnshire Lakes | Scunthorpe | West of Scunthorpe | 2150 | 1000 | This site is located approximately 2.3km from the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. The HRA for the Lincolnshire Lakes development (URS, 2014) reports that wintering bird surveys undertaken that significant flocks of Golden Plover occur over winter within the fields within the northern part of the proposed development; this area can therefore be considered to provide functionally linked land to the Humber Estuary. The site is too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1P-1 (SCUH-1, PA/2015/1333) | Scunthorpe | Phoenix Parkway Phase 1 | 158 | 7.96 | These sites are located within 4.42km of the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. However, these sites are on land within 200m of a residential built up area and/or are enclosed by woodland/tall hedgerows and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1P-2 (SCUH-2) | Scunthorpe | Phoenix Parkway Phase 2 | 40 | 1.88 | | |
| H1P-3 (PA/2020/1333)) | Scunthorpe | Land at Burringham Road | 144 | 5.24 | | |
| H1P-4 (SCHU-C7) | Scunthorpe | Land at former South Leys School, Enderby Road – Phase 1 | 120 | 4.95 | These sites are over 4.6km from the nearest European site and consequently no potential impact pathways have been identified. They are located beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the | Out |
| H1P-5 (SCHU-C7) | Scunthorpe | Land at former South Leys School, Enderby Road – Phase 2 | 70 | 4.20 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1P-6 (PA/2019/1782) | Scunthorpe | Moorwell Road | 200 | 8.36 | Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces, are on land within 200m of a residential built up area and/or are enclosed by woodland/tall hedgerows and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1P-7 | Scunthorpe | Former Ashby Market | 40 | 0.47 | | |
| H1P-8 | Scunthorpe | Land at Lakeside Parkway | 34 | 1.55 | | |
| H1P-9 | Scunthorpe | Former Sandfield House | 25 | 0.64 | | |
| H1P-10 | Scunthorpe | Former Rustys Car Garage | 10 | 0.08 | | |
| H1P-11 (SCUH-C2) | Scunthorpe | Brumby Resource Centre, East Common Lane | 40 | 1.04 | | |
| H1P-12 (BARH-1, BARH-2) | Barton | Pasture Road South | 319 | 21.40 | These sites are located within 500m of the Humber Estuary Ramsar and within 1km of the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. However, these sites already consist of buildings, hardstanding and sealed surfaces, and/or are on land within 200m of a residential built up area and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1P-13 | Barton | Land off Barrow Road | 225 | 6.10 | | |
| H1P-14 (BRIH-1, BRIH-5) | Brigg | Land north of Atherton Way | 149 | 4.40 | These sites are over 13km from the nearest European site and consequently no potential impact pathways have been identified. They are located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. | Out |
| H1P-15 (BRIH-2) | Brigg | Land at Western Avenue | 186 | 5.54 | | |
| H1P-16 (BRIH-3) | Brigg | Wrawby Road Phase 2 | 333 | 11.97 | | |
| H1P-17 (BRIH-4) | Brigg | Wrawby Road Phase 1 | 152 | 4.31 | | |
| H1P-18 | Brigg | Land at Horstead | 20 | 0.46 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| | | Avenue | | | Furthermore, these sites are on land within 200m of a residential built up area and so they are not considered to provide functionally linked land for the Humber Estuary. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1P-19 | Barnetby le Wold | Land at King`s Road Land | 43 | 1.2 | | |
| H1P-20 | Barrow upon Humber | Land off Ferry Road | 54 | 1.65 | This site is located within 1.8km of the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. However, this site is on land within 200m of a residential built up area and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1P-21 | Broughton | Land off the B1207 | 84 | 2.75 | This site is over 12km from the nearest European site and consequently no potential impact pathways have been identified. It is located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, this site is on land within 200m of a residential built up area and it is enclosed by woodland/tall hedgerows and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| H1P-22 (CROH-1) | Crowle | Land to the east of Fieldside | 75 | 2.80 | These sites are located approximately 2km from Thorne and Hatfield Moors SPA and Thorne Moors SAC fall within the Natural | In |
| H1P-23 | Crowle | Land off Mill Road | 57 | 1.05 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1P-24 | Crowle | Land off Fieldside | 20 | 0.5 | England Impact Risk Zones for the SSSIs corresponding to these sites. Potential for hydrological impacts due to water discharge and recreational pressures. However, H1P-22 and H1P-24 consist of buildings, hardstanding and sealed surfaces and so do not provide functionally linked land for the Humber Estuary, or Thorne and Hatfield Moors. H1P-23, however, does consist of semi-natural habitats that may provide functionally linked land for Thorne Moors. However, as H1P-23 is bounded by woodland it would not provide functionally linked land for the Humber Estuary. | |
| H1P-25 | Epworth | Yealand Flats | 45 | 1.5 | This site is located within 4.5km of Thorne and Hatfield Moors SPA and Hatfield Moors SAC, and does not fall within any of the Natural England Impact Risk Zones and no potential impact pathways have been identified. Furthermore, being 4.5km from Hatfield Moors it is beyond the 3.1km distance that Alexander and Creswell (1990) identified as the averaging foraging distance for Nightjar from nest sites; it is therefore not considered to provide functionally linked land.<br>It is also located over 8.5km from the Humber Estuary SAC, SPA and Ramsar and beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, this site is on land within 200m of a residential built up area and so it is not considered to provide functionally linked land for the Humber Estuary. | Out |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1P-26 | Haxey | Land at Field House | 75 | 2.96 | This site is located approximately 5km from Thorne and Hatfield Moors SPA and Hatfield Moors SAC, and does not fall within any of the Natural England Impact Risk Zones and no potential impact pathways have been identified. Furthermore, these sites are too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar.<br>It is also located over 13km from the Humber Estuary European site and beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, these sites already consist of buildings, hardstanding and sealed surfaces or are on land within 200m of a residential built up area and so they are not considered to provide functionally linked land for the Humber Estuary. | Out |
| H1P-27 (KIRH-3) | Kirton in Lindsey | Land at Former RAF | 302 | 14.26 | This site is over 16km from the nearest European site and consequently no potential impact pathways have been identified. It is located a considerable distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, this site already consists of buildings, hardstanding and sealed surfaces and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| H1P-28 | Ealand | Land adjacent to Ivy House Farm, on Main street. | 21 | 1 | This site is located approximately 3.8km from Thorne and Hatfield Moors SPA and Thorne Moors SAC, however, it does not fall within any of the Natural England Impact Risk Zones and no potential impact pathways have been identified. Furthermore, being 3.8km from Thorne Moors it is beyond the 3.1km distance that Alexander and Creswell (1990) identified as the averaging foraging distance for Nightjar from nest sites; it is therefore not considered to provide functionally linked land.<br>It is also approximately 4.8km from the Humber Estuary SAC, SPA and Ramsar and therefore beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, this site is on land within 200m of a residential built up area and so it is not considered to provide functionally linked land for the Humber Estuary. | Out |
| H1P-29 | East Halton | Land off Mill Lane | 26 | 1 | This site is located approximately 2.6km from the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. However, this site is on land within 200m of a residential built up area and is enclosed by woodland/tall hedgerows and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1P-30 | Scawby | Land south of Main Street | 24 | 0.79 | This site is over 13km from the nearest European site and consequently no potential impact pathways have been identified. It is | Out |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| | | | | | located a significant distance beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from this development is not considered significant. Furthermore, this site is on land within 200m of a residential built up area and is enclosed by woodland/tall hedgerows and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| H1P-31 | South Killingholme | Land at School Road | 21 | 0.69 | This site is located approximately 3.6km from the Humber Estuary SAC, SPA and Ramsar. Potential impact pathways include water discharge and increased recreational pressure. However, it is on land already consisting of buildings, hardstanding and sealed surfaces and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| H1P-32 | Westwoodside | Land south of Doncaster Road | 26 | 0.97 | This site is located approximately 5.2km from Thorne and Hatfield Moors SPA and Hatfield Moors SAC, and does not fall within any of the Natural England Impact Risk Zones and no potential impact pathways have been identified. Furthermore, being 5.3km from Hatfield Moors it is beyond the 3.1km distance that Alexander and Creswell (1990) identified as the averaging foraging distance for Nightjar from nest sites; it is therefore not considered to provide functionally linked land.<br>It is also approximately 14km from the Humber Estuary SAC, SPA and Ramsar and | Out |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| | | | | | therefore beyond the 4.42km distance which Fearnley *et al.* (2012) identifies as being the distance within which 88% of visitors to the Humber Estuary will travel and consequently an increase in recreational pressure from these developments is not considered significant. Furthermore, this site is on land within 200m of a residential built up area and enclosed by woodland/tall hedgerows and so it is not considered to provide functionally linked land for the Humber Estuary. | |
| H1P-33 | Wroot | Land at Field Lane | 13 | 0.43 | This site is located approximately 1.7km from Thorne and Hatfield Moors SPA and Thorne Moors SAC. Potential for hydrological impacts due to water discharge and recreational pressures. However, consisting of an arable field it is unlikely to provide functionally linked land for Thorne Moors. | In |
| EC1-1 | Scunthorpe | Normanby Enterprise Park | Employment - E(g), B2, B8 | 38.87 | This site is located approximately 1.6km from the nearest European site (Humber Estuary SAC, SPA and Ramsar). This site falls within the Natural England SSSI Impact Risk Zone for the Humber Estuary and requires further assessment of potential impacts in relation to water supply, discharge and air pollution. However, it is on land that consists of woodland/scrub habitats and is enclosed by woodland/tall hedgerows and so it is not considered to provide functionally linked land for the Humber Estuary. It is also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| EC1-2 | Scunthorpe | Land north of Tesco | Employment - E(g), B8 | 39.96 | This site is located approximately 1.3km from the nearest European site (Humber Estuary SAC, SPA and Ramsar). This site falls within the Natural England SSSI Impact Risk Zone for the Humber Estuary and requires further | In |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| | | | | | assessment of potential impacts in relation to water supply and discharge. Parts of the site, where over 200m from adjacent residential development, could also provide functionally linked land to the Humber Estuary. It is too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | |
| EC1-3 | Kirmington | Humberside Airport | Employment – E(g), B8 | 12 | Whilst these sites are over 12km from the nearest European site (the Humber Estuary SAC, SPA and Ramsar site) they could result in airport expansion and an increased number of flights in and out of the airport. The Civil Aviation Authority produces maps for all airports which detail a bird strike safeguarding zone; a 13km circle around the centre of the aerodrome within which developments, such as lake or nature reserve creation, must be considered by the airport authority due to the risk of increased bird strike. Therefore, it is considered that the airport could pose an increased risk of collision to birds within 13km of the airport, and any airport expansion facilitated by these policies could result in an increased risk of collision which could adversely impact on the Humber SPA and Ramsar and their functionally linked wetlands. Further assessment in relation to the impacts of development on the Humber Estuary SPA and Ramsar is therefore required.<br>However, the sites themselves, consisting of buildings, hardstanding and sealed surfaces, or woodland and scrub, immediately adjacent to the existing airport are not considered to provide functionally linked land for the Humber Estuary. These sites are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| EC1-4 | Kirmington | Humberside Airport | Employment – E(g), B8 | 7.8 | | |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| EC1-5 | Sandtoft | Sandtoft Business Park | Employment – E(g), B8 | 55.3 | This site is located approximately 1.5km from the nearest European site (Thorne and Hatfield Moors SPA and Hatfield Moors SAC). This site falls within the Natural England SSSI Impact Risk Zone for the Humber Estuary and requires further assessment of potential impacts in relation to water discharge. Parts of the site, where over 200m from adjacent residential development and not consisting of hardstanding/buildings, could also provide functionally linked land to the Humber Estuary. Additionally, whilst the site is within the 3.1km distance that Alexander and Creswell (1990) identify as the average foraging distance for Nightjar from nest sites, the habitats present (arable and buildings/hardstanding) are not considered suitable for Nightjar and this site is not considered to provide functionally linked land for Hatfield Moor. | In |
| EC1-6 | Barton upon Humber | Land to the north west of the A15 Barton Interchange | Employment – E(g), B2, B8 | 15 | This site is located approximately 1.5km from the nearest European site (Humber Estuary SAC, SPA and Ramsar). This site falls within the Natural England SSSI Impact Risk Zone for the Humber Estuary and requires further assessment of potential impacts in relation to water supply, discharge and air pollution. The site may also provide functionally linked and for the Humber Estuary. The site is too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| EC1-8 | Barnetby Top | Land to the south of Barnetby Top Interchange and to the east of the A18 | Employment – E(g), B2, B8 | 10 | This site is over 12km from the nearest European site and consequently no potential impact pathways have been identified. Furthermore, this site is on land that is enclosed by woodland/tall hedgerows and given the distance to the Humber Estuary it is not considered to provide functionally linked. They are also too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | Out |
| EC1-9 | M180 Junction 2 | Land to the south of Crowle gyratory | Employment – E(g), B8 | 5 | This site is located approximately 4.4km from Thorne and Hatfield Moors SPA and Thorne Moors SAC, however, it does not fall within any of the Natural England Impact Risk Zones and no potential impact pathways have been identified.<br>It is also located 5.5km from the Humber Estuary SAC, SPA and Ramsar and outside of the Natural England SSSI Impact Risk Zone for the Humber Estuary and no potential impact pathways have been identified. However, given it consists of open arable fields it may provide functionally linked land for the Humber Estuary. | In |
| MIN6-15 | Westwoodside | Cove Farm, Westwoodside (Extension) | Sand and gravel (Area of search) | - | The current Cove Farm sand and gravel quarry is located approximately 2.8km from Hatfield Moor SAC and SPA. Depending on where the extension to this quarry is situated, it may fall within the Natural England SSSI Impact Risk Zone for this site which identifies that potential risks from quarries may occur and further investigation is required. The current quarry falls outside this Impact Risk Zone. It may also fall within arable and grassland fields that could be used as functionally linked land for both the Humber Estuary and Hatfield Moors. | In |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| MIN6-16 | Messingham | Land at Holme Lane | Silica sand | 118.23 | This site is over 8.4km from the nearest European Site (the Humber Estuary SAC, SPA and Ramsar site) and consequently no potential impact pathways have been identified. However, given the site consists of arable fields and grassland, with some woodland areas, it may provide functionally linked land for the Humber Estuary. It is too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| MIN6-17 | Winteringham | Eastfield Farm, Winteringham | Silica sand | 2.03 | This site is located approximately 350m from the boundary of the Humber Estuary SAC, SPA and Ramsar site, and requires further assessment of potential impacts in relation to water supply, discharge and air pollution. This site may also provide functionally linked land to the Humber Estuary. Cutts et al. (2016) highlight that the area within which this site falls has widespread Curlew use. It is however, too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |
| MIN6-18 | Winteringham | Land South of Composition Lane, Winteringham | Silica sand (Area of search) | - | The location of this site is currently unknown, but Winteringham is located in close proximity to the Humber Estuary SAC, SPA and Ramsar site and any mineral extraction development in this area is likely to fall within the Natural England SSSI Impact Risk Zone which identifies that potential risks from quarries may occur and further investigation is required. This site may also provide functionally linked land to the Humber Estuary. Cutts et al. (2016) highlight that the area within which this site falls has widespread Curlew use. It is, however, too distant from Thorne and Hatfield Moors to provide functionally linked land for Nightjar. | In |

| Site Reference | Location/ Settlement | Site Name | Allocation Type/ Humber of Dwellings | Site Area (ha) | Potential Impact | Screening Outcome |
|---|---|---|---|---|---|---|
| Note: **E(g)** – Offices, research and development of products and processes, any industrial process, being a use, which can be carried out in any residential area without detriment to the amenity of that area by reason of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit (e.g. light industrial use). **B2 General industrial** - Use for industrial process other than one falling within class B1 (excluding incineration purposes, chemical treatment or landfill or hazardous waste). **B8 Storage or distribution** - This class includes open air storage. | | | | | | |

**Table 6-4: Screening Assessment**

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| **Humber Estuary SAC**<br><br>*Qualifying Features:*<br>Sandbanks which are slightly covered by sea water all the time [1110]<br>Estuaries [1130]<br>Mudflats and sandflats not covered by seawater at low tide [1140]<br>Coastal lagoons [1150] (Priority Habitat)<br>*Salicornia* and other annuals colonizing mud and sand [1310]<br>Atlantic salt meadows (*Glauco-* | Recreational pressures | A number of policies within the North Lincolnshire Local Plan will result in increased residential development which could increase recreational pressures on the Humber Estuary SAC (SS2, SS6, SS7, H1, H6, H7). A population increase of 6% is anticipated in North Lincolnshire by 2039, with the greatest increase (55.4%) in people over 65 who have the greatest amount of leisure time. It is therefore likely that increasing numbers of visitors will use the amenity resource provided by the estuary, potentially result in increased disturbance (i.e. visual and noise) and trampling. Furthermore, policy EC7, CSC5, CSC6, CSC15 and CSC17 promote development tourism and visitor attractions, including water-based recreation (CSC6) which could attract visitors to the area putting further recreational pressure on this site.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Urbanisation | Being partly located within North Lincolnshire, any residential, employment, mineral, waste or transport development promoted under policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, EC5, RD1, MIN1, MIN5, MIN6, WAS2, T6 and T7 have the potential to directly impact upon the qualifying features of the | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| *Puccinellietalia maritimae*) [1330]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") [2120]<br>Fixed coastal dunes with herbaceous vegetation ("grey dunes") [2130] (Priority Habitat)<br>Dunes with *Hippopha rhamnoides* [2160]<br>River Lamprey *Lampetra fluviatilis* [1099]<br>Sea Lamprey *Petromyzon marinus* [1095]<br><br>Given that the Grey Seal *Halichoerus grypus* population for which this site is designated breeds at Donna Nook, over 30km from the North Lincolnshire boundary, it is unlikely to be impacted upon by the Local Plan Publication Draft | | Humber Estuary SAC. This is particularly the case where development/allocations, are implemented in close proximity to the site boundary, or the supporting sites of Alkborough Flats and Chowder Ness. This could result in direct habitat loss where this occurs within the site boundary, or indirect impacts such as physical damage, habitat fragmentation or disturbance.<br>***Likely significant effect*** | | |
| | Atmospheric Pollution | Increased population in the area expected during the lifetime of the plan will likely increase the number of vehicles using the local road and motorway network. Vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road (Ricardo-AEA, 2016), and pollutant levels can be expected to fall to near background levels at more than 200m. Policies SS7 and H1 do not allocate any sites for residential development within 200m of the estuary, but there are sites allocated adjacent to major roads in North Lincolnshire that do pass in close proximity to the SAC, including the A18, A160, A1077, A161 and A15 which could increase traffic, and consequently emissions. In addition, T7 promotes the delivery, maintenance and improvement of key routes across the area, which could also increase transport and emissions. Furthermore, SS8, SS9, SS10, EC1, EC5, MIN1, MIN5, MIN6 and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could also lead to additional point sources in the catchment. This could have a significant impact on the site as APIS (2021) identify that a number of qualifying features (i.e. estuaries, coastal lagoons, saltmarsh habitats and dune habitats) are potentially sensitive to eutrophication and/or acidification.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Water Resource Use/ Flow | Given the highly developed coastline of the Humber Estuary, water abstraction and also discharges have the potential to significantly effect this site. However, Anglian | No in-combination effects have been identified for water resource use and | **No likely significant effect (alone or in** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| Addendum | Regulation | Water (2019) identify that in the Central Lincolnshire resource zone, demand until 2045 will increase by between 10 and 15% leading to a baseline deficit. However, in this region water is abstracted from the Sherwood Sandstone and Lincolnshire Limestone groundwater, with surface water coming from the River Ancholme, not the Humber Estuary. Furthermore, the South Humber Bank resource zone is predicted to have a surplus by 2025.<br>***No likely significant effect*** | flow regulation.<br>In relation to the Yorkshire Water WRMP (Yorkshire Water, 2020), one option was identified as having the potential to impact on European sites, however, this was the North Yorkshire Groundwater Option Scheme 1 which could potentially impact on an SAC, but not the Humber Estuary. | **combination)** |
| | Water Pollution/ Siltation | A significant number of the policies and site allocations within the North Lincolnshire Local Plan have the potential to increase water pollution/siltation, both during any construction phases or operationally. For example, SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, EC5, RD1, MIN6, WAS2, T6 and T7 relating to future housing growth/site allocations, employment sites, the rural economy, mineral development, waste management and infrastructure all have the potential to result in policies that could potentially lead to issues such as increased wastewater discharges, road run-off and surface water run-off, potentially adversely impacting on water quality in the Humber Estuary.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| | Flood and Water Level Management | A significant number of the policies and site allocations within the North Lincolnshire Local Plan have the potential to either increase flooding (e.g. through housing/ employment site development increasing surface water run-off, such as through SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, EC5) or require additional flood risk management measures to protect developments from flooding. This could adversely impact upon the Humber Estuary, in particular through coastal squeeze.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| **Hatfield Moor SAC**<br><br>*Qualifying Feature:*<br>Degraded raised bogs still capable of natural regeneration [7120] | Recreational pressures | A number of policies within the North Lincolnshire Local Plan will result in increased residential development which could increase recreational pressures on Hatfield Moor SAC (SS2, SS6, SS7, H1, H6, H7). A population increase of 6% is anticipated in North Lincolnshire by 2039, with the greatest increase (55.4%) in people over 65 who have the greatest amount of leisure time. There is therefore the potential that increasing numbers of visitors will use the amenity resource provided by the moors. This could cause physical damage such as trampling/erosion or disturbance, potentially resulting in changes in species composition (Pellerin *et al*., 2006). Furthermore, policy EC7, CSC5, CSC15 and CSC17 promote development tourism and visitor attractions which could attract visitors to the area putting further recreational pressure on this site.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Urbanisation | Given that Hatfield Moor SAC is located outside of the North Lincolnshire boundary, direct impacts of urbanisation upon it (e.g. habitat loss) are unlikely. However, indirect impacts could still arise, for example from trampling, habitat fragmentation or disturbance as a result of development in close proximity to the site which may be promoted as a result of policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, RD1, MIN1, MIN5, MIN6, WAS2, T6 and T7p. | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| | | ***Likely significant effect*** | | |
| | Atmospheric Pollution | Lowland raised bog habitats are vulnerable to atmospheric nitrogen deposition, especially of ammonia. Although anticipated increases in population during the life of the plan will likely increase the number of vehicles using the local road and motorway network, Ricardo-AEA (2016) report that vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road. Pollutant levels can be expected to fall to near background levels at more than 200m from the road. H1 does not allocate any areas for residential development within 200m of the SAC boundary. Furthermore, there are no major roads within 200m of the SAC boundary. However, policies SS8, SS9, SS10, EC1, MIN1, MIN5, MIN6 and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could also lead to additional point sources in the catchment.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Water Resource Use/ Flow Regulation | Lowland raised bogs are particularly sensitive to water abstraction which can impact on the vegetation communities present. Hatfield Moors falls within the Yorkshire Water service area and Yorkshire Water (2020) identify that one option within the Water Resources Management Plan (WRMP) could impact on designated sites, but that the preferred WRMP is not likely to have significant effects on the integrity of Hatfield Moor.<br>***No likely significant effect*** | None of the plans and projects reviewed were identified as potentially resulting in adverse impacts on Hatfield Moor SAC. | **No likely significant effect (alone or in combination)** |
| | Water Pollution/ Siltation | Several policies and site allocations within the North Lincolnshire Local Plan have the potential to lead to policies that will increase water pollution/siltation, both during any construction phases or operationally. For example, SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, RD1, MIN6, WAS2, T6 and T7 relating to future housing growth/site allocations, employment sites, the rural economy, mineral development, waste management and infrastructure all have the potential to | None of the plans and projects reviewed were identified as potentially resulting in adverse impacts on Hatfield Moor SAC. | **No likely significant effect (alone or in combination)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| | | lead to issues such as increased wastewater discharges, road run-off and surface water run-off, potentially adversely impacting on water quality. However, as an ombrotrophic peat bog, the site is effectively located upstream of North Lincolnshire, it is unlikely that sources of water pollution within North Lincolnshire would be able to impact on this SAC.<br>***No likely significant effect*** | | |
| | Flood and Water Level Management | A significant number of policies and site allocations within the North Lincolnshire Local Plan have the potential to lead to policies that could either increase flooding (through housing/ employment site development increasing surface water run-off, such as through SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1) or require additional flood risk management measures to protect developments from flooding.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| **Thorne Moor SAC**<br><br>*Qualifying Feature:*<br>Degraded raised bogs still capable of natural regeneration [7120] | Recreational pressures | A number of policies within the North Lincolnshire Local Plan will result in increased residential development which could increase recreational pressures on Thorne Moor SAC (SS2, SS6, SS7, H1, H6, H7). A population increase of 6% is anticipated in North Lincolnshire by 2039, with the greatest increase (55.4%) in people over 65 who have the greatest amount of leisure time. There is therefore the potential that increasing numbers of visitors will use the amenity resource provided by the moors. This could cause physical damage such as trampling/erosion or disturbance, potentially resulting in changes in species composition (Pellerin *et al*., 2006). Furthermore, policy EC7, CSC5, CSC15 and CSC17 promote development tourism and visitor attractions which could attract visitors to the area putting further recreational pressure on this site.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Urbanisation | Given that Thorne Moor SAC falls partly inside the North Lincolnshire boundary, direct impacts of urbanisation | N/A in combination assessment to be | **Likely significant effect** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| | | upon it (e.g. habitat loss) could occur, although are unlikely. However, indirect impacts could arise, for example from trampling, habitat fragmentation or disturbance as a result of development in close proximity to the site which may be promoted as a result of policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, RD1, MIN1, MIN5, MIN6, WAS2, T6 and T7.<br>***Likely significant effect*** | undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **(alone)** |
| | Atmospheric Pollution | Lowland raised bog habitats are vulnerable to atmospheric nitrogen deposition, especially of ammonia. Although anticipated increases in population during the life of the plan will likely increase the number of vehicles using the local road and motorway network, Ricardo-AEA (2016) report that vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road. Pollutant levels can be expected to fall to near background levels at more than 200m from the road. H1 does not allocate any areas for residential development within 200m of the SAC boundary. Furthermore, there are no major roads within 200m of the SAC boundary. However, policies SS8, SS9, SS10, EC1, MIN1, MIN5, MIN6 and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could also lead to additional point sources in the catchment.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Water Resource Use/ Flow Regulation | Lowland raised bogs are particularly sensitive to water abstraction which can impact on the vegetation communities present. Thorne Moors falls within the Yorkshire Water service area and Yorkshire Water (2020) identify that one option within their Water Resources Management Plan (WRMP) could impact on designated sites, but that the preferred WRMP is not likely to have significant effects on the integrity of Thorne Moor.<br>***No likely significant effect*** | None of the plans and projects reviewed were identified as potentially resulting in adverse impacts on Thorne Moor SAC. | **No likely significant effect (alone or in combination)** |
| | Water Pollution/ | Several policies and site allocations within the North Lincolnshire Local Plan have the potential to lead to | None of the plans and projects reviewed were | **No likely significant effect** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| | Siltation | policies that will increase water pollution/siltation, both during any construction phases or operationally. For example, SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, RD1, MIN6, WAS2, T6 and T7 relating to future housing growth/site allocations, employment sites, the rural economy, mineral development, waste management and infrastructure all have the potential to lead to issues such as increased wastewater discharges, road run-off and surface water run-off, potentially adversely impacting on water quality. However, as an ombrotrophic peat bog, the site is effectively located upstream of North Lincolnshire, it is unlikely that sources of water pollution within North Lincolnshire would be able to impact on this SAC.<br>***No likely significant effect*** | identified as potentially resulting in adverse impacts on Thorne Moor SAC. | **(alone or in combination)** |
| | Flood and Water Level Management | A significant number of policies and site allocations within the North Lincolnshire Local Plan have the potential to lead to policies that could either increase flooding (e.g. through housing/ employment site development increasing surface water run-off, such through SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1) or require additional flood risk management measures to protect developments from flooding.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| **River Derwent SAC**<br><br>*Qualifying Features:*<br>Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]<br>River Lamprey - | Recreational pressures | Whilst an increase in population in North Lincolnshire is expected during the lifetime of the plan, particularly of over 65s with a considerable amount of leisure time, it is unlikely to impact on the qualifying features of the SAC due to the distance from the North Lincolnshire boundary. Furthermore, Natural England (2014h) does not identify recreational pressures as a prioritised issue for this site.<br>***No likely significant effect*** | None identified due to the distance of this site from the North Lincolnshire boundary, its position upstream, and the nature of the interest features present. | **No likely significant effect (alone or in-combination)** |
| | Urbanisation | Being located 14km away from the North Lincolnshire boundary, direct and indirect impacts on the qualifying interests of this SAC from urbanisation and development promoted by the policies and site allocations in the Local | | |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| *Lampetra fluviatilis* [1099]<br>Sea Lamprey *Petromyzon marinus* [1095]<br>Bullhead *Cottus gobio* [1163]<br>Otter *Lutra lutra* [1355] | | Plan are unlikely.<br>***No likely significant effect*** | | |
| | Atmospheric Pollution | Although an increase in population is expected in North Lincolnshire during the lifetime of the plan, which is likely to result in increases in vehicles using the local road and motorway network, adverse impacts are not anticipated given the distance to the site which is over 14km from the local authority boundary. Ricardo-AEA (2016) report that vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road. Pollutant levels can be expected to fall to near background levels at more than 200m from the road. Combined with technological improvements reducing vehicle emissions no significant effects are anticipated.<br>***No likely significant effect*** | | |
| | Water Resource Use/ Flow Regulation | Whilst over-abstraction is identified as a threat to the interest features of this site, with the potential to lead to reduced flows (Natural England, 2014h), the distance from the North Lincolnshire boundary means that abstractions to support development and Local Plan policies within North Lincolnshire are unlikely to impact on this SAC. Furthermore, any increase in discharges associated with policies developed under the local plan are unlikely to impact upon this SAC, which is upstream of North Lincolnshire.<br>***No likely significant effect*** | | |
| | Water Pollution/ Siltation | Whilst water pollution and siltation are identified by Natural England (2014h) as significant issues for the River Derwent SAC, given the distance between North Lincolnshire and this site, and that the area is located downstream of it, no significant effects are identified.<br>***No likely significant effect*** | | |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| | Flood and Water Level Management | Given the distance between the River Derwent SAC and North Lincolnshire, and that the local authority is located downstream of the designated site, any increased flood risk arising from implementation of policies promoted by the Local Plan, or need to implement flood risk management measures, is not anticipated to have a likely significant effect on the qualifying features of this SAC.<br>***No likely significant Effect*** | | |
| **Humber Estuary SPA**<br><br>*Qualifying Features:*<br>Site qualifies under article 4.1 as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season:<br>- Avocet *Recurvirostra avosetta* (breeding and wintering)<br>- Bittern *Botaurus stellaris* (breeding and wintering)<br>- Hen Harrier *Circus cyaneus* (wintering)<br>- Golden Plover *Pluvialis apicaria* | Recreational pressures | A number of policies within the North Lincolnshire Local Plan will result in increased residential development which could increase recreational pressures on the Humber Estuary SPA (SS2, SS6, SS7, H1, H6, H7). A population increase of 6% is anticipated in North Lincolnshire by 2039, with the greatest increase (55.4%) in people over 65 who have the greatest amount of leisure time. It is therefore likely that increasing numbers of visitors will use the amenity resource provided by the estuary, potentially result in increased disturbance (i.e. visual and noise) and trampling. Furthermore, policy EC7, CSC5, CSC6, CSC15 and CSC17 promote development tourism and visitor attractions, including water-based recreation (CSC6) which could attract visitors to the area putting further recreational pressure on this site.<br>***Likely significant effect*** | Given that a number of the plans and projects reviewed have the potential to significantly impact upon the Humber Estuary SPA, and require mitigation and avoidance measures to offset adverse impacts, there is the potential that in-combination effects could arise with the North Lincolnshire Local Plan. | **Likely significant effect (alone and in-combination)** |
| | Urbanisation | Being partly located within North Lincolnshire, any residential, employment, mineral, waste or transport development promoted under policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, EC5, RD1, MIN1, MIN5, MIN6, WAS2, T6 and T7p have the potential to directly impact upon the qualifying features of the Humber Estuary SPA. This is particularly the case where development/allocations, are implemented in close proximity to the site boundary, or the supporting sites of Alkborough Flats and Chowder Ness. Development/site allocations on land functionally linked to the Humber | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| (wintering)<br>- Bar-tailed Godwit *Limosa lapponica* (wintering)<br>- Ruff *Philomachus pugnax* (passage)<br>- Marsh Harrier *Circus aeruginosus* (breeding)<br>- Little Tern *Sterna albifrons* (breeding)<br><br>Site qualifies under article 4.2 as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species in any season:<br>- Shelduck *Tadorna tadorna* (wintering)<br>- Knot *Calidris canutus* (wintering and passage)<br>- Dunlin *Calidris alpina* (wintering) | | Estuary could also have a likely significant effect. This could result in direct habitat loss where this occurs within the site boundary, or indirect impacts such as physical damage, habitat fragmentation or disturbance.<br>***Likely significant effect*** | | |
| | Atmospheric Pollution | Increased population in the area expected during the lifetime of the plan will likely increase the number of vehicles using the local road and motorway network. Vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road (Ricardo-AEA, 2016), and pollutant levels can be expected to fall to near background levels at more than 200m. Policies SS7 and H1 do not allocate any sites for residential development within 200m of the estuary, but there are sites allocated adjacent to major roads in North Lincolnshire that do pass in close proximity to the SAC, including the A18, A160, A1077, A161 and A15 which could increase traffic, and consequently emissions. In addition, T7 promotes the delivery, maintenance and improvement of key routes across the area, which could also increase transport and emissions. Furthermore, SS8, SS9, SS10, EC1, EC5, MIN1, MIN5, MIN6 and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could also lead to additional point sources in the catchment. This could have a significant impact on the site as APIS (2021) identify that fen, saltmarsh and dune grasslands, which support a number birds for which the site is designated, are sensitive to eutrophication, potentially impacting on community composition, increasing grass dominance and soil acidification).<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Water Resource Use/ Flow Regulation | Given the highly developed coastline of the Humber Estuary, water abstraction and also discharges have the potential to significantly effect the habitats that support the bird species for which this site is designated. However, Anglian Water (2019) identify that in the | No in-combination effects have been identified for water resource use and flow regulation.<br>In relation to the Yorkshire | **No likely significant effect (alone or in-combination)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| - Black-tailed Godwit *Limosa limosa* (wintering and passage)<br>- Redshank *Tringa totanus* (wintering and passage)<br><br>Site qualifies under article 4.2 as it is used regularly by over 20,000 waterbirds in any season: In the non-breeding season, the area regularly supports 153,934 individual waterbirds (five-year peak mean 1996/97 – 2000/01) | | Central Lincolnshire resource zone, demand until 2045 will increase by between 10 and 15% leading to a baseline deficit. However, in this region water is abstracted from the Sherwood Sandstone and Lincolnshire Limestone groundwater, with surface water coming from the River Ancholme, not the Humber Estuary. Furthermore, the South Humber Bank resource zone is predicted to have a surplus by 2025.<br>***No likely significant effect*** | Water WRMP (Yorkshire Water, 2020), one option was identified as having the potential to impact on European sites, however, this was the North Yorkshire Groundwater Option Scheme 1 which could potentially impact on an SAC, but not the Humber Estuary. | |
| | Water Pollution/ Siltation | A significant number of the policies and site allocations within the North Lincolnshire Local Plan have the potential to increase water pollution/siltation, both during any construction phases or operationally. For example, SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, EC5, RD1, MIN6, WAS2, T6 and T7 relating to future housing growth/site allocations, employment sites, the rural economy, mineral development, waste management and infrastructure all have the potential to result in policies that could potentially lead to issues such as increased wastewater discharges, road run-off and surface water run-off, potentially adversely impacting on water quality in the Humber Estuary and the habitats that support the bird species for which this site is designated.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| | Flood and Water Level Management | A significant number of the policies and site allocations within the North Lincolnshire Local Plan have the potential to either increase flooding (e.g. through housing/ employment site development increasing surface water run-off, such as through SS2, SS6, SS7, SS8, SS9, SS10 H1, H6, H7, EC1, EC5) or require additional flood risk management measures to protect developments from flooding. This could adversely impact upon the Humber Estuary, in particular through coastal squeeze, which could result in a loss of intertidal habitat which the bird species for which the SPA is designated rely upon.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| **Thorne and Hatfield Moors SPA**<br><br>*Qualifying Features:*<br>Site qualifies under Article 4.1 by supporting populations of European importance of the following species listed on Annex I of the Directive:<br>- Nightjar *Caprimulgus europaeus* (breeding)<br>In addition, it is Natural England's view that the site would also meet SPA designation criteria in relation to | Recreational pressures | A number of policies within the North Lincolnshire Local Plan will result in increased residential development which could increase recreational pressures on Thorne and Hatfield Moor SPA (SS2, SS6, SS7, H1, H6, H7). A population increase of 6% is anticipated in North Lincolnshire by 2039, with the greatest increase (55.4%) in people over 65 who have the greatest amount of leisure time. There is therefore the potential that increasing numbers of visitors will use the amenity resource provided by the moors. This could cause physical damage such as trampling/erosion of the habitats upon which Nightjar rely, or disturbance. Furthermore, policy EC7, CSC5, CSC15 and CSC17 promote development tourism and visitor attractions which could attract visitors to the area putting further recreational pressure on this site.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Urbanisation | Given that Thorne and Hatfield Moor SPA falls partly inside the North Lincolnshire boundary, direct impacts of urbanisation upon it (e.g. habitat loss of areas upon which Nightjar rely) could occur, although are unlikely. However, indirect impacts could arise, for example from trampling, habitat fragmentation or disturbance as a result of development in close proximity to the site which | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| Common Crane *Grus grus*, as the current level of use by this species (i.e. three breeding pairs) constitutes more than 1% of the UK population (Natural England, pers. comm). Whilst a formal re-designation of the site to include Common Crane as a qualifying feature has not been undertaken, this HRA will consider this species as a qualifying feature. | | may be promoted as a result of policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, RD1, MIN1, MIN5, MIN6, WAS2, T6 and T7. Development/site allocations on land functionally linked to Thorne or Hatfield Moors could also have a likely significant effect.<br>***Likely significant effect*** | | |
| | Atmospheric Pollution | Lowland raised bog habitats are vulnerable to atmospheric nitrogen deposition, especially of ammonia. APIS (2021) identify that there is the potential for negative impacts to arise on Nightjar populations (no data is currently available for Common Crane) from eutrophication adversely impacting on the supporting habitats of this species, for example through a transition from heather to grass dominance or changes in plant biochemistry. Although anticipated increases in population during the life of the plan will likely increase the number of vehicles using the local road and motorway network, Ricardo-AEA (2016) report that emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road. Pollutant levels can be expected to fall to near background levels at more than 200m. H1 does not allocate any areas for residential development within 200m of the SAC boundary. Furthermore, there are no major roads within 200m of the SPA boundary. However, policies SS8, SS9, SS10, EC1, MIN1, MIN5, MIN6 and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could also lead to additional point sources in the catchment.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| | Water Resource Use/ Flow Regulation | Lowland raised bogs are particularly sensitive to water abstraction which can impact on the vegetation communities present, and consequently the Nightjar and Common Crane populations they support. Thorne and Hatfield Moors SPA falls within the Yorkshire Water service area and Yorkshire Water (2020) identify that there are number of options within the Water Resources | None of the plans and projects reviewed were identified as potentially resulting in adverse impacts on Thorne and Hatfield Moors SPA. | **No likely significant effect (alone or in-combination)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| | | Management Plan (WRMP) that could impact on designated sites, but that the preferred WRMP is not likely to have significant effects on the integrity of the site.<br>***No likely significant effect*** | | |
| | Water Pollution/ Siltation | Several policies and site allocations within the North Lincolnshire Local Plan have the potential to lead to policies that will increase water pollution/siltation, both during any construction phases or operationally. For example, SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1, RD1, MIN6, WAS2, T6 and T7 relating to future housing growth/site allocations, employment sites, the rural economy, mineral development, waste management and infrastructure all have the potential to lead to issues such as increased wastewater discharges, road run-off and surface water run-off, potentially adversely impacting on water quality. However, as both components of the site (i.e. Thorne and Hatfield Moors) are ombrotrophic peat bogs, they are effectively located upstream of the main areas of North Lincolnshire where development is proposed, it is unlikely that sources of water pollution within North Lincolnshire would be able to impact on this SPA.<br>***No likely significant effect*** | None of the plans and projects reviewed were identified as potentially resulting in adverse impacts on Thorne and Hatfield Moors SPA. | **No likely significant effect (alone or in-combination)** |
| | Flood and Water Level Management | A significant number of policies and site allocations within the North Lincolnshire Local Plan have the potential to lead to policies that could either increase flooding (e.g. through housing/ employment site development increasing surface water run-off, such as through SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H7, EC1) or require additional flood risk management measures to protect developments from flooding.<br>***Likely significant effect*** | N/A in combination assessment to be undertaken as part of the Appropriate Assessment due to likely significant effects alone. | **Likely significant effect (alone)** |
| **Humber Estuary Ramsar** | Recreational pressures | Given that the Humber Estuary SAC and SPA is designated for very similar qualifying features to the Ramsar Site the assessments detailed above are also | N/A in combination assessment to be undertaken as part of the | **Likely significant effect (alone)** |

| Designated Site | Potential Impacts and Pathways | Potential Hazards Impact Pathways | Potential In-combination effects with other plans or projects (if applicable) | Screening Assessment |
|---|---|---|---|---|
| *Qualifying Features:*<br>Criterion 1 – the site is a representative example of a near-natural estuary with a range of habitats<br>Criterion 3 – supports a breeding colony of Grey Seals at Donna Nook and Saltfleetby-Theddlethorpe dune slacks support breeding Natterjack Toad<br>Criterion 5 – supports 153,934 waterfowl in the non-breeding season (5-year peak mean 1996/97-2000/01)<br>Criterion 6 – Contains populations of a number of species at levels of international importance on passage and over winter<br>Criterion 8 - it is an important migration route for both River and Sea Lamprey | Urbanisation<br>Atmospheric Pollution<br>Water Resource Use/ Flow Regulation<br>Water Pollution/ Siltation<br>Flood and Water Level Management | considered applicable to the Ramsar Site.<br>***Likely Significant Effect***<br><br>The exceptions to this area the qualifying features of amphibia, which relates to populations of Natterjack Toad and marine mammals, which relate to Grey Seal. The population of Natterjack Toads is located at Saltfleetby-Theddlethorpe dunes on the coast between Cleethorpes and Mablethorpe, over 35km from the North Lincolnshire boundary, and the Grey Seal population is at Donna Nook over 30km away. Given these considerable distances, it is not considered that these qualifying features will be significantly affected the North Lincolnshire Local Plan Publication Draft Addendum.<br>***No Likely Significant Effect*** | Appropriate Assessment due to likely significant effects alone.<br><br>For Natterjack Toad and Marine Mammals, no in combination effects with other plans or projects have been identified. | **No likely significant effect (alone or in combination)** |

## 6.3 Screening Statement and Conclusions

The majority of development policies within the North Lincolnshire Local Plan Publication Draft Addendum have been screened out alone and in combination with other plans or projects. The exception to this are listed below, and this due to the level of development, nature of the policy and site allocations proposed:

- SS2 – Spatial Strategy for North Lincolnshire
- SS6 – Spatial Distribution of Housing Sites
- SS7 – Strategic Site Allocation – Lincolnshire Lakes
- SS8 – Employment Land Requirement (including Strategic Employment Sites)
- SS9 – Strategic Site Allocation – Land at North Killingholme Airfield
- SS10 – Strategic Site Allocation - South Humber Bank
- H1 – Site Allocations
- H6 – North Lincolnshire's Travelling Communities
- H7 – New Agricultural Workers of Forestry Dwellings
- EC1 – Employment Land Supply
- EC5 – Wharves
- EC7 – A Sustainable Visitor Economy
- RD1 – Supporting Sustainable Development in the Countryside
- DQE8 – Renewable Energy Proposals
- CSC5 – Golf Courses
- CSC6 – Water Based Leisure
- CSC15 – Tourism and Visitor Attractions
- CSC17 – Camping and Caravan Sites
- MIN1 – Mineral Supply Requirements
- MIN5 – Energy Minerals (Oil & Gas/Hydrocarbons)
- MIN6 – Mineral Sites (specifically MIN6-15, MIN6-17 and MIN6-18)
- WAS2 – Waste Facilities
- WAS5 – Wastewater Treatment
- T6 – Freight
- T7 – Safeguarding Transport infrastructure

The most likely effects of the potential site allocations within the plan on European sites are related to pressures from new development, including recreational impacts, atmospheric pollution, water abstraction/discharge, increased water pollution and flood risk management pressures.

This Screening Assessment has determined that the North Lincolnshire Local Plan Publication Draft Addendum are not likely to have significant effects, either alone or in-combination with other plans, on the following European site:

- River Derwent SAC

The North Lincolnshire Local Plan Publication Draft, including site allocations, could potentially have significant adverse effects alone on the following sites:

- Humber Estuary SAC
- Hatfield Moor SAC
- Thorne Moor SAC

- Humber Estuary SPA
- Thorne and Hatfield Moors SPA
- Humber Estuary Ramsar

Therefore, an Appropriate Assessment is required to assess in more detail the likely nature of the effects on the integrity of these European sites.

# 7 Appropriate Assessment

## 7.1 Introduction

This section describes Tasks 2 and 3 of the HRA of the North Lincolnshire Local Plan Publication Draft Addendum, as outlined in Section 2.

Where the potential for significant effects has been identified, the nature and likely scale of effects on the integrity of the individual European sites are reported, excluding those aspects that have been screened out. Additional information and interpretation is provided to allow for a reasonable assessment of the effects, and to identify appropriate avoidance/mitigation included within the plan to ensure that adverse effects do not occur.

## 7.2 Screening Conclusion

The HRA Task 1 Screening Assessment identified that the North Lincolnshire Local Plan Publication Draft Addendum could potentially have significant adverse effects on the following sites:

- Humber Estuary SAC
- Hatfield Moor SAC
- Thorne Moor SAC
- Humber Estuary SPA
- Thorne and Hatfield Moors SPA
- Humber Estuary Ramsar

## 7.3 Assessment of Effects on Site Integrity

This section details the Appropriate Assessment of the potential effects of the North Lincolnshire Local Plan Publication Draft Addendum on the integrity of the identified European sites. In line with the Holohan v An Bord Pleanala ECJ case (C-462/17), this assessment considers typical habitats or species, within or outside of a European site boundary, if they are necessary to the conservation of the habitat types and species listed for the protected area.

### 7.3.1 The Humber Estuary SAC

The qualifying features, conservation objectives and site vulnerabilities for the Humber Estuary SAC are provided in Table 3-2.

The Screening Assessment concluded that the Humber Estuary SAC could be at risk from recreational pressures, urbanisation, atmospheric pollution, water pollution/siltation and flood and water level management. The interest feature of Grey Seal was screened out of the assessment with the known breeding colony being located over 30km away from the district boundary at Donna Nook. All other interest features are considered in this assessment.

Details for the Appropriate Assessment of the Local Plan Publication Draft Addendum, both alone and in-combination with other plans and projects on the integrity of the Humber Estuary SAC in relation to the impacts identified in the Screening Assessment are described in Table 7-1.

**Table 7-1: Test of Adverse Effects on Integrity on the Humber Estuary SAC**

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| Sandbanks which are slightly covered by sea water all the time<br>Estuaries<br>Mudflats and sandflats not covered by seawater at low tide<br>Coastal lagoons<br>*Salicornia* and other annuals colonizing mud and sand<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)<br>Embryonic shifting dunes<br>Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")<br>Fixed coastal dunes with herbaceous vegetation ("grey dunes")<br>Dunes with *Hippophae rhamnoides*<br>River Lamprey | Recreational Pressures | Development of new housing as a result of policies within the Local Plan Publication Draft Addendum, including policies SS2, SS6, SS7, H1, H6 and H7, could result in adverse impacts on the Humber Estuary SAC due to increased numbers of visitors, which could damage SAC habitats through increased trampling, litter, vandalism etc. This could also impact on Alkborough Flats, which although outside of the designated site boundary, receives the same level of protection under the NPPF, and sites outside the North Lincolnshire boundary, such as Blacktoft Sands. In particular, policy H1 allocates 37 sites, with 4,084 dwellings, for residential development within 4.42km of the estuary (see Table 6-3). Fearnley *et al.* (2012) identifies this distance as being that within which 88% of visitors to the Humber Estuary will travel and it is therefore considered that residential development within this zone could result in a significant increase in visitor pressures to the site. This residential development will facilitate population growth, which is expected to be around 2.4% over the lifetime of the plan, with the largest growth in people over 65 (35% growth is predicted) (North Lincolnshire Council, 2021). This group often have the greatest amount of leisure time, further increasing recreational pressures on the site.<br>Furthermore, a number of policies within the Local Plan promote development of the tourist and recreational sectors. For example, EC7 promotes a sustainable visitor economy through | Despite promoting residential development, policies SS2, SS7 and H6 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'. Policy CSC6 has also been strengthened within the Addendum to the Publication Draft by including a further condition which states that, in relation to water-based recreational facilities, a development will only be permitted where it as 'no adverse impact on the Humber Estuary SAC, SPA and Ramsar and the development incorporates measures to avoid and mitigate any adverse impacts, such as disturbance'.<br>Policies DQE10, DQE11 and CSC3 also aim to strengthen the contribution that open space, sport, leisure and recreation facilities make to North Lincolnshire's tourist network and enhance existing facilities. This will reduce the potential for increased recreational pressure on the Humber Estuary SAC by providing alternative facilities.<br>Furthermore, policy CSC3 states that all new residential developments of 10 dwellings or more (or on sites of 0.5ha or | **No adverse impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| *Lampetra fluviatilis* Sea Lamprey *Petromyzon marinus* | | development of high quality visitor facilities, CSC5 promotes development of golf courses, CSC6 promotes development of water-based recreation (including on the River Humber), CSC15 aims to provide new visitor attractions and CSC17 promotes development of new caravan and camping facilities, all of which could attract more visitors to North Lincolnshire increasing visitor pressure on the Humber Estuary SAC.<br>In-combination, other plans and strategies which promote recreational and tourist developments, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, the North Lincolnshire Rights of Way Improvement Plan and the England Coast Path strategy could lead to a cumulative increase in recreational pressures. | more) will need to provide high-quality open spaces, sport and recreation facilities to meet the needs of additional residents. These new open spaces and recreational facilities will provide alternative attractions in North Lincolnshire, thereby reducing visitor pressure on the SAC.<br>Under policy H1, dependent on the scale of residential development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development of each of the allocated sites will be required, and will be expected to consider changes in recreational pressures and impacts of increased visitor numbers on sensitive habitats. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. For example, the provision of open space and recreational/ leisure facilities as part of any development proposed. Policy DQE3 reinforces the need for an Appropriate Assessment for any projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon the Humber Estuary SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Urbanisation | A number of policies promote residential, employment, mineral, waste or transport | Although they promote a range of development types, polices SS2, SS7, | **No adverse impact upon** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | development within North Lincolnshire, including SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, EC5, RD1, MIN1, MIN5, MIN6 (specifically MIN6-17 and MIN6-18), WAS2, T6 and T7. However, no residential sites allocated for development under H1 are located within the boundaries of the SAC, the closest being H1C-74 at Keadby which is 300m from the site boundary; there will therefore be no direct impacts on the Humber Estuary SAC of habitat loss or physical damage from residential development arising from policies in the Local Plan.<br>However, strategic site allocation SS10 on the South Humber Bank directly abuts, the SAC boundary. Direct habitat loss or physical damage could therefore arise.<br>There are no proposed mineral extraction sites within the SAC boundary, the closest being MIN6-17 approximately 350m from the site boundary.<br>Indirect impacts of urbanisation, such as increased recreational pressure, atmospheric pollution and impacts on the water environment are considered elsewhere in this table.<br>In-combination effects could occur with other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan and the Greater Lincolnshire Strategic Economic Plan. Specifically, in the North Killingholme area impacts from the Able Logistics Park, Able Marine Energy Park and the North Killingholme Power Project could act in-combination sites allocated under the Local Plan, including SS10 South Humber Bank and SS9 North Killingholme Airfield. | SS10, H6, EC5, MIN6 and WAS2 all contain wording which provides a level of protection for designated sites and the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. The Addendum to the Publication Draft has also strengthened policy EC5 by adding a further condition that proposals for new or extended port, wharf and jetty facilities on the Rivers Humber and Trent will be permitted provided that there is no adverse impact on 'any SAC, SPA or Ramsar Sites, or proposals will only be permitted where there are imperative reasons of overriding public interest, there is no alternative and compensatory measures are provided for the loss of designated habitat in line with the Habitats Regulations'.<br>For example, SS10 specifically states that any development on the South Humber Bank shall give appropriate consideration to internationally protected nature conservation sites, and specifically for this policy, the South Humber Bank Mitigation Strategy details the habitat to be created to mitigate for the loss of functional land to be lost as part of the development within the South Humber Bank. This includes wet grassland creation, such as that at Halton Marshes which also already been constructed. This is reinforced by the HRAs for the specific projects themselves, including that for the Able Marine Energy Park (Hendeca, 2020) and the Able Logistics Park (Able UK, 2010) which detail a range of further mitigation measures | **site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | required to ensure that these developments have no adverse impact on the integrity of the Humber Estuary SAC. This includes creation of compensatory intertidal habitat creation, restrictions on the timing of works, implementation of a waterbird protection plan relating to noise and disturbance, and measures to limit light overspill, amongst others.<br>Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'.<br>Dependent on the scale, location and nature of development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon the Humber Estuary SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Atmospheric | APIS (2021) identifies that a number of | Policy T3 states that new development will | **No adverse** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | Pollution | qualifying features of the Humber Estuary SAC (i.e. estuaries, coastal lagoons, saltmarsh habitats and dune habitats) are potentially sensitive to eutrophication and/or acidification as a result of air pollution. There are a number of major roads in close proximity to the Humber Estuary SAC, which is unsurprising given the substantial size of the designated site. This includes the A18 (bounds the site at Keadby Bridge), A1077 (located on the site boundary at South Ferriby) and A15 (crosses the site via the Humber Bridge). Vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road (Ricardo-AEA, 2016), and pollutant levels can be expected to fall to near background levels at more than 200m. Therefore, atmospheric deposition related to increased use of the major roads inside and within 200m of the SAC, due to policies within the local plan which promote new housing and employment developments, could adversely impact on the integrity of the Humber Estuary SAC.<br>Policy T7 also promotes the delivery, maintenance and improvement of key routes across the area, which could also increase transport and emissions which could adversely impact upon the Humber Estuary SAC through $NO_x$ deposition. This includes some routes in close proximity to the Humber including the Lincolnshire Lakes road, Barton Link Road and access to North Killingholme Airfield.<br>However, traffic modelling studies have been undertaken where it is anticipated that the quantum of development proposed by the Local Plan will result in significant increases in traffic levels. This includes on the Brigg Link Road and the A1077 at the Holydyke/Hungate mini | be supported where it is accessible, or can be made accessible, by sustainable modes of transport, and that they should encourage and promote walking, cycling, public transport, electric and ultra-low emission vehicles, car-sharing and car clubs. In addition, Policy T1 promotes sustainable transport (e.g. walking, cycling) and Policy T2 promotes the improvement of public transport. These policies should minimise any increase in private car use associated with residential and employment site development promoted by the Local Plan.<br>The majority of new vehicles also generally emit fewer emissions than older vehicles as a result of carbon reduction technologies and an increase in demand for more fuel efficient and cost-effective means of car travel. This trend is likely to increase in the future, potentially offsetting the air pollution impacts of increased traffic on the A18, A1077 and A15, the local road network and routes developed/improved under policy T7. However, in line with Natural England's guidance note on advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (Natural England, 2018), any projects promoted under policy T7 that would increase traffic on the roads within 200m of the SAC boundary will need to consider in-combination effects of the increased road traffic, and if there is an in-combination increase of 1000 Annual Average Daily Traffic (AADT) on a road within 200m of the SAC, then an project-level appropriate assessment will be | **impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | roundabout in Barton and the Falkland Way Junction in Barton. The proposed Brigg Link Road does not fall within 200m of the Humber Estuary SAC and neither do the two sections of concern on the A1077 (both >1km away). Consequently, as the areas of concern which have been modelled are not within 200m of the designated site, it is not anticipated that traffic levels will increase significantly to cause an adverse impact.<br>Furthermore, SS8, SS9, SS10, EC1, EC5, MIN1, MIN5p, MIN6 (specifically MIN6-17 and MIN6-18) and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could also lead to additional point source emissions in the district.<br>In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, and specific developments on the South Humber Bank (i.e. Able Logistics Park, Able Marine Energy Park, the North Killingholme Power Project, Humber Gas Pipeline Replacement Project) could lead to in-combination effects related to atmospheric pollution. | required.<br>Furthermore, in relation to point sources of pollution, policy DM3 requires that development proposals demonstrate that environmental risks have been evaluated and appropriate measures have been taken to minimise risks, including to air quality. The Council will 'seek to ensure that new development proposals will not have an unacceptable negative impact on air quality and an air quality impact assessment will be required. Policy MIN6 also requires the environmental impacts, including on ecology and air quality, to be assessed before a development can be granted planning permission.<br>The measures to avoid/reduce impacts upon the Humber Estuary SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Water Pollution/ Siltation | Policies SS2p SS6p SS7, SS8, SS9, SS10, H1, H6, H6, EC1, EC5, RD1, MIN6 (specifically MIN6-17 and MIN6-18), WAS2, T6 and T7 all promote development, of a range of types, which have the potential to result in water pollution/siltation, during both construction phases and operationally. This could be through increased wastewater discharges, road run-off and surface water run-off. Pollution could then reach the Humber Estuary via surface water pathways, potentially compromising water | Despite promoting development, policies SS2, SS9, SS10, H6 and WAS2 all contain wording which provides a level of protection for the water environment. For example, SS10 requires that a site will only be developed where pollution and waste control measures are implemented and WAS2 requires waste management developments to demonstrate that there will be no harm to water quality and resources. | **No adverse impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | quality and the status of the water body under the Water Framework Directive.<br>In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, and specific developments on the South Humber Bank (i.e. Able Logistics Park, Able Marine Energy Park, the North Killingholme Power Project, Humber Gas Pipeline Replacement Project) could lead to in-combination effects related to water quality. | Furthermore, Policy DQE6 requires that developments incorporate SuDS appropriate to the nature of their site and that appropriate pollution control measures are incorporated to help protect water quality.<br>Policy DM3 requires that development proposals demonstrate that environmental risks have been evaluated and appropriate measures have been taken to minimise risks. It states that 'development will not be permitted where it would have an adverse effect on the quality or quantity of groundwater resources or watercourses and water bodies'.<br>Dependent on the scale, location and nature of development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required; this will likely include assessment of water quality impacts at both the construction and operational stages. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon the Humber Estuary SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that | |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | any planning decisions will be directly impacted upon. | |
| | Flood and Water Level Management | Development (i.e. for housing, employment sites, mineral sites, waste sites and transport infrastructure), as promoted through policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, EC5, RD1, MIN6 (specifically MIN6-17 and MIN6-18), WAS2 and T7, has the potential to increase flooding through increased surface water run-off on impermeable surfaces. The developments may also require additional flood risk management measures to protect them from flooding. If in close proximity to the Humber Estuary SAC, this could result in a direct loss/damage of habitats from the defences themselves, changes to hydrological and geomorphological process and coastal squeeze.<br>In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, and specific developments on the South Humber Bank (i.e. Able Logistics Park, Able Marine Energy Park, the North Killingholme Power Project, Humber Gas Pipeline Replacement Project) could lead to in-combination effects related to increased flooding from surface water run-off, or adverse impacts associated with flood risk management measures implemented. Furthermore, in-combination effects may arise with the Humber Flood Risk Management Strategy and the Shoreline Management Plan. | Despite promoting development, policies SS2, SS7, SS9, SS10, H6, EC5, MIN6 and WAS2 all contain wording which provide a level of protection for the water environment and include consideration of flood risk management. For example, SS9 requires the North Killingholme Airfield development to submit a Flood Risk and Drainage Assessment to assess and mitigate the risk from flooding from surface water drainage. The incorporation of SuDS is also required.<br>Specifically, policy DQE5 requires that development avoids areas of flood risk and does not increase flooding elsewhere. It also sets clear requirements that developments need to meet relating to flood risk management that will allow it to proceed. Policy DQE6 also requires that developments incorporate SuDS appropriate to the nature of their site.<br>Also, in relation to mineral extraction, policy MIN3 requires that mineral extraction developments may only proceed were workings will not increase the potential of flood risk or surface water flooding.<br>Dependent on the scale, location and nature of the development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required; this will include assessment of impacts on the water environment and flood risk. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse | **No adverse impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon the Humber Estuary SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

### 7.3.1 Hatfield Moor SAC

The qualifying features, conservation objectives and site vulnerabilities for Hatfield Moor SAC are provided in Table 3-2.

The Screening Assessment concluded that Hatfield Moor SAC could be at risk from recreational pressures, urbanisation, atmospheric pollution and flood and water level management. Details for the Appropriate Assessment of the Local Plan Publication Draft Addendum, both alone and in-combination with other plans and projects on the integrity of Hatfield Moor SAC in relation to the impacts identified in the Screening Assessment are described in Table 7-2.

**Table 7-2: Test of Adverse Effects on Integrity on Hatfield Moor SAC**

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| Degraded raised bogs still capable of natural regeneration | Recreational Pressures | Development of new housing as a result of policies within the Local Plan Publication Draft Addendum, including policies SS2, SS6, SS7, H1, H6 and H6 could result in adverse impacts on Hatfield Moor SAC due to increased numbers of visitors. This could cause physical damage to raised bog habitats such as trampling/erosion or disturbance, potentially resulting in changes in species composition and impacting upon species which are essential for the regeneration of this habitat (Pellerin *et al*., 2006).<br>However, there is only one site allocated for residential development within the impact risk zones for Hatfield Moor SSSI (which approximately equates to the SAC area); this is H1P-33 in Wroot. This site is only allocated for 13 dwellings whereas the impact risk zone it falls within identifies that only developments of over 50 dwellings would be considered a significant impact; therefore, impacts from development at H1P-33 alone in terms of increases in visitor numbers would likely be negligible.<br>However, the residential development promoted by the plan will facilitate population growth, which is expected to be around 2.4% with the largest growth in people over 65 (35% growth predicted) (North Lincolnshire Council, 2021). This is the group who have the greatest amount of leisure time, further increasing recreational pressures on the site.<br>Furthermore, a number of policies within the Local Plan promote development of the tourist and recreational sectors. For example, EC7 | Despite promoting residential development, policies SS2, SS7 and H6 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'.<br>Policies DQE10, DQE11 and CSC3 also aim to strengthen the contribution that open space, sport, leisure and recreation facilities make to North Lincolnshire's tourist network and enhance existing facilities. This will reduce the potential for increased recreational pressure on Hatfield Moor SAC by providing alternative facilities.<br>Furthermore, policy CSC3 also specifically states that all new residential developments of 10 dwellings or more (or on sites of 0.5ha or more) will need to provide high-quality open spaces, sport and recreation facilities to meet the needs of additional residents. These alternative spaces will reduce pressures on Hatfield Moor SAC.<br>Under policy H1, dependent on the scale of residential development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development of each of the sites on the qualifying features will be required, and will be expected to consider changes in recreational pressures and impacts | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | promotes a sustainable visitor economy through development of high quality visitor facilities, CSC5 promotes development of golf courses, CSC15 aims to provide new visitor attractions and CSC17 promotes development of new caravan and camping facilities, all of which could attract more visitors to North Lincolnshire increasing visitor pressure on Hatfield Moor SAC.<br>However, the closest site to Hatfield Moor SAC is H1P-33 approximately 1.7km away. Whilst this is likely within the typical distance a dog walker may travel, it is in excess of the distance that children would be expected to walk to access green space for recreational purposes (the North Lincolnshire Open Space Study stipulates that natural and semi-natural greenspace should be within 800m/10 minutes travel time of households, and for children this should be 600m; North Lincolnshire Council, 2019). Natural England has also produced an Access Management Strategy and Plan for the Humberhead Peatlands. This includes measures to mitigate the pressure of increased numbers of visitors. Specifically, the plan includes a visitor priority area on Hatfield Moor where less sensitive habitats are located and promoted to visitors, waymarked routes and remaining areas of the site are not promoted for access. The plan also proposes measures to ensure dogs are kept under control, which are enforced through signage and wardening. As visitor pressure is already being managed, any minimal increase in visitor numbers from the policies in the Local Plan are not anticipated to have an adverse impact on site integrity.<br>In-combination, other plans and strategies which promote recreational and tourist | of increased visitor numbers on sensitive habitats. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. For example, the provision of open space and recreational/leisure facilities as part of any development proposed. Policy DQE3 reinforces the need for an Appropriate Assessment for any projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Hatfield Moor SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | developments, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan and the North Lincolnshire Rights of Way Improvement Plan, could lead to a cumulative increase in recreational pressures. | | |
| | Urbanisation | A number of policies promote residential, employment, mineral, waste or transport development within North Lincolnshire, including SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, RD1, MIN1, MIN5, MIN6, WAS2, T6 and T7. However, no residential sites allocated for development under H1 are located within the boundaries of the designated site, the closest being H1P-33 at Wroot 1.7km away; there will therefore be no direct impacts of habitat loss or physical damage from residential development on the SAC.<br>There are also no sites allocated for employment within the site boundary, and none fall within the Hatfield Moor SSSI impact risk zones. The closest site is EC1-5 Sandtoft Airfield 2.2km away.<br>There are no sites allocated for mineral development within the SAC boundary, however, a proposed extension to the Cove Farm Sand and Gravel Quarry at Westwoodside under policy MIN6-15 could potentially fall within the impact risk zone for this site and result in adverse impacts.<br>Indirect impacts of urbanisation, such as increased recreational pressure, atmospheric pollution and impacts on the water environment | Although they promote a range of development types polices SS2, SS7, SS10, H6, MIN6 and WAS2 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. For example, H6 will only permit the development of sites to accommodate Gypsies, Travellers and Travelling Showpeople where there are no significant environmental impacts, and Policy MIN6 requires the environmental impacts, including on ecology, to be assessed before a development can be granted planning permission.<br>Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'.<br>Dependent on the scale, location and nature of the development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | are considered elsewhere in this table.<br>As no direct impacts from urbanisation were identified in this assessment there will be zero impact alone and therefore no in-combination assessment. For indirect impacts, the in-combination assessment is undertaken within other sections of this table. | Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Hatfield Moor SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Atmospheric Pollution | APIS (2021) identifies that lowland raised bog habitats are vulnerable to atmospheric nitrogen deposition, especially of ammonia. Although anticipated increases in population during the life of the plan will likely increase the number of vehicles using the local road and motorway network, vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road (Ricardo-AEA, 2016), and pollutant levels can be expected to fall to near background levels at more than 200m.<br>H1 does not allocate any areas for residential development within 200m of the SAC boundary and EC1 does not allocate any areas for development of employment sites within 200m. Furthermore, there are no major roads within 200m of the SAC boundary and consequently impacts from reduced air quality associated with increased in traffic from development and population increases promoted by policies in the Local Plan are anticipated to be negligible.<br>Policies SS8, SS9, SS10, EC1, MIN1, MIN5, MIN6 (specifically MIN6-15) and WAS2 could however, result in the development of employment sites, mineral developments and | In relation to point sources of pollution, policy DM3 requires that development proposals demonstrate that environmental risks have been evaluated and appropriate measures have been taken to minimise risks, including to air quality. The Council will 'seek to ensure that new development proposals will not have an unacceptable negative impact on air quality and an air quality impact assessment will be required. Policy MIN6 also requires the environmental impacts, including on ecology and air quality, to be assessed before a development can be granted planning permission.<br>The measures to avoid/reduce impacts upon Hatfield Moor SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | waste management sites that could also lead to additional point sources in the area. In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, could lead to in-combination effects related to atmospheric pollution. | | |
| | Flood and Water Level Management | Development (i.e. for housing, employment sites, mineral sites, waste sites and transport infrastructure), as promoted through policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, RD1, MIN6 (specifically MIN6-15), WAS2 and T7, has the potential to increase flooding through increased surface water run-off on impermeable surfaces. The developments may also require additional flood risk management measures to protect them from flooding. If in close proximity to Hatfield Moor SAC, or in the catchment within which this site sits, it could result in a direct loss/damage of habitats from the defences themselves or changes to hydrogeological process and drainage patterns.<br>In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan and Local Transport Plan 2011-16, could lead to in-combination effects related to increased flooding from surface water run-off, or adverse impacts associated with flood risk management measures implemented. Furthermore, in-combination effects may arise with the Humber Flood Risk Management Strategy. | Despite promoting development, policies SS2, SS7, SS9, SS10, H6, MIN6 and WAS2 all contain wording which provide a level of protection for the water environment and include consideration of flood risk management. For example, MIN6 requires mineral extraction proposals to be supported by a range of assessments that address potential environmental impacts, including flood risk.<br>Specifically, policy DQE5 requires that development avoids areas of flood risk and does not increase flooding elsewhere. It also sets clear requirements that developments need to meet relating to flood risk management that will allow it to proceed. Policy DQE6 also requires that developments incorporate SuDS appropriate to the nature of their site.<br>Also, in relation to mineral extraction, policy MIN3 requires that mineral extraction developments may only proceed where workings will not increase the potential of flood risk or surface water flooding.<br>Dependent on the scale, location and nature of the development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required; this will include assessment of impacts on the | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | water environment and flood risk. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Hatfield Moor SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

### 7.3.1 Thorne Moor SAC

The qualifying features, conservation objectives and site vulnerabilities for Thorne Moor SAC are provided in Table 3-2.

The Screening Assessment concluded that Thorne Moor SAC could be at risk from recreational pressures, urbanisation, atmospheric pollution and flood and water level management.

Details for the Appropriate Assessment of the Local Plan Publication Draft Addendum, both alone and in-combination with other plans and projects on the integrity of Thorne Moor SAC in relation to the impacts identified in the Screening Assessment are described in Table 7-3.

**Table 7-3: Test of Adverse Effects on Integrity on Thorne Moor SAC**

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| Degraded raised bogs still capable of natural regeneration | Recreational Pressures | Development of new housing as a result of policies within the Local Plan Publication Draft Addendum, including policies SS2, SS6, SS7, H1, H6 and H6 could result in adverse impacts on Thorne Moor SAC due to increased numbers of visitors. This could cause physical damage to raised bog habitats such as trampling/erosion or disturbance, potentially resulting in changes in species composition and impacting upon species which are essential for the regeneration of this habitat (Pellerin *et al*., 2006).<br>There are 5 sites allocated for residential development within the impact risk zones for Thorne, Crowle and Goole Moors SSSI (which approximately equates to the SAC area). These are H1C-43, H1C44, H1P-22, H1P-23 and H1P-24 in Crowle which allocate sites for 8, 9, 75, 57 and 20 dwellings respectively. These sites fall within the impact risk zone which identifies that developments of 50+ residential dwellings could have a significant impact, so adverse impacts from these allocations in terms of recreational pressures could arise.<br>The residential development promoted by the plan will facilitate population growth, which is expected to be around 2.4% with the largest growth in people over 65 (35% growth predicted) (North Lincolnshire Council, 2021). This is the group who have the greatest amount of leisure time, further increasing recreational pressures on the site.<br>Furthermore, a number of policies within the Local Plan promote development of the tourist and recreational sectors. For example, EC7 | Despite promoting residential development, policies SS2, SS7 and H6 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'.<br>Policies DQE10, DQE11 and CSC3 also aim to strengthen the contribution that open space, sport, leisure and recreation facilities make to North Lincolnshire's tourist network and enhance existing facilities. This will reduce the potential for increased recreational pressure on Thorne Moor SAC by providing alternative facilities.<br>Furthermore, policy CSC3 also specifically states that all new residential developments of 10 dwellings or more (or on sites of 0.5ha or more) will need to provide high-quality open spaces, sport and recreation facilities to meet the needs of additional residents. These alternative spaces will reduce pressures on Thorne Moor SAC.<br>Under policy H1, dependent on the scale of residential development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development of each of the sites on the qualifying features will be required, and will be expected to consider changes in recreational pressures and | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | promotes a sustainable visitor economy through development of high quality visitor facilities, CSC5 promotes development of golf courses, CSC15 aims to provide new visitor attractions and CSC17 promotes development of new caravan and camping facilities, all of which could attract more visitors to North Lincolnshire increasing visitor pressure on Thorne Moor SAC.<br>However, the closest site to Thorne Moor SAC is H1C-44, approximately 1.4km away, with H1C-43 1.6km away and all other allocations in Crowle over 2km away. Whilst these distances are likely within the typical distance a dog walker may travel, it is in excess of the distance that children would be expected to walk to access green space for recreational purposes (the North Lincolnshire Open Space Study stipulates that natural and semi-natural greenspace should be within 800m/10 minutes travel time of households, and for children this should be 600m; North Lincolnshire Council, 2019). Parking at the eastern side of Thorne Moor is also relatively limited which will discourage visitors. Natural England has also produced an Access Management Strategy and Plan for the Humberhead Peatlands. This includes measures to mitigate the pressure of increased numbers of visitors. Specifically, the plan includes waymarked routes on Thorne Moors and remaining areas of the site are not promoted for access. The plan also proposes measures to ensure dogs are kept under control, which are enforced through signage and wardening. As visitor pressure is already being managed, any minimal increase in visitor numbers from the policies in the Local Plan are not anticipated to have an adverse impact on site integrity.<br>In-combination, other plans and strategies which | impacts of increased visitor numbers on sensitive habitats. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. For example, the provision of open space and recreational/leisure facilities as part of any development proposed. Policy DQE3 reinforces the need for an Appropriate Assessment for any projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Thorne Moor SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | promote recreational and tourist developments, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan and the North Lincolnshire Rights of Way Improvement Plan, could lead to a cumulative increase in recreational pressures. | | |
| | Urbanisation | A number of policies promote residential, employment, mineral, waste or transport development within North Lincolnshire, including SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, RD1, MIN1, MIN5, MIN6, WAS2, T6 and T7. However, no residential sites allocated for development under H1p are located within the boundaries of the designated site, the closest being H1C-44 in Crowle 1,4km away; there will therefore be no direct impacts of habitat loss or physical damage from residential development on the SAC.<br>There are also no sites allocated for employment within the site boundary, and none fall within the Thorne, Crowle and Goole Moors SSSI impact risk zones. The closest site is EC1-9 Ealand 3.8km away.<br>Indirect impacts of urbanisation, such as increased recreational pressure, atmospheric pollution and impacts on the water environment are considered elsewhere in this table.<br>As no direct impacts from urbanisation were identified in this assessment there will be zero impact alone and therefore no in-combination assessment. For indirect impacts, the in-combination assessment is undertaken within other sections of this table. | Although they promote a range of development types polices SS2, SS7, SS10, H6 and WAS2 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. For example, H6 will only permit the development of sites to accommodate Gypsies, Travellers and Travelling Showpeople where there are no significant environmental impacts.<br>Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'.<br>Dependent on the scale, location and nature of the development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Thorne Moor SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Atmospheric Pollution | APIS (2021) identifies that lowland raised bog habitats are vulnerable to atmospheric nitrogen deposition, especially of ammonia. Although anticipated increases in population during the life of the plan will likely increase the number of vehicles using the local road and motorway network, vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road (Ricardo-AEA, 2016), and pollutant levels can be expected to fall to near background levels at more than 200m.<br>H1 does not allocate any areas for residential development within 200m of the SAC boundary and EC1 does not allocate any areas for development of employment sites within 200m. Furthermore, there are no major roads within 200m of the SAC boundary and consequently impacts from reduced air quality associated with increased in traffic from development and population increases promoted by policies in the Local Plan are anticipated to be negligible.<br>Policies SS8, SS9, SS10, EC1, MIN1, MIN5, MIN6 and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could lead to additional point sources in the area.In-combination, other plans and strategies which | In relation to point sources of pollution, policy DM3 requires that development proposals demonstrate that environmental risks have been evaluated and appropriate measures have been taken to minimise risks, including to air quality. The Council will 'seek to ensure that new development proposals will not have an unacceptable negative impact on air quality and an air quality impact assessment will be required.<br>The measures to avoid/reduce impacts upon Hatfield Moor SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, could lead to in-combination effects related to atmospheric pollution. | | |
| | Flood and Water Level Management | Development (i.e. for housing, employment sites, mineral sites, waste sites and transport infrastructure), as promoted through policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, RD1, MIN6, WAS2 and T7, has the potential to increase flooding through increased surface water run-off on impermeable surfaces. The developments may also require additional flood risk management measures to protect them from flooding. If in close proximity to Thorne Moor SAC, or in the catchment within which this site sits, it could result in a direct loss/damage of habitats from the defences themselves or changes to hydrogeological process and drainage patterns.<br>In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan and Local Transport Plan 2011-16, could lead to in-combination effects related to increased flooding from surface water run-off, or adverse impacts associated with flood risk management measures implemented. Furthermore, in-combination effects may arise with the Humber Flood Risk Management Strategy. | Despite promoting development, policies SS2, SS7, SS9, SS10, H6, MIN6 and WAS2 all contain wording which provide a level of protection for the water environment and include consideration of flood risk management. For example, MIN6 requires mineral extraction proposals to be supported by a range of assessments that address potential environmental impacts, including flood risk.<br>Specifically, policy DQE5 requires that development avoids areas of flood risk and does not increase flooding elsewhere. It also sets clear requirements that developments need to meet relating to flood risk management that will allow it to proceed. Policy DQE6 also requires that developments incorporate SuDS appropriate to the nature of their site. Policy DQE6 also requires that developments incorporate SuDS appropriate to the nature of their site.<br>Also, in relation to mineral extraction, policy MIN3 requires that mineral extraction developments may only proceed were workings will not increase the potential of flood risk or surface water flooding.<br>Dependent on the scale, location and nature of the development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required; this will include assessment of impacts on the water environment and flood risk. Where | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Thorne Moor SAC can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

### 7.3.1 The Humber Estuary SPA

The qualifying features, conservation objectives and site vulnerabilities for the Humber Estuary SPA are provided in Table 3-2.

The Screening Assessment concluded that the Humber Estuary SPA could be at risk from recreational pressures, urbanisation, atmospheric pollution, water pollution/siltation and flood and water level management.

Details for the Appropriate Assessment of the Local Plan Publication Draft Addendum, both alone and in-combination with other plans and projects on the integrity of the Humber Estuary SPA in relation to the impacts identified in the Screening Assessment are described in Table 7-4.

**Table 7-4: Test of Adverse Effects on Integrity on the Humber Estuary SPA**

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| Article 4.1 – site is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season:<br>Avocet *Recurvirostra avosetta* (breeding and wintering)<br>Bittern *Botaurus stellaris* (breeding and wintering)<br>Hen Harrier *Circus cyaneus* (wintering)<br>Golden Plover *Pluvialis apicaria* (wintering)<br>Bar-tailed Godwit *Limosa lapponica* (wintering)<br>Ruff *Philomachus pugnax* (passage)<br>Marsh Harrier *Circus aeruginosus* (breeding)<br>Little Tern *Sterna albifrons* (breeding)<br><br>Article 4.2 – site is used regularly by | Recreational Pressures | Development of new housing as a result of policies within the Local Plan Publication Draft Addendum, including policies SS2, SS6, SS7, H1, H6 and H6, could result in adverse impacts on the Humber Estuary SPA due to increased numbers of visitors, which could result in increased disturbance of the bird populations using the estuary (i.e. noise and visual disturbance causing flight responses). Damage to habitats supporting the important bird populations could also occur from trampling, litter, vandalism etc. This could also impact on Alkborough Flats, which although outside of the designated site boundary, receives the same level of protection under the NPPF, and sites outside the North Lincolnshire boundary, such as Blacktoft Sands. In particular, policy H1 allocates 37 sites, with 4,084 dwellings, for residential development within 4.42km of the estuary (see Table 6-3). Fearnley *et al.* (2012) identifies this distance as being that within which 88% of visitors to the Humber Estuary will travel and it is therefore considered that residential development within this zone could result in a significant increase in visitor pressures to the site. This residential development will facilitate population growth, which is expected to be around 2.4% over the lifetime of the plan with the largest growth in people over 65 (35% growth is predicted) (North Lincolnshire Council, 2021). This group often have the greatest amount of leisure time, further increasing recreational pressures on the site. | Despite promoting residential development, policies SS2, SS7 and H6 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'. The Addendum to the Publication Draft strengthened this policy further by also including functionally land, so that 'proposals which may affect an SPA, SAC or Ramsar site, or functionally linked land supporting these sites, will be assessed according to their implications for the site's conservation objectives'. Policy CSC6 has also been strengthened within the Addendum to the Public Draft by including a further condition which states that, in relation to water-based recreational facilities, a development will only be permitted where it as 'no adverse impact on the Humber Estuary SAC, SPA and Ramsar and the development incorporates measures to avoid and mitigate any adverse impacts, such as disturbance'.<br>Policies DQE10, DQE11 and CSC3 also aim to strengthen the contribution that open space, sport, leisure and recreation | **No adverse impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed in Annex I) in any season:<br>Shelduck *Tadorna tadorna* (wintering)<br>Knot *Calidris canutus* (wintering and passage)<br>Dunlin *Calidris alpina* (wintering)<br>Black-tailed Godwit *Limosa limosa* (wintering and passage)<br>Redshank *Tringa totanus* (wintering and passage)<br><br>Article 4.2 – site is used regularly by over 20,000 waterbirds | | Furthermore, a number of policies within the Local Plan promote development of the tourist and recreational sectors. For example, EC7 promotes a sustainable visitor economy through development of high quality visitor facilities, CSC5 promotes development of golf courses, CSC6 promotes development of water-based recreation (including on the River Humber), CSC15 aims to provide new visitor attractions and CSC17 promotes development of new caravan and camping facilities, all of which could attract more visitors to North Lincolnshire increasing visitor pressure on the Humber Estuary SPA.<br>In-combination, other plans and strategies which promote recreational and tourist developments, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, the North Lincolnshire Rights of Way Improvement Plan and the England Coast Path strategy could lead to a cumulative increase in recreational pressures. | facilities make to North Lincolnshire's tourist network and enhance existing facilities. This will reduce the potential for increased recreational pressure on the Humber Estuary SPA by providing alternative facilities. Furthermore, the Addendum report to the Publication Draft further strengthened policy DQE10 by including the additional condition that open space will be safeguarded from development unless it can be demonstrated that 'the open space is not necessary for reducing recreational disturbance impacts on the Humber Estuary, or any loss of such open space will require to be compensated for'.<br>Furthermore, policy CSC3 states that all new residential developments of 10 dwellings or more (or on sites of 0.5ha or more) will need to provide high-quality open spaces, sport and recreation facilities to meet the needs of additional residents. These new open spaces and recreational facilities will provide alternative attractions in North Lincolnshire, thereby reducing visitor pressure on the SPA.<br>Under policy H1, dependent on the scale of residential development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development of each of the allocated sites will be required, and will be expected to consider changes in recreational pressures and impacts of increased visitor numbers on sensitive habitats. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no | |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | adverse effects on the integrity of the site. For example, the provision of open space and recreational/leisure facilities as part of any development proposed. Policy DQE3 reinforces the need for an Appropriate Assessment for any projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon the Humber Estuary SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Urbanisation | A number of policies promote residential, employment, renewable energy, mineral, waste or transport development within North Lincolnshire, including SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1 (specifically EC1-3 and EC1-4), EC5, DQE8, RD1, MIN1, MIN5, MIN6 (specifically MIN6-17 and MIN6-18), WAS2, T6 and T7. However, no residential sites allocated for development under H1 are located within the boundaries of the SPA, the closest being H1P-12 and H1P-13 at Barton-upon-Humber which are 395m and 1.1km from the site boundary respectively; there will therefore be no direct impacts on the Humber Estuary SPA from loss or physical damage of habitats which support the notable bird populations arising from policies in the Local Plan. However, the East Halton renewable energy opportunity as detailed under policy DQE8 area does | Although they promote a range of development types polices SS2, SS7, SS10, H6, EC5, MIN6, DQE8 and WAS2 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. For example, policy SS7 relating to the Lincolnshire Lakes has now been strengthened from that included at the Preferred Options stage so that the wording now commits to the protection of existing features, and inclusion of new areas of woodland, acid grassland, neutral grassland, ditches, swales, wetland and ponds within the development, integrated with strategic green linkages. This will help mitigate the | **No adverse impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | partially overlap with SPA boundary and therefore any renewable energy development in this area could result in a direct impact on the designated site.<br>Furthermore, bird populations for which the SPA is designated do not just inhabit the SPA itself, they frequently use functionally linked land outside of the SPA, particularly at high tide, for roosting, feeding and loafing, and development in these areas could therefore have a significant adverse impact, particularly where developments are large and impact agricultural land, such as under policy SS7 relating to the Lincolnshire Lakes development. Other site allocations which could impact on functionally linked land include SS9, SS10, SSH1p and SSH2p, EC1-2, EC1-5, EC1-6, EC1-9, T6, MIN6-15, MIN6-16, MIN6-17 and MIN6-18.<br>Strategic site allocation SS10 on the South Humber Bank directly abuts the SPA boundary. Direct habitat loss or physical damage could therefore arise, along with disturbance of bird populations during both construction and operational phases. Impacts of employment development on functionally linked land could also have a significant adverse impact.<br>Employment site allocations EC1-3 and EC1-4 around Humberside Airport, whilst over 12km from the Humber Estuary SPA, could result in expansion of the airport. The Humber Estuary and its functionally linked habitats are located within the 13km bird strike safeguarding zone around the airport and therefore any development of the airport associated with these two policies could result in an increased risk of strike to bird populations for which the site is designated.<br>There are no proposed mineral extraction sites | loss of some of the functionally linked land within this area. The Addendum to the Publication Draft has also strengthened policy EC5 by adding a further condition that proposals for new or extended port, wharf and jetty facilities on the Rivers Humber and Trent will be permitted provided that there is no adverse impact on 'any SAC, SPA or Ramsar Sites, or proposals will only be permitted where there are imperative reasons of overriding public interest, there is no alternative and compensatory measures are provided for the loss of designated habitat in line with the Habitats Regulations'.<br>Additionally, policy SS10 also specifically states that any development on the South Humber Bank shall give appropriate consideration to internationally protected nature conservation sites, and specifically for this policy, the South Humber Bank Mitigation Strategy details the habitat to be created to mitigate for the loss of functional land to be lost as part of the development within the South Humber Bank. This includes wet grassland creation, such as that at Halton Marshes which also already been constructed. This is reinforced by the HRAs for the specific projects themselves, including that for the Able Marine Energy Park (Hendeca, 2020) and the Able Logistics Park (Able UK, 2010) which detail a range of further mitigation measures required to ensure that these developments have no adverse impact on the integrity of the Humber Estuary SPA. This includes creation of | |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | within the SPA boundary, the closest being MIN6-17 approximately 350m from the site boundary. This could therefore result in direct impacts on functionally linked land, although the proposed quarry extension under MIN6-17 is very small (2.03 ha only).<br>Specifically, the development of renewable energy resources under policy DQE8, particularly wind power, in close proximity to the SPA such as in the East Halton renewable energy opportunity area on the South Humber Bank, could have a significant adverse impact on bird populations through collision, diversion of migratory flyways and impacts on feeding routes, which could have a significant impact on the SPA.<br>Indirect impacts of urbanisation, such as increased recreational pressure, atmospheric pollution and impacts on the water environment are considered elsewhere in this table.<br>In-combination effects could occur with other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan and the Greater Lincolnshire Strategic Economic Plan. Specifically, in the North Killingholme area impacts from the Able Logistics Park, Able Marine Energy Park and the North Killingholme Power Project could act in-combination sites allocated under the Local Plan, including SS10 South Humber Bank and SS9 North Killingholme Airfield. | compensatory intertidal habitat creation, restrictions on the timing of works, implementation of a waterbird protection plan relating to noise and disturbance, and measures to limit light overspill, amongst others. Policy H1P-13 in close proximity to the Humber Estuary also specifically states 'Bird surveys are likely to be required in order to determine whether there would be a Likely Significant Effect on the Humber Estuary SPA or Ramsar site'.<br>Also, DQE8 also states that proposals for renewable energy must consider impacts on nature conservation features and makes specific reference to the requirements of policy DQE3. The supporting text also highlights that fore renewable energy developments particular consideration to the potential to disturb or displace SPA birds caused by the loss of suitable feeding, roosting and loafing sites.<br>Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'.<br>Dependent on the scale, location and nature of development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for | |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon the Humber Estuary SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Atmospheric Pollution | APIS (2021) identifies that a number of the habitats associated with the bird species for which the site qualifies as a SPA are potentially sensitive to eutrophication and/or acidification as a result of air pollution. This could potentially impact on community structure and then food sources for the bird populations. There are a number of major roads in close proximity to the Humber Estuary SPA, which is unsurprising given the substantial size of the designated site. This includes the A18 (bounds the site at Keadby Bridge), A1077 (located on the site boundary at South Ferriby) and A15 (crosses the site via the Humber Bridge). Vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road (Ricardo-AEA, 2016), and pollutant levels can be expected to fall to near background levels at more than 200m. Therefore, atmospheric deposition related to increased use of the major roads inside and within 200m of the SPA, due to policies within the local plan which promote new housing and employment developments, could adversely impact on the integrity of the Humber | Policy T3 states that new development will be supported where it is accessible, or can be made accessible, by sustainable modes of transport, and that they should encourage and promote walking, cycling, public transport, electric and ultra-low emission vehicles, car-sharing and car clubs. In addition, Policy T1 promotes sustainable transport (e.g. walking, cycling) and Policy T2 promotes the improvement of public transport. These policies should minimise any increase in private car use associated with residential and employment site development promoted by the Local Plan.<br>The majority of new vehicles also generally emit fewer emissions than older vehicles as a result of carbon reduction technologies and an increase in demand for more fuel efficient and cost-effective means of car travel. This trend is likely to increase in the future, potentially offsetting the air pollution impacts of increased traffic on the A18, A1077 and | **No adverse impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | Estuary SPA.<br>Policy T7 also promotes the delivery, maintenance and improvement of key routes across the area, which could also increase transport and emissions which could adversely impact upon the Humber Estuary SPA through $NO_x$ deposition. This includes some routes in close proximity to the Humber including the Lincolnshire Lakes road, Barton Link Road and access to North Killingholme Airfield.<br>However, traffic modelling studies have been undertaken where it is anticipated that the quantum of development proposed by the Local Plan will result in significant increases in traffic levels. This includes on the Brigg Link Road and the A1077 at the Holydyke/Hungate mini roundabout in Barton and the Falkland Way Junction in Barton. These locations are a considerable distance from the Humber Estuary SPA and consequently, as the areas of concern which have been modelled are not within 200m of the designated site, it is not anticipated that traffic levels will increase significantly to cause an adverse impact on the habitats that support the SPA bird species.<br>Furthermore, SS8, SS9, SS10, EC1, EC5, MIN1, MIN5, MIN6 (specifically MIN6-17 and MIN6-18) and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could also lead to additional point sources in the district. In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, and specific developments on the South Humber Bank (i.e. Able Logistics Park, Able Marine Energy Park, | A15, the local road network and routes developed/improved under policy T7. However, in line with Natural England's guidance note on advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (Natural England, 2018), any projects promoted under policy T7 that would increase traffic on the roads within 200m of the SAC boundary will need to consider in-combination effects of the increased road traffic, and if there is an in-combination increased of 1000AADT on a road within 200m of the SAC, then an project-level appropriate assessment will be required.<br>Furthermore, in relation to point sources of pollution, policy DM3 requires that development proposals demonstrate that environmental risks have been evaluated and appropriate measures have been taken to minimise risks, including to air quality. The Council will 'seek to ensure that new development proposals will not have an unacceptable negative impact on air quality and an air quality impact assessment will be required. Policy MIN6 also requires the environmental impacts, including on ecology and air quality, to be assessed before a development can be granted planning permission.<br>The measures to avoid/reduce impacts upon the Humber Estuary SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | the North Killingholme Power Project, Humber Gas Pipeline Replacement Project) could lead to in-combination effects related to atmospheric pollution. | | |
| | Water Pollution/ Siltation | Policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, EC5, RD1, MIN6 (specifically MIN6-17 and MIN6-18), WAS2 and T7 all promote development, of a range of types, which have the potential to result in water pollution/siltation, during both construction phases and operationally. This could be through increased wastewater discharges, road run-off and surface water run-off. This could then reach the Humber Estuary via surface water pathways potentially compromising water quality and impacting upon food supplies of the bird populations using the estuary, or the habitats that support them.<br>In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, and specific developments on the South Humber Bank (i.e. Able Logistics Park, Able Marine Energy Park, the North Killingholme Power Project, Humber Gas Pipeline Replacement Project) could lead to in-combination effects related to water quality. | Despite promoting development, policies SS2, SS9, SS10, H6 and WAS2 all contain wording which provides a level of protection for the water environment. For example, SS10 requires that a site will only be developed where pollution and waste control measures are implemented and WAS2 requires waste management developments to demonstrate that there will be no harm to water quality and resources.<br>Furthermore, Policy DQE6 requires that developments incorporate SuDS appropriate to the nature of their site and that appropriate pollution control measures are incorporated to help protect water quality.<br>Policy DM3 requires that development proposals demonstrate that environmental risks have been evaluated and appropriate measures have been taken to minimise risks. It states that 'development will not be permitted where it would have an adverse effect on the quality or quantity of groundwater resources or watercourses and water bodies'.<br>Dependent on the scale, location and nature of development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required; this will likely include assessment of water quality impacts at both the construction and | **No adverse impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | | operational stages. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon the Humber Estuary SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Flood and Water Level Management | Development (i.e. for housing, employment sites, mineral sites, waste sites and transport infrastructure), as promoted through policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, EC5, RD1, MIN6 (specifically MIN6-17 and MIN6-18), WAS2 and T7, has the potential to increase flooding through increased surface water run-off on impermeable surfaces. The developments may also require additional flood risk management measures to protect them from flooding. If in close proximity to the Humber Estuary SPA, this could result in a direct loss/damage of habitats from the defences themselves, changes to hydrological and geomorphological process and coastal squeeze. This could all impact upon the food sources and habitats that support the bird species for which the site is designated an SPA. Furthermore, any construction of flood defences | Despite promoting development, policies SS2, SS7, SS9, SS10, H6, MIN6 and WAS2 all contain wording which provide a level of protection for the water environment and include consideration of flood risk management. For example, SS9 requires the North Killingholme Airfield development to submit a Flood Risk and Drainage Assessment to assess and mitigate the risk from flooding from surface water drainage. The incorporation of SuDS is also required.<br>Specifically, policy DQE5 requires that development avoids areas of flood risk and does not increase flooding elsewhere. It also sets clear requirements that developments need to need to meet relating to flood risk management that will allow it to proceed. Policy DQE6 also | **No adverse impact upon site integrity** |

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | could result in disturbance to bird populations.<br>In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, and specific developments on the South Humber Bank (i.e. Able Logistics Park, Able Marine Energy Park, the North Killingholme Power Project, Humber Gas Pipeline Replacement Project) could lead to in-combination effects related to increased flooding from surface water run-off, or adverse impacts associated with flood risk management measures implemented. Furthermore, in-combination effects may arise with the Humber Flood Risk Management Strategy and the Shoreline Management Plan. | requires that developments incorporate SuDS appropriate to the nature of their site. Policy DQE6 also requires that developments incorporate SuDS appropriate to the nature of their site.<br>Also, in relation to mineral extraction, policy MIN3 requires that mineral extraction developments may only proceed where workings will not increase the potential of flood risk or surface water flooding.<br>Dependent on the scale, location and nature of the development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required; this will include assessment of impacts on the water environment and flood risk. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon the Humber Estuary SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

### 7.3.1 Thorne and Hatfield Moors SPA

The qualifying features, conservation objectives and site vulnerabilities for Thorne and Hatfield Moors SPA are provided in Table 3-2.

The Screening Assessment concluded that Thorne and Hatfield Moors SPA could be at risk from recreational pressures, urbanisation, atmospheric pollution and flood and water level management.

Details for the Appropriate Assessment of the Local Plan Publication Draft Addendum, both alone and in-combination with other plans and projects on the integrity of Thorne and Hatfield Moors SPA in relation to the impacts identified in the Screening Assessment are described in Table 7-5.

**Table 7-5: Test of Adverse Effects on Integrity on Thorne and Hatfield Moors SPA**

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| Article 4.1 – site supports a breeding population of Nightjar which is of European importance<br><br>Natural England also consider that the Common Crane population meets the requirements for SPA designation | Recreational Pressures | Development of new housing as a result of policies within the Local Plan, including policies SS2, SS6, SS7, H1, H6 and H6 could result in adverse impacts on Thorne and Hatfield Moors SPA due to increased numbers of visitors. This could result in disturbance to the Nightjar population for which the site is designated, and also Common Crane.<br>In relation to Hatfield Moor there is only site allocated for residential development within the impact risk zones for Hatfield Moor SSSI (which approximately equates to this component of the SPA); this is H1P-33 in Wroot. However, this site is only allocated for 13 dwellings whereas the impact risk zone it falls within identifies that only developments of over 50 dwellings would be considered a significant impact; therefore, impacts from development at H1P-33 alone in terms of increases in visitor numbers would likely be negligible.<br>In relation to Thorne Moor, there are 5 sites allocated for residential development within the impact risk zones for Thorne, Crowle and Goole Moors SSSI (which approximately equates to this component of the SPA). These are H1C-43, H1C44, H1P-22, H1P-23 and H1P-24 in Crowle which allocate sites for 8, 9, 75, 57 and 20 dwellings respectively. These sites fall within the impact risk zone which identifies that developments of 50+ residential dwellings could have a significant impact, so adverse impacts from these allocations in terms of recreational pressures could arise.<br>The residential development promoted by the plan will facilitate population growth, which is expected to be around 2.4% with the largest growth in people | Despite promoting residential development, policies SS2, SS7 and H6 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'. The Addendum to the Publication Draft strengthened this policy further by also including functionally land, so that 'proposals which may affect an SPA, SAC or Ramsar site, or functionally linked land supporting these sites, will be assessed according to their implications for the site's conservation objectives'.<br>Policies DQE10, DQE11 and CSC3 also aim to strengthen the contribution that open space, sport, leisure and recreation facilities make to North Lincolnshire's tourist network and enhance existing facilities. This will reduce the potential for increased recreational pressure on Thorne and Hatfield Moors SPA by providing alternative facilities.<br>Furthermore, policy CSC3 also specifically states that all new residential developments of 10 dwellings or more (or on sites of 0.5ha or more) will need to provide high-quality open spaces, sport and recreation facilities to meet the needs of additional residents. These alternative spaces should reduce | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | over 65 (35% growth predicted) (North Lincolnshire Council, 2021). This is the group who have the greatest amount of leisure time, further increasing recreational pressures on the site.<br>Furthermore, a number of policies within the Local Plan promote development of the tourist and recreational sectors. For example, EC7 promotes a sustainable visitor economy through development of high quality visitor facilities, CSC5 promotes development of golf courses, CSC15 aims to provide new visitor attractions and CSC17 promotes development of new caravan and camping facilities, all of which could attract more visitors to North Lincolnshire increasing visitor pressure on Thorne and Hatfield Moors SPA.<br>However, the closest site to Hatfield Moor is H1P-33 approximately 1.7km away, and the closest to Thorne Moor is H1C-44, approximately 1.4km away, with H1C-43 1.6km away and all other allocations in Crowle over 2km away. Whilst this is likely within the typical distance a dog walker may travel, it is in excess of the distance that children would be expected to walk to access green space for recreational purposes (the North Lincolnshire Open Space Study stipulates that natural and semi-natural greenspace should be within 800m/10 minutes travel time of households, and for children this should be 600m; North Lincolnshire Council, 2019). Natural England has also produced an Access Management Strategy and Plan for the Humberhead Peatlands. This includes measures to mitigate the pressure of increased numbers of visitors. Specifically, the plan includes a visitor priority area on Hatfield Moor where less sensitive habitats are located and promoted to visitors, waymarked routes on both Thorne and Hatfield Moors and remaining areas of the site are not promoted for access. The plan also proposes measures to ensure dogs are | pressures on Thorne and Hatfield Moors SPA.<br>Under policy H1, dependent on the scale of residential development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development of each of the sites on the qualifying features will be required, and will be expected to consider changes in recreational pressures and impacts of increased visitor numbers on sensitive habitats. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. For example, the provision of open space and recreational/leisure facilities as part of any development proposed. Policy DQE3 reinforces the need for an Appropriate Assessment for any projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Thorne and Hatfield Moors SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | kept under control, which are enforced through signage and wardening. As visitor pressure is already being managed, any minimal increase in visitor numbers from the policies in the Local Plan are not anticipated to have an adverse impact on site integrity.<br>In-combination, other plans and strategies which promote recreational and tourist developments, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan and the North Lincolnshire Rights of Way Improvement Plan, could lead to a cumulative increase in recreational pressures. | | |
| | Urbanisation | A number of policies promote residential, employment, mineral, waste or transport development within North Lincolnshire, including SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, RD1, MIN1, MIN5, MIN6 (specifically MIN6-15), WAS2, T6 and T7. However, no residential sites allocated for development under H1 are located within the boundaries of the designated site, the closest to Hatfield Moor being H1P-42 at Wroot 1.7km away and the closest to Thorne Moor being H1C-44 in Crowle 1.4km away; there will therefore be no direct impacts of habitat loss or physical damage from residential development on the SPA. However, the nightjar population for which the SPA is designated, and also Common Crane, do not just inhabit the SPA itself they frequently use functionally linked land outside of the SPA for feeding, roosting and loafing, and development in these areas could therefore have a significant adverse impact. Other site allocations which could impact on functionally linked land include H1P-23 and MIN6-15.<br>There are no sites allocated for employment within the site boundary, and none fall within the Hatfield Moor SSSI or Thorne Moor SSSI impact risk zones. The closest site to Hatfield Moor is EC1-5 Sandtoft | Although they promote a range of development types polices SS2, SS7, SS10, H6, DQE8 and WAS2 all contain wording which provides a level of protection for the natural environment by stating that developments will have to consider the specific impact on biodiversity before they can proceed. For example, H6 will only permit the development of sites to accommodate Gypsies, Travellers and Travelling Showpeople where there are no significant environmental impacts. Also, DQE8 also states that proposals for renewable energy must consider impacts on nature conservation features, and Policy MIN6 requires the environmental impacts, including on ecology, to be assessed before a development can be granted planning permission.<br>Furthermore, policy DQE3 specifically states that all schemes shall 'protect, manage and enhance the network of habitats, species and sites of international, national and local importance'.<br>Dependent on the scale, location and nature | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | Airfield 2.2km away and the closest site to Thorne Moor is EC1-9 Ealand, 3.8km away. Impacts of employment development on functionally linked land could also have a significant adverse impact.<br>There are no sites allocated for mineral development within the SPA boundary, however, a proposed extension to the Cove Farm Sand and Gravel Quarry at Westwoodside under policy MIN6-15 could potentially fall within the impact risk zone for the Hatfield Moor part of the site and result in adverse impacts on functionally linked land.<br>Specifically, the development of renewable energy resources under policy DQE8, particularly wind power, in close proximity to the SPA, could have a significant adverse impact on bird populations through collision, diversion of migratory flyways and impacts on feeding routes, which could have a significant impact on the SPA.<br>Indirect impacts of urbanisation, such as increased recreational pressure, atmospheric pollution and impacts on the water environment are considered elsewhere in this table.<br>As no direct impacts from urbanisation were identified in this assessment there will be zero impact alone and therefore no in-combination assessment. For indirect impacts, the in-combination assessment is undertaken within other sections of this table. | of the development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Thorne and Hatfield Moor SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Atmospheric Pollution | APIS (2021) identifies that habitats that support Nightjar, including dwarf shrub heath and coniferous woodland are vulnerable to eutrophication and acidification associated with atmospheric pollution. This can result in changes to community composition, altered soil function, toxicity to plants and declines in bryophyte and lichen populations and tree health. Although anticipated increases in population during the life of the plan will likely | In relation to point sources of pollution, policy DM3 requires that development proposals demonstrate that environmental risks have been evaluated and appropriate measures have been taken to minimise risks, including to air quality. The Council will 'seek to ensure that new development proposals will not have an unacceptable negative impact on air quality and an air quality | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | increase the number of vehicles using the local road and motorway network, vehicle emissions, particularly of $NO_x$ and $NO_2$, are greatest within the first 50-100m from the road (Ricardo-AEA, 2016), and pollutant levels can be expected to fall to near background levels at more than 200m. H1 does not allocate any areas for residential development within 200m of the SPA boundary and EC1 does not allocate any areas for development of employment sites within 200m. Furthermore, there are no major roads within 200m of the SPA boundary and consequently impacts from reduced air quality associated with increased in traffic from development and population increases promoted by policies in the Local Plan are anticipated to be negligible. Policies SS8, SS9, SS10 EC1, MIN1, MIN5, MIN6 (specifically MIN6-15) and WAS2 could result in the development of employment sites, mineral developments and waste management sites that could lead to additional point source emissions in the catchment. In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan, Local Transport Plan 2011-16, could lead to in-combination effects related to atmospheric pollution. | impact assessment will be required.<br>Policy MIN6 also requires the environmental impacts, including on ecology and air quality, to be assessed before a development can be granted planning permission.<br>The measures to avoid/reduce impacts upon Thorne and Hatfield Moor SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |
| | Flood and Water Level Management | Development (i.e. for housing, employment sites, mineral sites, waste sites and transport infrastructure), as promoted through policies SS2, SS6, SS7, SS8, SS9, SS10, H1, H6, H6, EC1, RD1, MIN6 (specifically MIN6-15), WAS2 and T7, has the potential to increase flooding through increased surface water run-off on impermeable surfaces. The developments may also require additional flood risk management measures to protect them from flooding. If in close proximity to Thorne and Hatfield Moors SPA, or in the catchment within which this site sits, it could result in a direct loss/damage of | Despite promoting development, policies SS2, SS7, SS9, SS10, H6, MIN6 and WAS2 all contain wording which provide a level of protection for the water environment and include consideration of flood risk management. For example, MIN6 requires mineral extraction proposals to be supported by a range of assessments that address potential environmental impacts, including flood risk.<br>Specifically, policy DQE5 requires that development avoids areas of flood risk and | **No adverse impact upon site integrity** |

| Qualifying Feature | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| | | habitats from the defences themselves or changes to hydrogeological process and drainage patterns; this could then impact upon the Nightjar populations the habitats present support, and also Common Crane.<br>In-combination, other plans and strategies which promote any form of development, including the Humber Strategic Economic Plan, the Greater Lincolnshire Strategic Economic Plan and Local Transport Plan 2011-16, could lead to in-combination effects related to increased flooding from surface water run-off, or adverse impacts associated with flood risk management measures implemented. Furthermore, in-combination effects may arise with the Humber Flood Risk Management Strategy. | does not increase flooding elsewhere. It also sets clear requirements that developments need to need to meet relating to flood risk management that will allow it to proceed. Policy DQE6 also requires that developments incorporate SuDS appropriate to the nature of their site. Policy DQE6 also requires that developments incorporate SuDS appropriate to the nature of their site.<br>Also, in relation to mineral extraction, policy MIN3 requires that mineral extraction developments may only proceed were workings will not increase the potential of flood risk or surface water flooding.<br>Dependent on the scale, location and nature of the development proposed, it is likely that a project level HRA of the direct and indirect impacts of the development will be required; this will include assessment of impacts on the water environment and flood risk. Where impacts cannot be avoided, appropriate mitigation will be required to ensure no adverse effects on the integrity of the site. Policy DQE3 reinforces the need for an Appropriate Assessment for any specific projects, not connected to the management of a European site, if they are likely to have a significant effect upon them. This assessment will need to consider potential in-combination impacts identified in this assessment, along with any others that may arise.<br>The measures to avoid/reduce impacts upon Thorne and Hatfield Moors SPA can be guaranteed because they are incorporated directly into the Local Plan, meaning that any planning decisions will be directly impacted upon. | |

### 7.3.1 The Humber Estuary Ramsar

The qualifying features, conservation objectives and site vulnerabilities for the Humber Estuary Ramsar are provided in Table 3-2.

The Screening Assessment concluded that the Humber Estuary Ramsar could be at risk from recreational pressures, urbanisation, atmospheric pollution, water pollution/siltation and flood and water level management. The qualifying criteria of Grey Seal and Natterjack Toad were screened out of the assessment as the known breeding colony of Grey Sea is located over 30km away from the district boundary at Donna Nook, and the known population of Natterjack Toad over 35km away at Saltfleetby and Theddlethorpe dunes.

Details for the Appropriate Assessment of the Local Plan Publication Draft Addendum, both alone and in-combination with other plans and projects on the integrity of the Humber Estuary Ramsar in relation to the impacts identified in the Screening Assessment are described in Table 7-6.

**Table 7-6: Test of Adverse Effects on Integrity on Humber Estuary Ramsar**

| Qualifying Features | Identified Pathway of Impact | Adverse Effect of North Lincolnshire Local Plan Alone and In-combination | Avoidance/Mitigation Measures of North Lincolnshire Local Plan | Adverse Impact on Site Integrity |
|---|---|---|---|---|
| Ramsar Criterion 1 – near-natural estuary with range of habitats<br><br>Ramsar Criterion 5 – regularly supports 20,000 or more waterbirds<br><br>Ramsar Criterion 6 – supports a number of species at levels of international importance on passage (i.e. Golden Plover, Red Knot, Dunlin, Black-tailed Godwit and Common Redshank) and over-winter (i.e. Common Shelduck, Golden Plover, Red Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Common Redshank)<br><br>Ramsar Criterion 8 – important migration route for River Lamprey and Sea Lamprey | Recreational Pressures | The assessments contained in Table 7-1 and Table 7-4 are also relevant to the Humber Estuary Ramsar. | | **No adverse impact upon site integrity** |
| | Urbanisation | The assessments contained in Table 7-1 and Table 7-4 are also relevant to the Humber Estuary Ramsar. | | **No adverse impact upon site integrity** |
| | Atmospheric Pollution | The assessments contained in Table 7-1 and Table 7-4 are also relevant to the Humber Estuary Ramsar. | | **No adverse impact upon site integrity** |
| | Water Pollution/ Siltation | The assessments contained in Table 7-1 and Table 7-4 are also relevant to the Humber Estuary Ramsar. | | **No adverse impact upon site integrity** |
| | Flood and Water Level Management | The assessments contained in Table 7-1 and Table 7-4 are also relevant to the Humber Estuary Ramsar. | | **No adverse impact upon site integrity** |

# 8 Conclusions

Regulation 105 of the Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (amendment) (EU Exit) Regulations 2019) (the 'Habitats Regulations') states that if a land-use plan is "(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and (b) is not directly connected with or necessary to the management of the site" then the plan-making authority must "…make an appropriate assessment of the implications for the site in view of that site's conservation objectives" before the plan is given effect. The process by which Regulation 105 is met is known as Habitats Regulations Assessment (HRA).

It is accepted best-practice for the HRA of strategic planning documents to be run as an iterative process alongside the plan development, with the emerging policies and sites proposed for development continually assessed for their possible effects on European sites and modified or abandoned (as necessary) to ensure that the subsequently adopted plan is not likely to result in significant effects on any European sites, either alone or 'in combination' with other plans and projects.

HRA has been undertaken throughout the development of the North Lincolnshire Local Plan to date and has informed key stages and assessment work, including the selection of sites proposed for development. This report details the HRA for the Publication Draft Addendum of the North Lincolnshire Local Plan.

The most likely effects of the North Lincolnshire Local Plan Publication Draft Addendum on European sites are related to pressures from new development including recreational impacts, indirect impacts from urbanisation, atmospheric pollution, changes to water quality (surface run-off, pollution events) and impacts from flood and water level management.

The Screening Assessment determined that the North Lincolnshire Local Plan Publication Draft Addendum is not likely to have significant effects, either alone or in-combination with other plans on the following European site:

- River Derwent SAC

Potential significant effects of the North Lincolnshire Local Plan Publication Draft Addendum were identified for the following sites:

- Humber Estuary SAC
- Hatfield Moor SAC
- Thorne Moors SAC
- Humber Estuary SPA
- Thorne and Hatfield Moors SPA
- Humber Estuary Ramsar

The Appropriate Assessment identified that the existing policies and provisions in the of the North Lincolnshire Local Plan Publication Draft Addendum, in relation to recreational pressures, urbanisation, atmospheric pollution, water pollution/siltation and flood and water management will ensure that the Local Plan will have no adverse effects on these European sites either alone or in combination with any other plans or projects.

# Appendices

## A Review of Other Plans and Projects that could act In-combination with the North Lincolnshire Local Plan

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| **Land Use Planning** | | |
| Lincolnshire Lakes Area Action Plan (2016) | This project will create a number of high quality, sustainable village communities on land between the western edge of Scunthorpe and the River Trent, set within an attractive waterside environment with major opportunities for leisure, sport and recreation. It will also provide an ideal setting for new businesses with the creation of new high-quality employment space and a Business Park. The Lincolnshire Lakes Area Action Plan (AAP) has been produced to set the planning policy framework to deliver the development in a properly planned way and this was adopted in May 2016. | The HRA produced for the Lincolnshire Lakes AAP identified that adverse impacts could arise on the Humber Estuary SAC/SPA/Ramsar Site through urbanisation, recreational disturbance, air pollution and loss of supporting habitat. However, the HRA concluded that the Lincolnshire Lakes AAP would not have likely significant effects on the Humber, either alone or in-combination with other plans and projects. This is the case so long as any expansion to the allocated developed land was further assessed in an updated HRA, any future expansion of Scunthorpe Port was subject to a project-specific HRA and that raising the right bank of the River Trent would adhere to standard water quality controls and would be undertaken outside of the wintering bird season.<br>Also, the Lincolnshire Lakes proposals are included within the North Lincolnshire Local Plan Publication Draft Addendum within policy SS7 and strategic site allocations SS8, SSH1 and SSH2. Consequently, the findings of the HRA for the Lincolnshire Lakes AAP will be used to inform the HRA for the Local Plan itself. |
| Bassetlaw Local Plan 2020-2038: Publication Version Second Addendum (May 2022) | Bassetlaw District Council is in currently preparing the Bassetlaw Local Plan to establish the long-term approach to development in the District up to the year 2038. It is currently consulting on its 'Publication Version Addendum' of the Bassetlaw Local Plan. This Addendum, together with the Publication version of the Plan, will be the version of the Plan the Council will take forward to Examination by the Government. | A HRA screening was produced for the Local Plan Publication Version Second Addendum (May 2022), which concluded that the policies and site allocations in the Plan could have a likely significant effect upon the Sherwood Forest ppSPA as a result of physical loss or damage to off-site habitat, noise/vibration and light pollution to off-site habitat, air pollution and recreational impacts. Potential significant in-combination effects with other plans and policies were also identified. However, during the Appropriate Assessment process, further examination of the impact pathways and the incorporation of mitigation measures within relevant policies, it was concluded that no adverse impacts on the integrity of the ppSPA would occur. Given the distance to Sherwood Forest ppSPA it is not identified as being potentially impacted upon by the North Lincolnshire Local Plan; consequently, no in-combination effects have been identified.<br>No likely significant effects on Hatfield Moor SAC, Thorne Moor SAC or Thorne and Hatfield Moor SPA, and consequently no in-combination effects are anticipated with the North Lincolnshire Local Plan. |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | | Uncertain likely significant effects were identified in relation to the Humber Estuary SAC, SPA and Ramsar in relation to changes in water quality and quantity. However, the Appropriate Assessment concluded that the effects of the Bassetlaw Draft Local Plan would be negligible given the distance from the European sites and the number of large towns along the river outside the District. In addition, the Bassetlaw Draft Local Plan contains policy ST53 which provides mitigation measures to protect water quality. Consequently, no in-combination effects are anticipated with the North Lincolnshire Local Plan. |
| Doncaster Local Plan (2015-2035) – Adopted September 2021 | The Doncaster Local Plan was adopted in September 2021 and has replaced the adopted Unitary Development Plan and Local Development Framework. The Plan provides the new planning strategy for the Borough and will provide a comprehensive statement of the Borough's most important planning policies. It sets out detailed development management policies to guide new development in the Borough. | A HRA for the Submission Version assessed whether the proposals in the Doncaster Local Plan would impact on the European sites at Thorne Moors, Hatfield Moors, Lower Derwent Valley, River Derwent and Humber Estuary. It considered impacts in relation to increased demands for water, dealing with wastewater, visitor pressure, pet predation, loss of foraging habitat, air pollution, airport expansion and hydrological impacts of mineral extraction. Whilst some of the policies were initially screened as having the potential to impact on a European site, further investigation at the Appropriate Assessment stage ruled out the majority of impacts. Small amendments were suggested to a number of policies in relation to lorry parking, development in the countryside, minerals safeguarding and development, and gas shale and oil hydrocarbon developments to protect the integrity of Thorne Moor SAC, Hatfield Moor SAC ad Thorne and Hatfield Moors SPA. These amendments were incorporated into the adopted plan so that impacts from all policies on the European sites can be ruled out; consequently, no in-combination effects have been identified with the North Lincolnshire Local Plan. |
| East Riding Local Plan (2016) and Draft updates | This is a suite of adopted planning documents that together provide the long-term development plan for the East Riding till 2029. A number of documents make up the plan including, the strategy document, the allocations document, a Joint Waste Plan, a Joint Minerals Plan and the Bridlington Town Centre Area Action Plan. The plan is currently undergoing an update, however, a number of policies and site allocations remain unchanged. | The HRA for the strategy document and allocation plan for the original 2016 plan reached similar conclusions that land allocated for development at Hedon Haven would result in the loss of functional habitat used by birds from the adjacent Humber Estuary European site, however, mitigation measures including enhancement of habitat at Newton Garth and Hedon Haven will provide alternative wet grassland sites which will compensate for the loss of habitat, resulting in a conclusion of no impact on site integrity; consequently no in-combination effects are identified.<br>In relation to Thorne and Hatfield Moors, both the strategy document and allocations document from 2016 screened the SACs and SPA out of the HRA Stage 2 assessment for the East Riding Local Plan as it was assessed as having no likely significant |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | | effect upon them. Consequently, no in-combination effects with the North Lincolnshire Local Plan are identified.<br>Given the distance between North Lincolnshire and Bridlington it is not considered that the Area Action Plan for this town centre would have in-combination effects with the North Lincolnshire Local Plan.<br>The Habitats Regulations Assessment of the Local Plan Update, produced in April 2021, cannot currently rule out adverse impacts on the Humber Estuary as in relation to site allocations S6B and HAV-A there will be a loss of an established high tide roost and loafing/foraging area for a range of estuary birds. A planning application, with an accompanying Report to Inform Habitats Regulations Assessment concludes that, following mitigation, developments S6B and HAV-A would not have an adverse impact on the integrity of the Humber Estuary. However, the HRA for the local plan concludes that until the determination is made on the planning application, in agreement with Natural England, the assessment on whether the Local Plan would impact on the integrity of the Humber Estuary is deferred to avoid duplication of assessment. A similar deferred conclusion is also made in relation to air quality impacts on the Humber Estuary until traffic studies and air quality modelling are completed. There is therefore the potential for in-combination effects to occur if the deferred assessments do result in conclusions of an adverse effect on site integrity, however, this is currently uncertain. |
| Hull Local Plan 2016-2032 | Hull City Council adopted its Local Plan in November 2017. It identifies land for different uses and its policies will be used to determine planning applications for the period 2017 to 2032. | The HRA Screening for the adopted plan and its main modifications concluded that a number of policies and site allocations within the Local Plan could impact upon the Humber Estuary SAC, SPA and Ramsar due to the distance involved and/or connectivity between the Local Plan proposals and site boundary. Potential effects could arise from habitat fragmentation, disturbance, changes to hydrological regime, changes to water quality and changes to air quality; consequently, the Plan required undertaking of an Appropriate Assessment.<br>The Appropriate Assessment concluded that with mitigation, adverse effects from the policies and site allocations, including in-combination effects between plans and projects can be avoided for all designated sites. This does not preclude the need for HRA to be applied on a project level basis to those developments, e.g. the cruise terminal, with the potential to impact upon any interest feature of a designated site. Consequently, no in-combination effects have been identified with the North Lincolnshire Local Plan, although the importance of the mitigation being applied to prevent an adverse |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | | impact on site integrity is recognised. |
| North East Lincolnshire Local Plan (2013-2023) | The Local Plan for North East Lincolnshire sets out the vision and objectives for the Borough, allocates sites for housing, employment and other forms of development and sets out development management policies for the Borough. Following public examination during April/May 2017 the plan was formally adopted on the 22 March 2018. | The HRA produced for the pre-submission draft of the North East Lincolnshire Local Plan concluded that adverse impacts would not arise on European sites in and around the local authority area, so long as mitigation was implemented. Mitigation measures included modifying/strengthening policy text so that adverse impacts could be avoided, undertaking project-specific HRAs as developments came forward, following good practice construction techniques, promoting sustainable transport methods and improving green infrastructure/open spaces, amongst others. Consequently, no in-combination effects have been identified with the North Lincolnshire Local Plan. |
| Central Lincolnshire Local Plan (2017) | The Central Lincolnshire Local Plan was adopted by the Central Lincolnshire Joint Strategic Planning Committee (CLJSPC) on 24 April 2017 and replaces the Local Plans of the City of Lincoln, West Lindsey and North Kesteven District Councils. It is currently undergoing a review to address a range of issues such as climate change, housing, employment and shopping, amongst others. The Proposed Submission Local Plan was produced in March 2022 and has just been consulted on. | The HRA screening for the Central Lincolnshire Local Plan Proposed Submission Draft (March 2022) identified the potential for likely significant effects on the Humber Estuary as a result of habitat loss/fragmentation, physical damaged to species, disturbance, hydrological changes and atmospheric pollution. However, the Appropriate Assessment considered these impact pathways further and provided that the identified mitigation and recommendations are implemented, it is possible to conclude that the Local Plan is compliant with the Habitats Regulations and will not result in any adverse impacts on site integrity of the Humber Estuary, either alone or in combination with other plans and projects. Consequently, no in-combination effects have been identified with the North Lincolnshire Local Plan. |
| Appleby Parish Neighbourhood Plan (2019)<br>Worlaby Parish Neighbour Plan (2021)<br>Barrow upon Humber, Barton upon Humber, Bonby, Bottesford, Brigg, Elsham, Goxhill, Haxey, Kirton-in-Lindsey, Saxby All Saints, Scawby, South Ferriby, Winteringham and Winterton are in the process of drafting plans, but they have not yet gone through examination and do not therefore form | These parishes have been designated as Neighbourhood Areas and are in the process of developing, or in the case of Appleby Parish have already developed, their own Neighbourhood Plan. They are anticipated to cover key policies which will affect the outcome of planning applications. Hence it will allow local communities to shape development within their neighbourhood (RTPI, 2017). | These Plans will sit under the North Lincolnshire Local Plan and may allocate land for development. Consequently, in-combination effects with the North Lincolnshire Local Plan may arise. However, only some of these Neighbourhood Plans have been prepared, and therefore only that which has been adopted (i.e. Appleby Parish) will be included in this in-combination assessment.<br>The strategic environmental assessment for the Appleby Parish Neighbourhood Plan identified that none of the policies within the plan would have a negative impact on the environment, with most policies having a strongly positive impact. Also, given Appleby Parish is 5km from the Humber Estuary SAC, SPA and Ramsar, and over 18km from Thorne and Hatfield Moors in-combination effects are not anticipated. |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| part of the North Lincolnshire development plan. | | |
| **Development/Economic** | | |
| The Humber Strategic Economic Plan 2014-2020 | The over-arching Economic Plan outlines the key sectors across the region, opportunities for growth, the importance of developing a strong infrastructure, supporting businesses, promoting tourism, equipping the work force whilst protecting the environment. The ambition of the Plan is to create a competitive, resilient and prosperous region. This plan has not yet been updated. | The Plan clearly states that all proposed development should be sustainable and not infringe on the environmental qualities of European sites. Furthermore, proposed flood risk management objectives are likely to improve water quality and enhance biodiversity. However, some adverse effects associated with increased growth/ development of the area are likely to have in-combination effects on the Humber Estuary SAC/SPA/Ramsar Site. |
| Greater Lincolnshire Strategic Economic Plan 2014-2030 | The Plan covers opportunities for growth, existing skills within Greater Lincolnshire, existing assets e.g. transport and infrastructure and a strategy for achieving growth in the future. The priorities for growth set out in the Plan include focusing on success in a few key existing sectors including tourism, food production and engineering. Expanding growth into new sectors including care and logistics. These aims will be achieved by promoting telecommunications and developing Lincolnshire's infrastructure network. | The focus on growth and development within Lincolnshire will put pressure upon land and resources within the area. It is likely to increase pollution and disturbance to existing European sites even with the most stringent environmental regulation. For example, the push to develop tourism in the area will attract visitors to areas of natural beauty including designated sites. Hence, in-combination effects are likely on European sites. |
| Able Logistics Park | Able Logistics Park is a 497.5ha site with full planning permission in place for the creation of extensive warehousing, external storage and transportation depots, with the benefit of being located in close proximity to deep-water quays. It is located at North Killingholme. | This scheme has the potential to have significant adverse impacts on the Humber Estuary SAC, SPA and Ramsar site, however, planning conditions have been applied to address potential impacts, such as direct loss of mudflat, water pollution and disturbance to bird populations. This includes creation of wetland habitat to provide feeding, roosting and loafing areas for waterbirds at Halton Marshes, timing works to avoid the key overwintering period, phasing works to minimise construction disturbance, minimising light disturbance and having a pollution prevention plan. Consequently, it was assessed that the project is not likely to have a significant effect, alone or in-combination with other plans and projects.<br>However, in-combination effects could arise with the North Lincolnshire Local Plan if policies within it |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | | lead to further development within the North Killingholme area. |
| Able Marine Energy Park | This project will provide a bespoke port facility for the renewable energy sector, particularly offshore wind. It covers approximately 900 acres and features approximately 1300m of new deep-water quays. It will provide a multi-user facility for the manufacture, storage, assembly and deployment of next generation offshore wind turbines and their associated supply chains. It is located on the south bank of the Humber near North Killingholme. It constitutes a Nationally Significant Infrastructure Project and is fully consented. | This scheme has the potential to have significant adverse impacts on the Humber Estuary SAC, SPA and Ramsar site, however, mitigation measures and planning conditions have been applied to address potential impacts. This includes significant areas of wetland habitat creation, alongside a Regulated Tidal Exchange scheme at Cherry Cobb Sands, and careful phasing and timing of works to avoid critical periods. With the imposition of these planning conditions, the project was assessed as not likely to have a significant effect, alone or in-combination with other plans and projects.<br>However, in-combination effects could arise with the new North Lincolnshire Local Plan if policies within it lead to further development within the North Killingholme area. Any amendments made to the proposals, and accompanying HRA, will also need to be considered in terms of how they may impact upon the Humber Estuary SAC, SPA and Ramsar site. |
| North Killingholme Power Project | This project will involve the construction of a new electrical generating station and associated infrastructure on a 286ha site at North Killingholme. It will either operate as a gas-fired station, or a plant fuelled by solid fuels (i.e. coal, petroleum coke or biomass). It will also include full carbon capture facilities. It constitutes a Nationally Significant Infrastructure Project. | This scheme has the potential to have significant adverse impacts on the Humber Estuary SAC, SPA and Ramsar site through, for example, habitat loss and habitat fragmentation from construction of cooling water infrastructure in the estuary, direct fish/lamprey mortality from water abstraction, air quality changes and dust deposition and disturbance of birds from noise, light, vehicular movements and human activity. However, a number of conditions have been applied to the project to ensure no adverse impacts arise, including limiting piling extents to prevent habitat loss, fish screening of the intake system, reducing train speeds to limit noise and providing visual screening. Consequently, it was concluded that the North Killingholme Power Project would not adversely affect the integrity of the Humber Estuary SAC/SPA/Ramsar Site, so long as the mitigation and avoidance measures are implemented.<br>However, in-combination effects could arise with the North Lincolnshire Local Plan if policies within it lead to further development within the North Killingholme area. |
| Green Port Hull / Paull Local Development Order | This is a 500ha site of employment land, part of which is covered by the Paull Local Development Order which grants outline planning permission for development that is associated with renewable and low-carbon industries. | This project would likely have adverse impacts on the Humber Estuary SAC, SPA and Ramsar site. However, as part of this Local Development Order, a package of works to avoid likely significant effects on the European site has been developed, involving measures to provide alternative habitat for Curlew, Golden Plover and Lapwing at two locations; Hedon (Newton Garth) and Hedon Haven. This will include wet grassland creation on arable land. As a result |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | | of these measures the HRA for the Local Development Order concluded that there is no potential for likely significant effects on the Humber SAC/SPA/Ramsar Site, alone or in-combination with other plans or projects.<br>Whilst this site is located on the North Bank of the Humber, given the scale of the development, potential in-combination effects could arise in conjunction with the North Lincolnshire Local Plan. |
| Humber Gas Pipeline Replacement Project | This project by National Grid Gas Plc comprises the construction of a replacement section of gas transporter pipeline crossing under the Humber Estuary between the existing Goxhill Above Ground Installation on the south bank of the estuary within North Lincolnshire, to the Paull Above Ground Installation on the north bank of the estuary within the East Riding of Yorkshire. It constitutes a Nationally Significant Infrastructure Project and seeks to ensure the long-term security of the Feeder 0 Gas Transmission Pipeline where it crosses the River Humber. Construction of this pipeline is currently ongoing. | The HRA that accompanies this development identifies that a number of likely significant effects on the Humber Estuary SPA and Ramsar site could occur as a result of this project, including displacement and disturbance of qualifying bird species through noise and visual disturbance, loss of foraging/roosting habitat within and adjacent to construction areas and potential impacts on inter-tidal habitats from potential pollution pathways. A number of mitigation measures were proposed to offset adverse impacts, including retaining grassland areas as alternative habitat, temporarily changing existing land use management practices and controlling access carefully. It was therefore concluded that there would not be an adverse impact on the integrity of the Humber Estuary SPA and Ramsar site as a result of the project alone, or in-combination with other projects.<br>However, in-combination effects could arise with the North Lincolnshire Local Plan if policies within it lead to further development within the Goxhill area that cause additional disturbance whilst the pipeline project is ongoing. |
| Keadby 2/3 | These projects are proposed by SSE Thermal. Keadby 2 Power Station is a new 840MW gas-fired power station currently under construction adjacent to the operational Keadby 1 plant. It is a high-efficiency gas-fired plant that is capable of being upgraded to further decarbonise its generation through carbon capture or hydrogen technology.<br>Keadby 3 is currently in development and would be a natural gas power station fitted with carbon capture to remove $CO_2$ from its emissions. | A HRA has been produced to accompany the Keadby 2 power station development. This looks at the principal impact of air pollution on Thorne and Hatfield Moors, and the Humber Estuary designated sites. The assessment of effects on sites designated for their European importance for nature conservation has shown that the main site potentially affected is the Humber Estuary SAC and Ramsar. The background levels of ammonia and loads of nutrient nitrogen at the Humber Estuary SAC are already high largely as a result of agricultural practices and hence there is little capacity for increased levels from the power station to be accommodated. In contrast background $NO_x$ levels are low and increases are likely to be accommodated. Whilst the process contributions for long-term effects still exceed 1% of the critical levels/loads, there are a number of reasons why they are more likely to be close to 1% and why adverse effects on the Humber Estuary SAC are predicted to be unlikely, for example only small areas of saltmarsh will be affected, only small exceedances of the 1% thresholds with only very localised areas affected by percentages of 2-3% |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | | and modelled predictions are likely to be an over-estimate. Consequently, the HRA concluded that the project is not predicted to result in adverse effects on the European designations, alone or in-combination with Keadby 1, and consequently no mitigation measures are proposed. As the HRA for Keadby 2 has not identified any likely significant effects on the sites considered in this HRA, no in-combination effects are identified.<br>As Keadby 3 is currently in the early stages of development no HRA is currently available. Further assessment may be required as part of the Keadby 3 HRA to assess the potential for any in-combination effects. |
| **Water Management and Flooding** | | |
| Water Resource Management Plans (WRMP)- Anglian Water and Yorkshire Water. | These Plans outline the regional strategy for managing water resources across their supply area over a 25-year period. They detail the likely demand and forecast supply. This includes an exploration of proposed and existing schemes/sectors which are likely to be resource intensive. Management of these anticipated impacts are then addressed to comply with the requirements of the Water Framework Directive. | Changes to water abstraction and discharge can adversely affect European sites by changing surface and ground water flow levels and quality (including dissolved oxygen). For example, Thorne and Hatfield Moors are susceptible to abstraction which can lead to scrub development and a loss of the qualifying communities. Despite these sensitivities, the WRMPs include measures to reduce in-combination effects of the various proposed schemes. Furthermore, during the plan period (2020 to 2045), Anglian Water forecast average per-capita consumption falling to 120 l/h/d by 2045, driven by customers selecting metering, although within the Central Lincolnshire resource zone a baseline deficit by 2044/45 of -5 and -15 Ml/d is predicted. However, in contrast the South Humber Bank resource zone is predicted to have a surplus greater than 3 Ml/d by 2025, and remains in surplus by 2045. Within the Yorkshire Water WRMP area, it is predicted that by the mid-2030s (despite a supply demand deficit for 2018/19) a supply deficit is not expected. This is attributed to a change in the approach to climate change, reduced leakage, ongoing reduction in household usage due to increased levels of metering and reduced non-household demand.<br>With regards to the proposed schemes in the Anglian Water WRMP, one scheme was identified within the HRA from within the Central Lincolnshire and South Humber Bank resource zones as having the potential to impact upon the Humber. This was the Pyewipe Water Reuse for Non-potable Use scheme, which falls within North East Lincolnshire, and mitigation measures are proposed to avoid adverse impacts on site integrity. The South Humber Bank Water Resource Zone (WRZ) to Central Lincolnshire WRZ Transfer schemes were assessed as having no likely significant effect on the Humber Estuary, or other European sites.<br>In the Yorkshire Water WRMP HRA, several feasible options were identified as having the potential to |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | | alter flow conditions in the Humber, including the River Ouse water treatment works extension, Ouse Raw Water Transfer Scheme, the Increased River Ouse Pump Storage Capacity Option, Aquifer Storage and Recovery Scheme 1, South Yorkshire Groundwater Scheme 1, East Yorkshire Groundwater Options 1 and 2, the Reuse of Abandoned Third Party Groundwater Source Options, the Dam Raising Options, the Reservoir De-silting Option, River Calder Abstraction Option 1, River Aire Abstraction Options 1 and 3 and the East Yorkshire Coast Desalinisation Option. However, the HRA for the Yorkshire Water WRMP concluded that except for one option, the preferred WRMP is not likely to have significant effects on the integrity of any of the designated sites, including the Humber Estuary, Thorne and Hatfield Moors and the River Derwent. The one option to which this conclusion does not apply is the North Yorkshire Groundwater Option Scheme 1 and its potential impacts on the North Pennine Dales Meadows SAC a significant distance from North Lincolnshire.<br>As the WRMPs have not identified any likely significant effects on the sites considered in this HRA, no in-combination effects are identified. |
| River Basin Management Plan (RBMP): Humber River Basin District | The Plan outlines relevant water bodies within the district and their classification. It covers the water quality within these catchments and actions to improve water quality in the future. It sets water quality targets and the next steps to achieve these. The aim of the RBMP is to address a range of challenges including: pollution (point source and diffuse) and physical modification of water bodies. | Any improvements to water quality or naturalising water bodies can only have a positive impact on European sites and hence no negative in-combination effects are anticipated. |
| Grimsby and Ancholme Catchment Flood Management Plan | The Management Plan outlines measures for sustainable management over the next 50-100 years. It takes into consideration climate change and current policies to target resources in the most effective way. It looks at current and future flood risk for the whole catchment and sub catchments. The purpose of the Plan is to establish new policies to reduce flood risk. | Reducing flood risk presents tangible benefits to society but these benefits are not always transposed to the natural world. Flooding can have positive outcomes for wildlife by creating wetland habitat for waders and other wetland specialists. Flooding can detrimentally affect some species by inundating burrows and nests. In-combination effects will depend on the approach taken to flood risk management. If it focusses on improving water storage across the catchment by improving habitat quality, European sites such as Thorne and Hatfield Moors may benefit. Conversely, hard engineering options may disconnect rivers from their floodplains, leading to a loss of wetland habitat. The Management Plan emphasises a sustainable |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | | approach and hence negative in-combination effects are not anticipated. |
| River Trent Catchment Flood Management Plan | The Management Plan outlines measures for sustainable management for the next 50-100 years. It takes into consideration climate change and current policies to target resources in the most effective way. It looks at current and future flood risk for the whole catchment and sub catchments. The purpose of the Plan is to establish new policies to reduce flood risk. | Reducing flood risk presents tangible benefits to society but these benefits are not always transposed to the natural world. Flooding can have positive outcomes for wildlife by creating wetland habitat for waders and other wetland specialists. Flooding can detrimentally affect some species by inundating burrows and nests. In-combination effects will depend on the approach taken to flood risk management. If it focusses on improving water storage across the catchment by improving habitat quality, European sites such as Thorne and Hatfield Moors may benefit. Conversely, hard engineering options may disconnect rivers from their floodplains, leading to loss of wetland habitat. The Management Plan emphasises a sustainable approach and hence negative in-combination effects are not anticipated. |
| Humber Flood Risk Management Strategy (2008) | The Management Strategy provides information on the work to date, the importance of the strategy, the history of the project, flood risk areas and priority areas for protection. The overall aim of the strategy is to ensure that 99% of the local population receives a good standard of protection from coastal flooding for the next 25 years and into the future. It proposes to do so via improving and protecting defences and managed realignment. This strategy is currently being updated as part of the Humber 2100+ Review. | The soft engineering options discussed within the Strategy are compatible with the aims and objectives of European sites. For example, managed realignment creates suitable habitat for wading birds and other species. In contrast, artificial structures or hard engineering options may facilitate development closer to the coast and habitat may be lost as a result. Hence, the Flood Risk Strategy may have in-combination effects on the Humber Estuary depending on the approach of defence adopted. |
| Humber Estuary Coastal Authorities Group: Flamborough Head to Gibraltar Point Shoreline Management Plan 2010 | The Shoreline Management Plan outlines the principles and compliance of sustainable shoreline management. It details coastal processes relevant to the plan, existing defences, land use and surrounding environments. Finally, it presents an action plan heading forward. The aims of the Management Plan are to protect against coastal erosion and flooding and promote sustainable development and coastal management which benefits the economy, environment | The Management Plan is likely to benefit European sites in so far as the approach is sustainable and actively seeks to prosper the environment. However, there remains a potential conflict of interest between this aim and the aim to prosper the economy and society. Hence, in-combination effects between the Local Plan and the Shoreline Management Plan are possible. |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | and society. | |
| **Nature Conservation** | | |
| Humber Management Scheme – Action Plan 2016 | The Action Plan summarises the Humber Nature Partnership's approach to protecting the qualifying features of the European Marine Site. The conservation objectives and targets of the Action Plan relate to protecting the integrity of the SPA and SAC which is measured using indicators such as abundance and distribution of qualifying habitats and species and the quality of the processes which underlie them. | The aims and objectives of the Action Plan are compatible with the conservation of the Humber Estuary European Marine Site and hence no negative in-combination effects on this European site are anticipated. |
| Thorne and Hatfield Moors Site Improvement Plan | The Site Improvement Plan (SIP) outlines the pressures and threats associated with the conservation of Thorne and Hatfield Moors. These include: Drainage, scrub control, air pollution, recreation, peat extraction and invasive species amongst others. The SIP then goes on to describe targets to address each of these issues, who is responsible and the associated cost. | The aims and objectives of the SIP are compatible with the conservation of Thorne and Hatfield Moors and hence no negative in-combination effects on this European site are anticipated. |
| Thorne Moors Water Level Management Plan | The Management Plan provides background to water level management at Thorne Moor including the biodiversity on site, water quality and important physical features. It then proceeds to outline proposed actions to conserve these assets including contingency plans were applicable. These actions take into consideration site constraints. The aims of the Plan are to achieve target condition, protect and enhance conservation interest on site and minimise damage to these features. | The aims and objectives of the Plan are compatible with the conservation of Thorne Moors and hence no negative in-combination effects on this European site are anticipated. |
| Lincolnshire Biodiversity Action Plan 2011-2020 (The Nature Strategy for | The Action Plan describes the value, threats and protection of biodiversity in Lincolnshire including a detailed | The aims and objectives of the Action Plan are compatible with the conservation of European sites by protecting interest features within them. No negative in-combination effects on any European |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| Greater Lincolnshire) (revised in 2015) | discussion of the key habitats and species found in Lincolnshire. It then goes on to propose actions for protecting biodiversity in Lincolnshire. The aims of the Action Plan relate to conserving and enhancing, valuing and recording biodiversity and ensuring that efforts to this effect are sustainable. | sites are anticipated. |
| Lincolnshire Geodiversity Strategy 2017-21 | The Geodiversity Strategy highlights the value, diversity, threats and protection of geodiversity in Lincolnshire. It has four main aims which include; 1. Recording and conserving geodiversity; 2. Robust legislation for geodiversity; 3. Publicise geodiversity; 4. Meet geodiversity objectives. | The aims and objectives of the Strategy are compatible with the conservation of European sites by protecting interest features within them. No negative in-combination effects on any European sites are anticipated. |
| **Recreation and Tourism** | | |
| North Lincolnshire Rights of Way Improvement Plan | The Improvement Plan details how the rights of way network in North Lincolnshire can be strengthened, promoted, streamlined and extended. The Plan incorporates costs and completion dates for a range of proposed actions and has the overall aim of improving the network of public rights of way in North Lincolnshire. | Public rights of way are utilised by walkers, cyclists and horse riders. Within North Lincolnshire, most public rights of way are within rural areas. Many of the actions proposed in the plan have the aim of encouraging greater usage of rights of way by the public, often in isolated areas. Increased recreational pressure close to or within European sites has the potential to disturb the qualifying features of the European site e.g. avian fauna and consequently in-combination effects may occur.<br>The plan does make reference to complying with current legislation surrounding nature conservation sites, and the plan proposes that to increase public usage of the rights of way network within North Lincolnshire, car parks should be constructed to make remote routes more accessible. This may help to reduce motorised traffic and hence may contribute to air quality and congestion targets. |
| England Coast Path Project | Natural England is currently in the process of developing a new National Trail around all of England's coast. As part of this project a 'coastal margin' is being identified. In this margin, walkers will have new rights for access. However, in April 2018 a European Court judgement affected how Natural England could assess the impact of the England Coast Path on | Given this path is proposed to extend along the North Lincolnshire Coast, and cross the Humber using the Humber Bridge, it has potential to increase the number of visitors coming to the area. In-combination with policies within the North Lincolnshire Local Plan that encourage tourism and the development of recreational assets, this has the potential to significantly impact on the Humber Estuary SAC/SPA/Ramsar Sites through increased recreational pressures. |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | environmentally protected sites and as a result progress on the path slowed.<br>In North Lincolnshire, the coastal path proposals for the Mablethorpe to Humber Bridge stretch are still in development. | |
| **Other** | | |
| Local Transport Plan 2011 to 2026 | The Transport Plan is composed of two separate documents; a strategy and how the strategy will be implemented. This fifteen-year plan seeks to foster a well maintained and sustainable transport network across North Lincolnshire. This will in turn support local businesses and communities. | The Local Transport Plan includes measures to encourage sustainable transport including promoting public transport, cycling and walking. These elements are likely to have a positive impact on local European sites by improving air quality. However, enhancing the transport network could facilitate increased levels of visitors to European sites and development within the region which may have in-combination effects on European sites via habitat loss and disturbance. |
| Humber Area Local Aggregate Assessment (2019) | The Assessment outlines the geology of the region, aggregate resources, their supply and demand (both now and in the future) and their import and export. It details objectives for meeting future demand. | Aggregate resources are predominantly used in construction and hence any increase in supply may facilitate construction in the wider area. Furthermore, mining these resources can be extremely destructive e.g. marine dredging. Marine dredging currently takes place in the North Sea beyond the Humber Estuary. The number of licensed dredging areas here is likely to increase. Hence in-combination effects are likely between the aims and objectives of the Assessment and the Local Plan. |
| Action Plan for the Scunthorpe PM10 AQMA (2018) | The Action Plan outlines the measures required to meet the target of reducing $PM_{10}$ concentrations within the Scunthorpe wide Air Quality Management Area. These measures are presented as an action plan and relate to air quality monitoring, industry, development control, non-permitted process emissions and tailpipe emissions. The action plan allocates responsibility to tackling each of these areas and includes measures to ensure compliance. | The Action Plan aims to improve air quality locally. This can only have a positive impact on the communities and habitats found in local European sites. Hence no in-combination effects are anticipated as a result of this Plan. |
| Waste Strategy 2012 - 2030 | The Waste Strategy covers the legal requirements and guidance applicable to waste management, recycling, waste disposal methods, challenges and solutions, options to reduce and re-use | This Strategy for tackling waste production it likely to have a positive effect on European sites via seeking more sustainable approaches to waste management e.g. by promoting reductions in waste and recycling. The outcome of this strategy can only be positive, although the pathways of impact on European sites may be indirect. |

| Document | Description of Plan/Project | Potential In-combination effects on European sites |
|---|---|---|
| | waste and a short, medium and longer-term goals. The aims of the Strategy are to reduce the quantity of waste produced and to move towards a zero-waste management system by 2020. | |

## References


Able UK (2010) *Land between East Halton Skitter and Chase Hill Road, North Killingholme; Appropriate Assessment under the Conservation of Habitats and Species Regulations 2010*.

Alexander, I. and Cresswell, B. (1990) *Foraging by Nightjars Caprimulgus europaeus away from their nesting areas*. Ibis 132: 568-574.

Allow Independent Road-testing (AIR) (2017) *Allow Independent Road-testing* [Online] Available at: http://www.allowair.org/ [Accessed 12th January 2021]

Anglian Water (2019) *Water Resource Management Plan 2019* [Online] Available at: https://www.anglianwater.co.uk/siteassets/household/about-us/wrmp-report-2019.pdf [Accessed 23rd January 2021].

APIS (2021) Site Relevant Critical Loads and Source Attribution [Online] Available at: http://www.apis.ac.uk/srcl [Accessed 23rd January 2021]

APIS (2016a) *Nitrogen Deposition: Coastal saltmarsh* [Online] Available at: http://www.apis.ac.uk/node/968 [Accessed 19th August 2019].

APIS (2016b) Ammonia: Bogs [Online] Available at: http://www.apis.ac.uk/node/866 [Accessed 19th August 2019].

Cruickshanks, K., Liley, D., Fearnley, H., Stillman, R., Harvell, P., Hoskin, R. and Underhill-Day, J. (2010). *Desk Based Study on Recreational Disturbance to birds on the Humber Estuary*. Footprint Ecology / Humber Management Scheme.

Cutts, N., Hemingway, K. and Thomson, S. (2016) *Humber Estuary High Tide Roost Review 2013-2014*. Institute of Estuarine and Coastal Studies, Hull.

Department for Environment, Food and Rural Affairs (2016) *Emissions of Air Quality Pollutants: 1990-2014*. Defra, London.

Department for Environment, Food and Rural Affairs (2018) *Air Pollutant Inventories for England, Scotland, Wales, and Northern Ireland: 1990-2016*. Defra, London.

Department for Communities and Local Government (2006) *Planning for the Protection of European Sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents*. Department for Communities and Local Government, London.

DTA Publications (2021) *The Habitats Regulations Handbook* [Online] Available at: https://www.dtapublications.co.uk/handbook/browse [Accessed 23rd January 2021].

Environment Agency (2021) *Catchment Data Explorer* [Online] Available at: https://environment.data.gov.uk/catchment-planning/ [Accessed 23rd January 2012]

Environment Agency (2015) *Part 1: Humber River Basin District. River Basin Management Plan* [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718328/Humber_RBD_Part_1_river_basin_management_plan.pdf [Accessed 23rd January 2021]

European Communities (2018) *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. Office for Official Publications of the European Communities, Luxembourg.

European Communities (2007) *Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC*. Office for Official Publications of the European Communities, Luxembourg.

European Communities (2002) *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Office for Official Publications of the European Communities, Luxembourg.

Fearnley, H., Liley, D. and Cruickshanks, K. (2012) *Results of the recreational visitor surveys across the Humber Estuary*. Footprint Ecology, Report for Humber Management Scheme.

Fischer, J.D., Cleeton, S.H., Lyons, T.P. and Miller, J.R. (2012) *Urbanization and the Predation Paradox: The Role of Trophic Dynamics in Structuring Vertebrate Communities*. *BioScience, 62 (9), 809-818.*

Hendeca (2020) *Revised Shadow Habitats Regulations Assessment: Proposed non-material change of re-siting mitigation habitat approved to be located at Mitigation Area A to the Halton Marshes Wet Grassland Scheme*. Available online: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-003486-201112%20TR030001%20Revised%20Shadow%20HRA.pdf [date accessed 12th April 2022]

Highways Agency (2019) *Design Manual for Roads and Bridges (DMRB): LA 105 Air Quality* [Online] Available at: https://www.standardsforhighways.co.uk/prod/attachments/10191621-07df-44a3-892e-c1d5c7a28d90?inline=true [Accessed 12th January 2021].

Holden, J., Chapman, P.J. and Labadz, J.C. (2004) *Artificial drainage of peatlands: hydrological and hydrochemical process and wetland restoration*. *Progress in Physical Geography, 28 (1), 95-123.*

JBA Consulting (2021) *North Lincolnshire Local Plan: Publication Plan Habitats Regulations Assessment*.

JBA Consulting (2020) *North Lincolnshire Local Plan: Preferred Options and Site Allocations Shadow Habitats Regulations Assessment*.

JBA Consulting (2018) *North Lincolnshire Local Plan Issues and Options: Habitats Regulations Screening Assessment*.

JNCC (2017a) Humber Estuary SAC [Online] Available at: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030170 [Accessed 30th January 2021]

JNCC (2017b) Hatfield Moor SAC [Online] Available at: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030166 [Accessed 30th January 2021]

JNCC (2017c) Thorne Moor SAC [Online] Available at: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0012915 [Accessed 30th January 2021]

JNCC (2017d) River Derwent SAC [Online] Available at: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030253 [Accessed 30th January 2021]

JNCC (2016a) Natura 2000 – Standard Data Form – Humber Estuary SAC [Online] Available at: http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030170.pdf [Accessed 30th January 2021]

JNCC (2016b) Natura 2000 – Standard Data Form – Hatfield Moor SAC [Online] Available at: http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030166.pdf [Accessed 30th January 2021]

JNCC (2016c) Natura 2000 – Standard Data Form – Thorne Moor SAC [Online] Available at: http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0012915.pdf [Accessed 30th January 2021]

JNCC (2016d) Natura 2000 – Standard Data Form – River Derwent SAC [Online] Available at: http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030253.pdf [Accessed 30th January 2021]

JNCC (2016e) Natura 2000 – Standard Data Form – Thorne and Hatfield Moors SPA [Online] Available at: http://jncc.defra.gov.uk/pdf/SPA/UK9005171.pdf [Accessed 30th January 2021]

JNCC (2008) Information Sheet on Ramsar Wetlands: Humber Estuary [Online] Available at: http://jncc.defra.gov.uk/pdf/RIS/UK11031.pdf [Accessed 30th January 2021]

Le Corre, N., Peuziat, I., Brigand, L. Gélinaud, G. & Meur-Férec, C. (2013) *Wintering Waterbirds and Recreationists in Natural Areas: A Sociological Approach to the Awareness of Bird Disturbance*. Environmental Management 52: 780.

Ministry of Housing, Communities and Local Government (2021) *National Planning Policy Framework* [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf [Accessed 1st September 2021].

Ministry of Housing, Communities and Local Government (2019) *Guidance on the use of Habitats Regulations Assessment* [Online] Available at: https://www.gov.uk/guidance/appropriate-assessment [Accessed 12th January 2021].

Mott MacDonald (2019) *Anglian Water – Water Resources Management Plan: Habitats Regulations assessment Task II: Appropriate Assessment* [Online] Available at: https://www.anglianwater.co.uk/siteassets/household/about-us/wrmp-2019-hra-task-ii.pdf [Accessed 23rd January 2021]

Natural England (2022a). Nutrient neutrality principles and use of Diffuse Water Pollution Plans (DWPPs) and Nutrient Management Plans (NMPs)[Online] Available at: https://cdn.havant.gov.uk/public/documents/Nutrient%20Neutrality%20Mitigation%20Principles.pdf. [Accessed 14th April 2022].

Natural England (2022b) Nutrient Neutrality A Summary Guide [Online] Available at: https://www.cornwall.gov.uk/media/1hmjm0bm/nutrient-neutrality-a-summary-guide.pdf. [Accessed 14th April 2022].

Natural England (2022c) Nutrient Neutrality Generic Methodology Issue 1/ [Online] Available at: https://cdn.havant.gov.uk/public/documents/Natural%20England%20Nutrient%20Neutrality%20Generic%20Methodology.pdf. [Accessed 14th April 2022].

Natural England (2018) *Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations* [Online] Available at: http://publications.naturalengland.org.uk/publication/4720542048845824. [Accessed 12th January 2021].

Natural England (2016) *That's Life -Restoring the Humberhead Peatlands*. [online] Available at: http://www.humberheadpeatlands.org.uk/wp-content/uploads/2017/06/Mid-Term-Workshop-Report-Sept-2016.pdf. [Accessed: 23rd January 2021].

Natural England (2015) *Site Improvement Plan: Humber Estuary SAC and SPA*. Natural England, Peterborough.

Natural England (2014a) *European Site Conservation Objectives for Humber Estuary Special Area of Conservation Site Code: UK0030170*. Natural England, Peterborough.

Natural England (2014b) *European Site Conservation Objectives for Hatfield Moor Special Area of Conservation Site code: UK0030166*. Natural England, Peterborough.

Natural England (2014c) *European Site Conservation Objectives for Thorne Moor Special Area of Conservation Site Code: UK0012915*. Natural England, Peterborough.

Natural England (2014d) *Site Improvement Plan: Thorne and Hatfield Moors*. Natural England, Peterborough.

Natural England (2014e) *European Site Conservation Objectives for River Derwent Special Area of Conservation Site code: UK0030253*. Natural England, Peterborough.

Natural England (2014f) *European Site Conservation Objectives for Humber Estuary Special Protection Area Site Code: UK9006111*. Natural England, Peterborough.

Natural England (2014g) *European Site Conservation Objectives for Thorne and Hatfield Moors Special Protection Area Site Code: UK9005171*. Natural England, Peterborough.

Natural England (2014h) *Site Improvement Plan: River Derwent SAC*. Natural England, Peterborough.

North East Lincolnshire Council (2019) South Humber Gateway Ecological Mitigation.

North Lincolnshire Council (2022) *North Lincolnshire Local Plan: Publication (Draft) Addendum*

North Lincolnshire Council (2021) *North Lincolnshire Local Plan: Publication (Draft)*

North Lincolnshire Council (2020) *North Lincolnshire Local Plan: Preferred Options (Draft)*

North Lincolnshire Council (2019) *North Lincolnshire Open Space Study*.

North Lincolnshire Council (2017) *North Lincolnshire Local Plan: Issues and Options Report.*

North Lincolnshire Council (2016a) *Housing and Employment Land Allocations, North Lincolnshire Council.*

North Lincolnshire Council (2016b) *Lincolnshire Lakes Area Action Plan, North Lincolnshire Council.*

North Lincolnshire Council (2003) *North Lincolnshire Local Plan - Adopted Plan May 2003.*

Pellerin, S., Huot, J. and Côté, S.D. (2006) *Long-term effects of deer browsing and trampling on the vegetation of peatlands. Biological Conservation, 128* (3), *316-326.*

Ricardo Energy & Environment (2021) *Water Resource Management Plan 2019 Strategic Environmental Assessment Environmental Report* [online] Available at: https://www.yorkshirewater.com/media/2415/wrmp19-sea.pdf [Accessed 23rd January 2021].

Ricardo-AEA (2016) *The ecological effects of air pollution from road transport: an updated review*. Report commissioned by Natural England.

Rivera-López, A. & MacGregor-Fors, I. (2016) *Urban predation: a case study assessing artificial nest survival in a neotropical city*. Urban Ecosystems 19: 649.

Ross, K. and Liley, D. (2014) *Humber Winter Bird Disturbance Study*. Report for the Humber Management Scheme by Footprint Ecology.

Royal Haskoning (2006) *Coastal Squeeze, saltmarsh loss and Special Protection Areas. English Nature Research Reports Number 710* [Online] Available at: http://publications.naturalengland.org.uk/publication/62014 [Accessed 23rd January 2021]

The Planning Inspectorate (2018). *PINS Note 05 / 2018 Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman v Coillte Teoranta*. [Online] Available at: https://pinslibrary.org.uk/vufind/Record/22547 [Accessed: 31.07.19].

Therivel, R. (2009) *Appropriate assessment of plans in England*. *Environmental Impact Assessment Review, 29(4), 261-272*.

URS (2014) Lincolnshire Lakes Area Action Plan – Submission (Publication Draft): Habitats Regulations Assessment. Available online: https://m.northlincs.gov.uk/public/planningreports/LincolnshireLakes/LLAAP_Final_Option_&_Policies_HRA.pdf [date accessed 12th April 2022]

Yorkshire Water (2020) *Water Resources Management Plan* [Online] Available at: https://www.yorkshirewater.com/media/2411/water-resources-management-plan-2019.pdf [Accessed 23rd January 2021]

Offices at

Coleshill
Doncaster
Dublin
Edinburgh
Exeter
Glasgow
Haywards Heath
Isle of Man
Limerick
Newcastle upon Tyne
Newport
Peterborough
Saltaire
Skipton
Tadcaster
Thirsk
Wallingford
Warrington

Registered Office
1 Broughton Park
Old Lane North
Broughton
SKIPTON
North Yorkshire
BD23 3FD
United Kingdom

+44(0)1756 799919
info@jbaconsulting.com
www.jbaconsulting.com
Follow us:

Jeremy Benn Associates Limited

Registered in England 3246693

JBA Group Ltd is certified to:
ISO 9001:2015
ISO 14001:2015
ISO 27001:2013
ISO 45001:2018