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South East Lincolnshire Local Plan Habitats Regulations Assessment – Adoption Stage

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**South East Lincolnshire Local Plan
Habitats Regulations Assessment**

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Summary

A Habitats Regulations Assessment (HRA) is required in accordance with the Conservation of Habitats and Species Regulations 2017, as amended, in order to ensure that plans and projects do not adversely affect any European wildlife sites. A plan being produced by a public body is the subject of Habitats Regulations Assessment, and it is the responsibility of the public body to produce the assessment in accordance with the legislation, to inform any necessary changes to the plan, prior to its adoption.

This report provides the HRA of the South East Lincolnshire Local Plan at Adoption stage and has been prepared by Footprint Ecology on behalf of the South East Lincolnshire Joint Strategic Planning Committee. HRA work has been undertaken at earlier stages of plan preparation, supported by Natural England. At the Draft Plan stage the HRA recommended further evidence gathering in relation to recreation pressure at the coastal European sites, and this is incorporated within the appropriate assessment section of this report. At Publication, an addendum was produced to provide a record that all HRA recommendations had been incorporated into the Local Plan. The HRA report was updated again after Examination in Public to assess the Proposed Main Modifications arising from the Examination, and this brought the content of the previous addendum back into the report. A short list of further modifications were also checked, finding no relevant HRA matters.

This report has also been updated following a European Court of Justice Judgment that highlights the need for appropriate use of avoidance and mitigation measures at the correct stage of HRA. The screening table identifies where policies have been screened out from having any likely significant effect, and where modifications to the plan were needed to give clarity in relation to the legislation or provide project level HRA direction.

An appropriate assessment has been undertaken to consider the implications of additional housing in terms of recreation pressure on coastal European sites. Recommendations made put in place measures to mitigate for increased recreation pressure, in order to prevent adverse effects arising as a result of increased housing. These measures include a number of actions on or close to the European sites in order to manage and reduce risks, and also the provision of adequate recreation space, for the large allocations at Boston, Spalding and Holbeach. These measures have been incorporated into Policy 28: the natural environment. This HRA has been able to conclude no adverse effects on site integrity with the integration of these measures. At Adoption stage, with all recommendations incorporated, it is concluded that the plan is being adopted in accordance with the requirements of the Habitats Regulations.

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Acknowledgements

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1. Introduction and Background Context

- 1.1 This report is the Habitats Regulations Assessment (HRA) of the South East Lincolnshire Local Plan at Adoption stage, after Examination in Public and with the incorporation of all modifications identified as a result of Examination. The South East Lincolnshire area covered by the plan includes the administrative areas of both South Holland District Council and Boston Borough Council. The new local plan has been prepared jointly by the two authorities, along with Lincolnshire County Council, under a newly formed planning body; the South East Lincolnshire Joint Strategic Planning Committee. The plan is being prepared in accordance with Government policy, making sure that local policy for the South East Lincolnshire area is kept up to date and relevant. Government policy¹ indicates that local planning documents should be continually reviewed, and informed by current evidence on local economic, social and environmental needs, as well as national legislation, policy and practice guidance.
- 1.2 A HRA is one of a number of assessment and evidence documents that support plan preparation. The HRA considers the implications of the plan for European wildlife sites, in terms of any possible harm on wildlife interest that could occur as a result. HRA is required for both plans and projects. Development proposals arising from the plan will also therefore be the subject of HRA, and will be informed by this plan level HRA. Further explanation of the assessment process is provided below and in greater detail in Appendix 1.
- 1.3 When embarking on new HRA work, it is important to take stock and consider how well any previous measures put in place alongside current planning policy in order to protect European site interest may have worked, and what evidence there is available to support the continuation of such measures, or where they may need modification.
- 1.4 This HRA report has been prepared by Footprint Ecology, on behalf of the South East Lincolnshire Joint Strategic Planning Committee. It provides background information on the HRA process, gathers information on the European sites that may be affected by the plan, reviews previous work to protect the European sites, and assesses the implications of the plan for the European sites, in accordance with the step by step process of HRA.

Habitats Regulations Assessment process

- 1.5 Habitats Regulations Assessment is commonly abbreviated to 'HRA' and is the step by step process of ensuring that a plan or project being undertaken by, or permitted by a public body, will not adversely affect the ecological integrity of a European wildlife site. Where it is deemed that adverse effects cannot be ruled out, a plan or project must not proceed, unless exceptional tests are met. This is because European legislation, which is transposed into domestic legislation and policy, affords European sites the highest

¹ The National Planning Policy Framework, published in March 2012 by the Department for Communities and Local Government.

levels of protection in the hierarchy of sites designated to protect important features of the natural environment.

- 1.6 The relevant European legislation is the Habitats Directive 1992² and the Wild Birds Directive 2009³, which are transposed into domestic legislation through the Conservation of Habitats and Species Regulations 2017. These Regulations are normally referred to as the ‘Habitats Regulations.’ Legislation sets out a clear step by step approach for decision makers considering any plan or project. In England, those duties are also supplemented by national planning policy through the National Planning Policy Framework (NPPF). This national planning policy also refers to Ramsar sites, which are listed in accordance with the international Ramsar Convention. The NPPF requires decision makers to apply the same protection and process to Ramsar sites as that set out in legislation for European sites. Formally proposed sites, and those providing formal compensation for losses to European sites, are also given the same protection.
- 1.7 The duties set out within the Habitats Regulations apply to any public body or individual holding public office with a statutory remit and function, referred to as ‘competent authorities.’ The requirements are applicable in situations where the competent authority is undertaking or implementing a plan or project, or authorising others to do so. A more detailed guide to the step by step process of HRA is provided in this report at Appendix 1.
- 1.8 In assessing the implications of any plan or project, in this case a local plan, for European sites in close proximity, it is essential to fully understand the sites in question, their interest features, current condition, sensitivities and any other on-going matters that are influencing each of the sites. Every European site has a set of ‘interest features,’ which are the ecological features for which the site is designated or classified, and the features for which Member States should ensure the site is maintained or, where necessary restored. Each European site has a set of ‘conservation objectives’ that set out the objectives for the site interest, i.e. what the site should be achieving in terms of restoring or maintaining the special ecological interest of European importance.
- 1.9 The site conservation objectives are relevant to any HRA, because they identify what should be achieved for the site, and a HRA may therefore consider whether any plan or project may compromise the achievement of those objectives. Further information on European site conservation objectives can be found at Appendix 2 of this report.

The South East Lincolnshire area and the new Local Plan

- 1.10 The South East Lincolnshire Local Plan has been prepared by the South East Lincolnshire Joint Strategic Planning Committee, which is a partnership brought together under

² Council Directive 92/43/EEC

³ Council Directive 2009/147/EC

statute⁴ to act as the local planning authority for the South East Lincolnshire area, covering both the South Holland District and the Boston Borough, for the purposes of the preparation, adoption and monitoring of a joint local plan. The partnership therefore includes both South Holland and Boston Councils, along with Lincolnshire County Council. The plan period runs from 2011 to 2036, and will proceed through a number of reviews over that period, as required. The new plan is now at Adoption stage. The joint plan for the South East Lincolnshire area will update the current planning policy in place within individual plans the South Holland District and Boston Borough.

- 1.11 The South East Lincolnshire Local Plan advises that the area has a population of approximately 156,900 people across the two planning authorities, in 64,600 households. The land use is primarily agricultural, with extensive high value agricultural land. As noted in the Publication Draft of the local plan, horticultural crops and potato growing are critical to the economy of the area, and is one of the main crop growing locations in the UK. There are a number of towns and villages of historic importance; with the main towns being Boston and Spalding. The south East Lincolnshire coastline is dominated by the Wash Estuary, with saltmarsh and intertidal sand and mudflats. The Wash coastline has been the subject of progressive change through both accretion and artificial land reclamation, and has considerable sea defences. The international designations on the Wash are the main considerations within this HRA.

A positive approach to assessing the plan and informing its progression

- 1.12 Local plan making proceeds through a number of stages as the plan is developed and refined, with public consultation at key stages where statutory bodies, organisations, business and the public are able to contribute to the direction of the developing plan. HRA is an intrinsic part of plan making, identifying risks to European sites that may be posed by emerging policy approaches within the plan, and seeking solutions, where available, to enable sustainable development to meet the needs of an area whilst also protecting European sites. The conservation and enhancement of the natural environment is integral to sustainable development, and a plan should therefore be seeking to secure the long term viability of European sites as part of its function.
- 1.13 The HRA should be mindful of the objectives of the plan, and the plan should be mindful of the objectives for the European sites. As noted above, the European site conservation objectives are described in Appendix 2 of this report. The conservation objectives should not be compromised in pursuit of the plan objectives, and the HRA is therefore a mechanism by which plan options can be tested to ensure compliance with the legislation. HRA enables continual refinement of the plan, as it is progressed alongside plan preparation, and informs the next stage of plan making with recommendations for additions and modifications to the plan. The local planning

⁴ On the 5th July 2011, the South East Lincolnshire Joint Strategic Planning Committee Order 2011 [SI: 2011 No. 1455] came into force, creating the joint planning body responsible for the local plan.

authorities are then able to consider and embed the recommendations into the plan, or progress an alternative policy approach where solutions are not available.

- 1.14 This HRA report has proceeded through various iterations and has remained in draft until now, at the finalisation and adoption of the plan. It has been updated as required at the various stages of plan making, including at Examination where main modifications may be recommended by the Examining Inspector.
- 1.15 As described above, the South East Lincolnshire Joint Strategic Planning Committee is the competent authority responsible for the HRA. Acting as both plan maker and competent authority responsible for assessing the plan, Strategic Planning Committee is able to integrate recommendations made in this HRA report alongside policy formulation and refinement. Stages of HRA are therefore often revisited, in order to keep checking plan updates.
- 1.16 Where a competent authority is performing such a role for an individual project, for example where a local planning authority is considering a planning application, the project proposer is normally presenting the project to the decision maker in final form, leaving less scope for modification and revisiting the HRA. It is critical therefore that the plan level HRA provides the necessary recommendations to assist in policy formulation that gives a clear steer to development projects coming forward for authorisation.

2. Information and Evidence to Inform the HRA

- 2.1 This section of the report looks at the information available to inform the HRA. It includes information on the European sites within and in the vicinity of the South East Lincolnshire area, and checks a number of other plans and strategies for any additional information, including the HRAs of those documents. New evidence gathering in the form of coastal visitor surveys, commissioned in light of the conclusions of the HRA for the Draft Plan, is now complete and the findings now inform this HRA report.

European sites

- 2.2 There are a range of European sites within or near the South East Lincolnshire boundary, with Baston Fen SAC, the Wash & North Norfolk Coast SAC and the Wash SPA/Ramsar site all being at least partly within the area. In addition to these sites, the Nene Washes SPA/SAC/Ramsar site lies within 10km. Additional sites are found out to 20km. In undertaking a HRA it is necessary to gather information on the European sites that could be potentially affected by the plan or project.
- 2.3 An early iteration of the HRA prepared by the Council, screened a number of sites out from requiring any further consideration, and a number of sites were screened in because likely significant effects could not be ruled out. This HRA has included a re-check of all sites within 20km, to have certainty that the HRA has adequately considered all risks. It is noted that the previous HRA screened Rutland Water SPA and Ramsar site as being potentially affected by recreation pressure. This site is significantly out with the 20km zone, and although it is a popular recreation destination, it is a managed reserve and water park, with extensive visitor infrastructure. It is therefore not considered relevant to the HRA of the South East Lincolnshire Local Plan.
- 2.4 Table 1 below lists the sites out to 20km of the administrative boundary of South East Lincolnshire. Sites within the 20km zone have been initially considered in order to determine whether they are potentially relevant to this HRA, or whether there are no possible means by which the site could be affected. Sites that are potentially relevant are considered in the screening of the plan for likely significant effects in Section 3 of this report.

Table 1: European sites considered within previous HRA work and/or within 20km of South East Lincolnshire

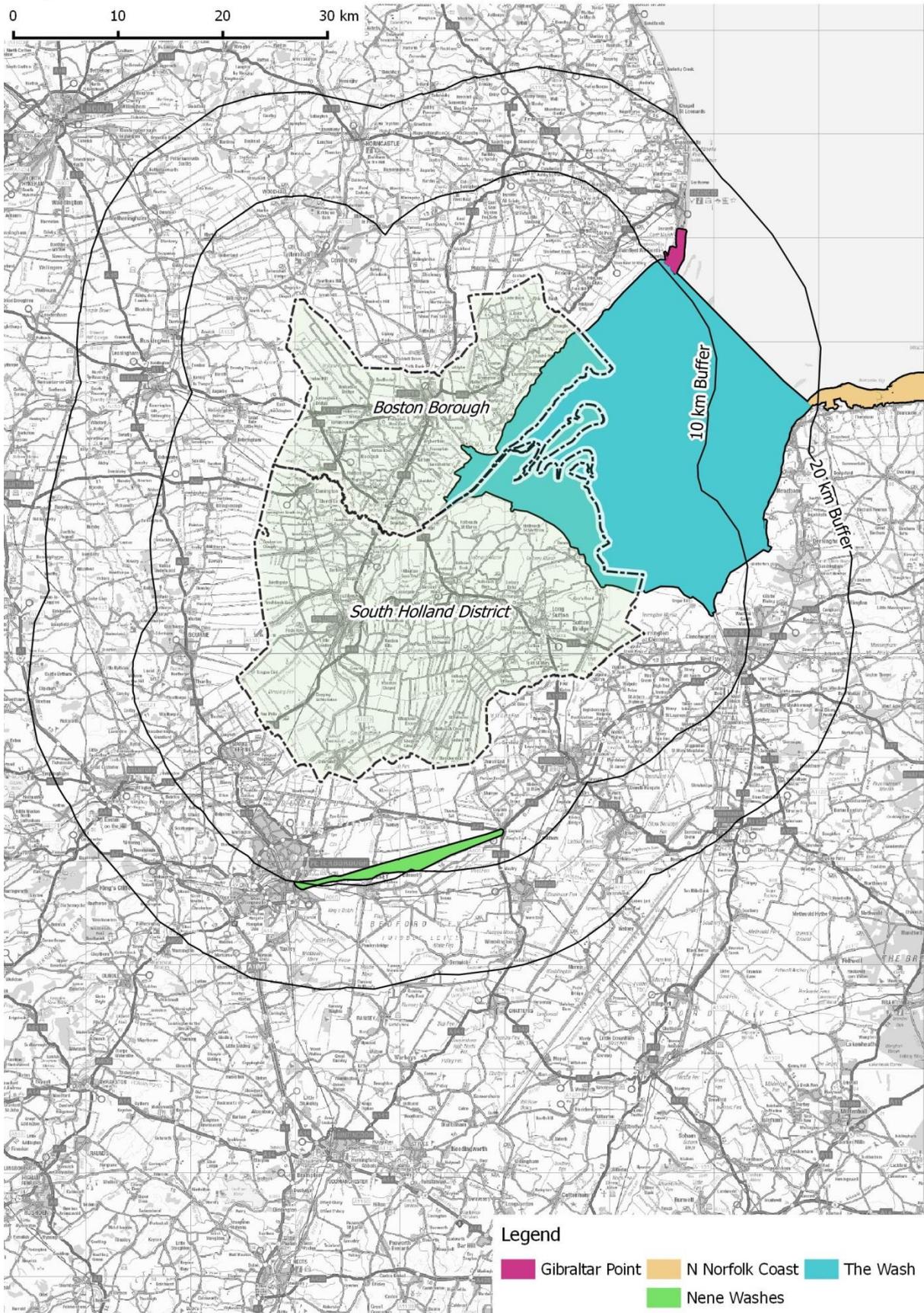
European Site	In plan area	In 10km	In 20km	Potential risks	HRA relevance
Baston Fen SAC	✓			Water quality, siltation	<u>Include</u> as although the previous HRA screened out this HRA should recheck latest information for certainty, given proximity.
The Wash & North Norfolk Coast SAC	✓			Recreation - pressure on habitat, water quality	<u>Include</u> in HRA due to proximity and previous HRA screening in for further assessment.
The Wash SPA/Ramsar	✓			Recreation – disturbance and pressure on habitat, water quality	<u>Include</u> in HRA due to proximity and previous HRA screening in for further assessment.
Nene Washes SPA/SAC/ Ramsar site		✓		Recreation – disturbance and pressure on habitat	<u>Exclude</u> as previous HRA screened out due to NE advice re limited visitor access. Situation remains unchanged.
Gibraltar Point SPA/Ramsar site			✓	Recreation – disturbance and pressure on habitat	<u>Include</u> in HRA due to previous HRA screening in for further assessment.
Saltfleetby – Theddlethorpe Dunes & Gibraltar Point SAC			✓	Recreation – disturbance and pressure on habitat	<u>Include</u> in HRA due to previous HRA screening in for further assessment.
North Norfolk Coast SPA/SAC			✓	Recreation – disturbance and pressure on habitat	<u>Exclude</u> as although just within 20km, there is a considerably longer drive, travelling around the Wash, to reach this site from SE Lincs.
Barnack Hills and Holes SAC			✓	Recreation – disturbance and pressure on habitat	<u>Exclude</u> as although previous HRA screened in due to potential recreation issues, the site is a managed NNR, and distance and small size means it is unlikely to have a significant draw other than from local residents.
Grimsthorpe SAC			✓	Air Quality	<u>Include</u> in HRA due to current unknown risks relating to air pollution. NE advised that air quality was not an issue for the local plan, but there may be opportunities in relation to this matter that should be pursued through the local plan.
Ouse Washes SAC/Ramsar			✓	Recreation – disturbance and pressure on habitat	<u>Exclude</u> as this fen is a reserve that is managed for access by nature conservation organisations WWF/RSPB
Orton Pit SAC			✓	Water quality, Recreation – disturbance	<u>Exclude</u> as a pond on the edge of a large urban area, being south of Peterborough. Visitors from SE Lincs unlikely to be

European Site	In plan area	In 10km	In 20km	Potential risks	HRA relevance
				and pressure on habitat	significant given location, and any issues will be far more localised.
Roydon Common & Dersingham Bog SAC/Ramsar sites (2 separate sites)			✓	Recreation – disturbance and pressure on habitat	<u>Exclude</u> - Footprint Ecology’s work on recreation pressure on Norfolk sites included visitor surveys, with a survey point at Roydon. Found very few interviewees lived beyond 5km from the site. Pressure from local residents, particularly for daily dog walking is an issue that local development should be considering. From 25 interviews all were Norfolk residents apart from a person from London.

2.5 Maps 1-3 show the SPAs, SACs and Ramsar sites, with 10 and 20km zones indicated. Map 1 illustrates the SPAs, Map 2 the SACs and Map 3 the Ramsar sites. For the purposes of this report, all sites are referred to as European sites, noting that SPAs and SACs are European sites under the European Directives and domestic Habitats Regulations, but also that Ramsar sites are treated as European sites as a matter of Government policy⁵.

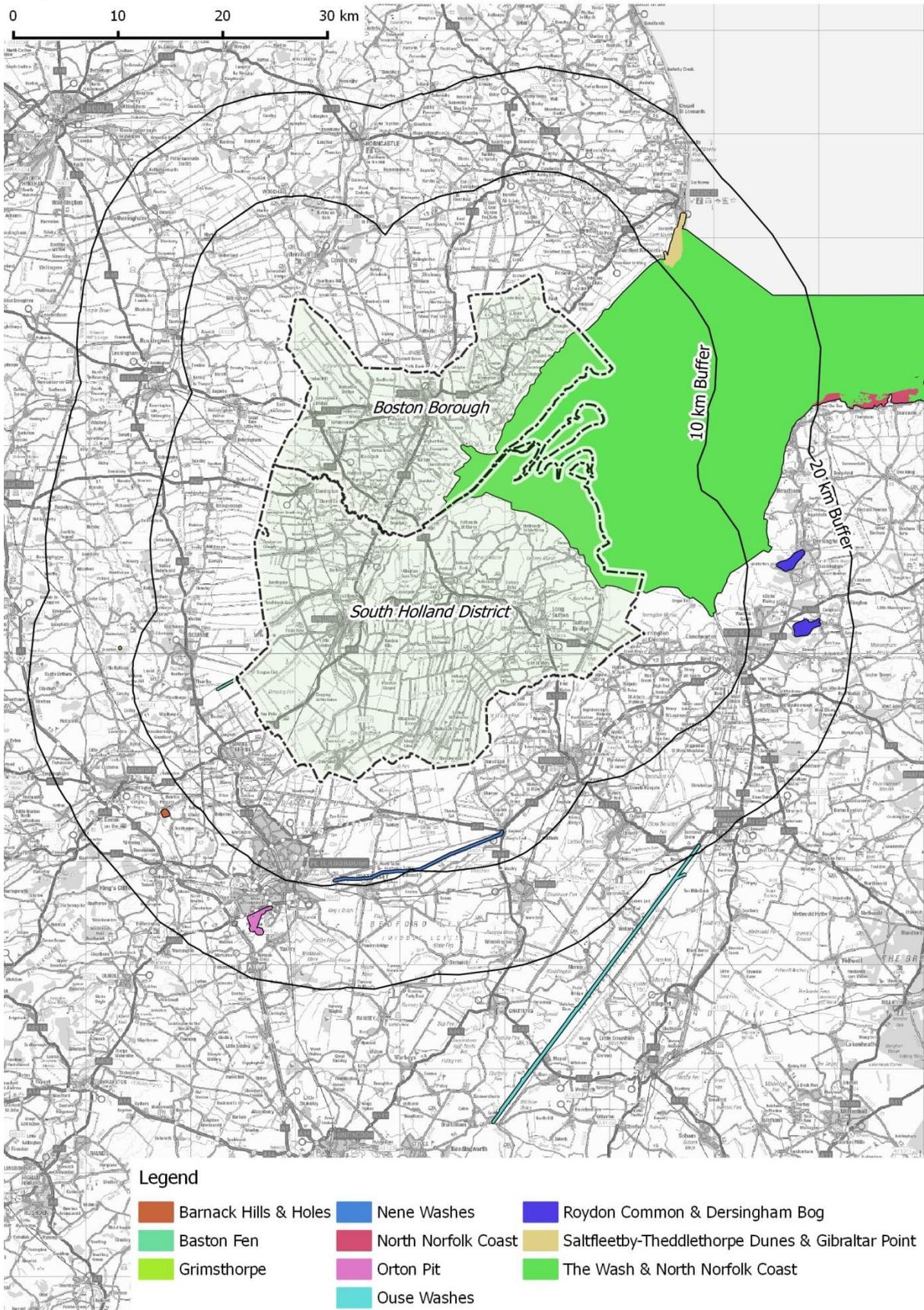
⁵ Paragraph 118 of the National Planning Policy Framework, published in March 2012 by the Department for Communities and Local Government

Map 1: SPA sites within a 20 km radius of Boston Borough and South Holland District.



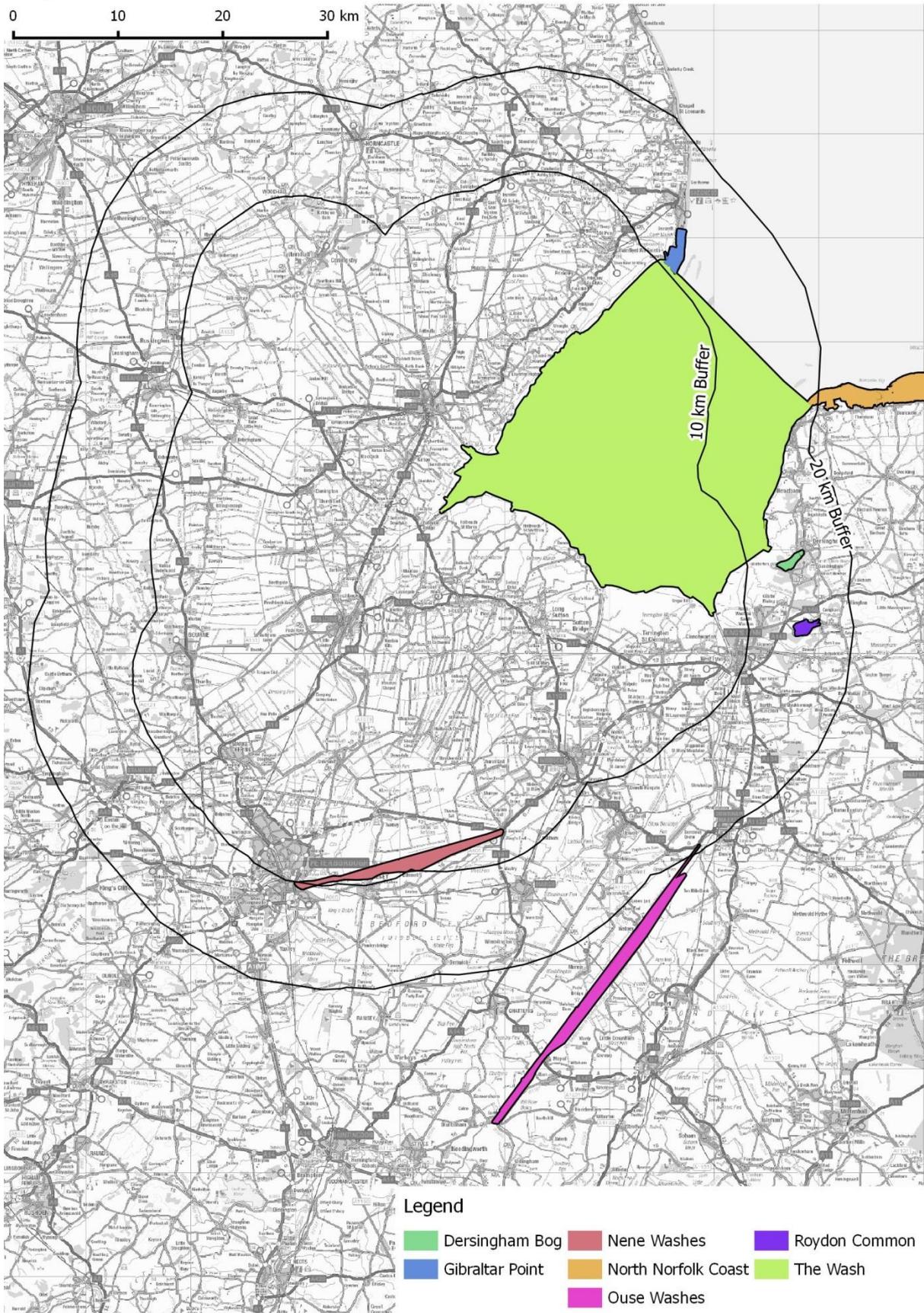
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Map 2: SAC sites within a 20 km radius of Boston Borough and South Holland District.



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Map 3: Ramsar sites within a 20 km radius of Boston Borough and South Holland District.



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Previous Habitats Regulations Assessment work

- 2.6 Prior to the preparation of this HRA report, the local plan has proceeded through previous plan making stages with public consultation. Initially a Preferred Options document was prepared in 2013, followed by a Draft Plan in early 2016. In light of the comments received on the draft plan, a Publication Draft was prepared. After Examination in Public, two rounds of modifications then informed the final plan for adoption.
- 2.7 Sustainability Appraisal (SA) is an additional and separate assessment to HRA, and forms part of the local plan assessment and evidence base. The SA does consider environmental issues, and therefore has some affinity with the HRA. The SA work undertaken in 2012 consisted of a draft scoping report, to inform the development of policies. This also included some preparatory work in relation to HRA, and the SA scoping report advises that a HRA screening opinion had been sought from Natural England. The SA scoping report stated that the HRA would be undertaken *“at a time when options for development policies actually emerge and are clear and the likely significance of these emerging policies and their impact on European sites can be judged with fuller information.”*
- 2.8 An initial screening of was undertaken 2013 of the Strategy and Policies document at Preferred Options stage. Following this, the Joint Strategic Planning Committee made a number of changes to how the development of plan policies would be progressed, including opting for a single plan rather than separating the site allocations from the strategic policies. The resultant single Draft Plan, encompassing strategic policies and allocations, was then the subject of HRA in January 2016, with the assessment report written by the Joint Strategic Planning Committee.
- 2.9 The HRA undertaken for the Draft Plan identified and assessed a number of potential issues that could occur as a result of the plan and have implications for European sites. The issues considered were land take, hydrology, water quality, air quality, recreational pressure and other potential effects that may occur due to proximity with European sites and the consequential increased urbanisation.
- 2.10 The assessment concluded that all potential issues could be screened as having ‘no likely significant effect’ with the exception of recreation pressure. Natural England, as the specialist advisor on HRA, and statutory consultee at the appropriate assessment stage, advised on a number of HRA drafts in 2015 and concurred with the conclusions being drawn, advising that additional evidence gathering would be beneficial in relation to recreation pressure. The January 2016 HRA provided a screening assessment of all policies in the Draft Plan, and also a record of previous conclusions from the initial HRA screening in 2013 at Preferred Options stage, before proceeding through the subsequent updates alongside the plan making stages.

Other plans and strategies of potential relevance to the HRA

- 2.11 The following potential sources of additional evidence have been checked for any relevant information to inform this HRA.

Lincolnshire Minerals and Waste Local Plan

- 2.12 The county level Minerals and Waste Local Plan is formed of a Core Strategy and Development Management Policies document and a Site Locations document. The adopted Core Strategy and Development Management Policies Document provides the criteria for the determination of minerals and waste proposals. The Site Locations document for minerals and waste sites was recently adopted in December 2017. The supporting HRA for the Site Locations document raises concerns in relation to Baston Fen SAC and the potential for water pollution as a result of mineral extraction. The SAC is not in close proximity to any development proposed within the South East Lincolnshire Local Plan and the potential effects highlighted by the Site Locations HRA are specific to the nature of minerals development, which could lead to hydrological changes as a result of alterations to hydrological processes where mineral is removed.

Marine Plans

- 2.13 The Marine and Coastal Access Act 2009 introduced a number of additional requirements for marine and coastal planning in the UK, including for the first time a formal marine planning system with the preparation of marine plans, to be written in accordance with the Marine Policy Statement. The Marine Management Organisation (MMO) is the statutory body with delegated powers from Defra to prepare the marine plans. The HRA for the East Marine Plans (Inshore and Offshore) concluded that the two plans for the East would not lead to adverse effects on site integrity for the European marine sites. This conclusion is based on recognition of the very high level of policy within these strategic plans, and the assessment of available mitigation measures for marine projects that may come forward. The plans do not support or give weight to individual projects, but rather are broadly supportive of development types, such as renewable energy generation, for example.
- 2.14 Whilst the marine plans do not highlight any relevant areas for concern in relation to the South East Lincolnshire local plan, it will be important for the planning authorities to be aware of marine projects coming forward under the new marine plans, and work collaboratively with the MMO to ensure that any project level HRAs comprehensively cover cumulative impacts.

England Coast Path

- 2.15 An additional commitment within the Marine and Coastal Access Act is the requirement to put in place a continual coastal path around the English coast. Natural England is currently progressing the England Coast Path, broken down into 'stretches' around the coast. The relevant stretches for South East Lincolnshire are stretches 9 and 10; Hunstanton to Sutton Bridge and Sutton Bridge to Skegness. Stretch 9 is at the 'Develop and Propose' stage, which means that Natural England is currently working on the ground to identify and assess potential route options and stretch 10 has progressed further to the publication of the proposals, but is yet to be finally determined.
- 2.16 It is recommended that the South East Lincolnshire Joint Strategic Planning Committee regularly liaises with the England Coast Path team at Natural England to be satisfied that the plan can proceed with any mitigation measures complementing those that will

be in place for the England Coast Path stretches around the Wash. Measures should work together and not raise any conflict. Early and continued dialogue would therefore be beneficial.

The Wash Shoreline Management Plan

- 2.17 This plan, produced by the Environment Agency in collaboration with a number of partners, highlights that the Wash European sites will be affected by coastal squeeze, and that this is primarily as a result of maintaining existing flood defences. The Environment Agency has comprehensive plans around the coast for compensatory habitat provision where designated sites are predicted to be affected by coastal defences, and the Wash shoreline Management Plan confirms that compensatory habitat provision will be provided.
- 2.18 This is of relevance to the South East Lincolnshire Local Plan as any project level HRA will need to assess impacts on compensatory habitat provision in addition to designated sites. Compensatory habitat is protected as a matter of Government policy, and management of compensatory habitat should be undertaken with a view to bringing the site into the European site network in due course. Progression on compensatory habitat provision for the Wash should therefore be regularly checked by the Joint Strategic Planning Committee.

The Wash Estuary Project

- 2.19 This project was a partnership initiative for organisations around the Wash, and a number of activities were progressed. It is understood that the partnership is no longer in existence due to funding issues. The partnership produced a number of helpful documents, including a Green Infrastructure study, that should be referred to in order to inform mitigation recommendations made in this HRA. Notably, this should assist with opportunities for new green infrastructure to link with existing ecological networks, to maximise biodiversity value as well as provide European site mitigation.

Anglia Water - Water Resource Management Plan

- 2.20 Natural England sought assurances from the South East Lincolnshire Joint Strategic Planning Committee that water supply could be secured for the plan period without posing any risk to European sites. Anglian Water responded to that concern by providing the South East Lincolnshire Joint Strategic Planning Committee with key information from their Water Resource Management Plan, which sets out how a sustainable supply will be achieved.
- 2.21 Anglian Water advised that *“To maintain the balance between supply and demand we promoted and have since built, the Covenham to Boston pipeline. The capacity of this is 16 millions litres per day – enough to meet our growth related needs in SE Lincolnshire through to the mid 2030’s, and probably well beyond this date. Therefore Anglian Water can confirm that there is sufficient water resource to serve the proposed scale of housing development.”* The correspondence is available in the Appendices to the HRA of the Draft Plan.

- 2.22 It is therefore concluded that water resources are not an issue for the HRA and can now be screened out.

Additional evidence gathering for the HRA

- 2.23 In light of the emerging conclusions within the early versions HRA of the Draft Plan, which was published in January 2016, and in light of advice being given by Natural England on those early drafts of the HRA, the planning officers from the local planning authorities commissioned Footprint Ecology to undertake visitor surveys in order to increase understanding of the potential recreation pressure on coastal sites; The Wash and Gibraltar Point.
- 2.24 Surveys were undertaken by Footprint Ecology at 12 locations around the Wash and Gibraltar Point, both in 2015 and 2016. Additionally the 2016 survey was expanded to include visitor surveys at RSPB reserves. This new evidence is discussed in detail in the appropriate assessment of the HRA at Section 4 of this report.

3. Screening the plan for likely significant effects

- 3.1 Following an explanation below of what constitutes a likely significant effect and what this stage of the HRA should consider, this section of the HRA screens both the European sites and the plan itself.

What constitutes a likely significant effect?

- 3.2 At the screening stage of HRA, there is the opportunity to identify changes to the plan that could be made to avoid risks to European sites. Any requirement for assessing the effectiveness of changes should be made at the appropriate assessment stage. The screening for likely significant effects, as described in Appendix 1, is an initial check to identify risks and recommend any obvious changes that can strengthen policy or completely avoid risks with the removal of potentially harmful aspects, for example. Where risks cannot be avoided, a more detailed assessment is undertaken to gather more information about the likely significant effects, and tests any measures to mitigate for those effects, which is the appropriate assessment stage of HRA.
- 3.3 The screening check of each aspect of the plan is essentially looking for two things; whether it is possible to say with certainty that there are no possible impacts on European sites, or whether, in light of a potential risk, adequate clarifications, corrections or instructions for the development project HRA are built into the policy and/or its supporting text, which serve to avoid any likely impacts. If one of these categories is met, it enables a competent authority to screen out from further stages of assessment. Where there is the potential for European sites to be affected, and mitigation measures require further scrutiny, more detailed consideration is required and this then screens those aspects of the plan in to the appropriate assessment.
- 3.4 A possibility of a significant impact should trigger the need for more detailed assessment, where the more complex analysis should take place. Unfortunately, there has been an increasing trend in trying to make detailed assessments to rule out the

likelihood of significant effects, and this demonstrates a failure to understand the tests within the Habitats Regulations Assessment process. The screening stage identifies whether there is a possibility of an impact, and then that possibility is assessed in detail to determine whether there is adequate certainty to conclude that the impact will not lead to an adverse effect on the integrity of the European site. The latter is a precautionary approach, and follows the principles established in case law relating to the use of such a principle in applying the European Directives and domestic Habitats Regulations.

- 3.5 In particular, the European Court in the ‘Waddensee’ case⁶ refers to “*no reasonable scientific doubt*” and the ‘Sweetman’ case⁷ the Advocate General identified that a positive conclusion on screening for likely significant effects relates to where there “*is a possibility of there being a significant effect*”. An additional recent European Court of Justice Judgment in 2018, the ‘People over Wind’ case⁸ clarified that the need to carefully explain actions taken at each HRA stage, particularly at the screening for likely significant effects stage. The Judgment is a timely reminder of the need for clear distinction between the stages of HRA, and good practice in recognising the function of each. The screening for likely significant effects stage should function as a screening or checking stage, to determine whether further assessment is required. Assessing the nature and extent of potential impacts on European site interest features, and the robustness of mitigation options, should be done at the appropriate assessment stage. This HRA report has been updated in June 2018 in light of this Judgment. Explanatory text previously included in the screening for likely significant effects section has been moved to an appropriate assessment section. The explanation of the approach taken has not changed, rather the section in which it appears has been updated.
- 3.6 All aspects of the emerging local plan that influence sustainable development for the South East Lincolnshire area are checked for risks to European sites; the likely significant effects. A likely significant effect is concluded where there is a potential pathway between an impact and the European site interest feature, by which the interest feature could then be significantly affected. This is often referred to as an ‘impact pathway.’ There could be clear evidence of risk, or rather there could be a scientific and plausible justification for concluding that a risk is present, even in the absence of direct evidence. The latter is a precautionary approach, and follows the principles established in case law referred to above.
- 3.7 Potential impact pathways are considered in turn below. A detailed policy by policy check to screen each policy, having regard for potential impact pathways, conservation objectives and current site circumstances and sensitivities then follows in Table 2. This has been repeated for each stage of plan making.

⁶ European Court of Justice case C - 127/02

⁷ European Court of Justice case C - 258/11

⁸ European Court of Justice case C – 323/17

European sites and impact pathways

- 3.8 In assessing the implications of any plan or project for the full suite of European sites, it is essential to fully understand the ecology and sensitivity of the sites, in order to identify how they may be affected. Every European site has a set of ‘interest features,’ which are the ecological features for which the site is designated or classified, and the features for which Member States should ensure the site is maintained or, where necessary restored. As previously highlighted and detailed in Appendix 2, each European site also has a set of ‘conservation objectives’ that set out the objectives for the site interest, i.e. what the site should be achieving in terms of restoring or maintaining the special ecological interest of European importance. As this assessment is progressed, the consideration of how the local plan may affect the achievement of each site’s conservation objectives underpins all assessment decisions and conclusions drawn.
- 3.9 European sites are at risk if there are possible means by which any aspect of a plan can, when being taken forward for implementation, pose a potential threat to the wildlife interest of the sites. This is often referred to as the ‘impact pathway’ as it is an identifiable means by which the plan or project could potentially affect the European site. A typical example would be where implementation of a policy could result in siltation to a watercourse, upstream from a SAC. The silt could travel downstream to the SAC and have implications for the European site interest features. The screening for likely significant effects would identify a plausible risk. It would consider how the risk could be avoided, and where avoidance measures cannot be identified and modifications to the plan made, the HRA would proceed to a more detailed level of assessment to gather more information on the nature and extent of the impact, and to what extent that may affect the European site interest.
- 3.10 The European sites considered to be of relevance to this HRA are detailed here, with interest features listed. These sites are those set out in table 1 as sites to include in the HRA. These sites are deemed to be ones where there could potentially be an impact pathway, and should therefore form part of the screening stage of this HRA. Threats to the site are found in the Site Improvement Plan (SIP) for each site. The SIPs are prepared by Natural England in conjunction with a wide range of partner organisations, such as the Environment Agency and Internal Drainage Boards, for example. The SIPs can provide helpful information for HRAs because they highlight current site sensitivities and therefore the types of impacts that may have significant effects on site interest features. The key facts for each site are recorded below, including a discussion on possible impact pathways and development related issues.

Baston Fen SAC

- 3.11 Baston Fen SAC is a large drainage channel with diverse submerged aquatic flora, providing habitat for high densities of Spined Loach (*Cobitis taenia*), and is one of four key sites for this species in the UK. The SIP refers to siltation as a main threat to the site and notes the need for dredging to be programmed, which will need careful planning in light of the risks this itself could pose for the interest feature. The SIP also highlights the

need for population and distribution monitoring to determine reasons for any changes in numbers.

- 3.12 It is understood, from the HRA of the Lincolnshire Minerals and waste Plan undertaken in 2015, that the Environment Agency has investigated discharges from works to the Grave Drain, which is linked to the SAC and found that there wasn't any cause for concern.
- 3.13 Natural England concurred with the conclusions of the January 2016 HRA for the Draft Plan, which were that Baston Fen was unlikely to be significantly affected by the local plan. Natural England further advised that project level HRA should consider siltation and water quality issues, and that the plan should incorporate a sustainable drainage policy.
- 3.14 This HRA at therefore advises that at a plan level, the inclusion of policy in relation to securing sustainable drainage should ensure that risks are highlighted at the project level. Project level HRA should have particular regard for siltation and water quality impacts. Policy wording in relation to sustainable drainage schemes was requested by Natural England, and on checking on the Publication Draft of the plan it is noted that a number of polices and in particular the large housing site allocations, make reference to sustainable drainage requirements. Baston Fen SAC is therefore screened out at the likely significant effects stage.

Grimsthorpe SAC

- 3.15 Grimsthorpe SAC is a former limestone quarry, providing calcareous substrates for calcareous grassland and scrub, with large colonies of early gentian (*Gentianella anglica*), providing the most northerly location for this species in the UK. Atmospheric nitrogen deposition is listed as the key threat in the SIP. The sources of atmospheric nitrogen are not fully understood, hence the action within the Site Improvement Plan for Natural England to investigate. Natural England advised in their response to the January 2016 HRA for the Draft Plan that air pollution could be screened out for the plan level HRA, but that at the project level, HRAs should ensure that air quality is not compromised.
- 3.16 This HRA therefore advises that agricultural development for new or extended pig and poultry units should not be located in proximity to sensitive sites, and the planning authorities should work closely with the Environment Agency, particularly to seek twin tracking of planning and Environmental Permit Applications where there are potential risks, to ensure that HRAs for both applications are informed by the other. Collaborative working between competent authorities is necessary where a project has multiple permissions. It is suggested that additional wording is added to Policy 30, as detailed in the screening table below, to this effect.
- 3.17 With these considerations, and additional wording at Policy 25, it is concluded that Grimsthorpe SAC can be screened out at the likely significant effect stage.

The Wash & North Norfolk Coast SAC, The Wash SPA/SAC/Ramsar site

- 3.18 The full citations for these sites can be found at Appendix 3. The Wash & North Norfolk Coast SAC is designated for a range of internationally important intertidal habitats, coastal lagoons and its population of Harbour Seal (*Phoca vitulina*) and Otter (*Lutra lutra*). The intertidal areas are vast and access to these is at a low density. The coastal lagoons are primarily along the North Norfolk Coast, such as at Salthouse, rather than the Lincolnshire side of the site. The SIP does not identify habitat deterioration as a threat.
- 3.19 It is known from a good understanding of the site that both Harbour Seal and Otter have the benefit of extensive habitat away from areas of disturbance.
- 3.20 It is concluded that the SAC, and habitat and non-avian species elements of the Ramsar listing can be screened out at likely significant effects stage of HRA, but that there should be continuing liaison with Natural England for future plan reviews.
- 3.21 The Wash Estuary SPA is classified because the saltmarsh and mudflat habitat draws a renowned and internationally important bird community. Land outside the site boundary is also important as functionally linked land because some species also utilise agricultural fields around the estuary for high tide roosting. During earlier stages of HRA for the plan, Natural England raised concerns relating to the use of functionally linked land by Pink-Footed Geese (*Anser brachyrhynchus*), and those sites have now been removed from the plan as allocations.
- 3.22 The SIP highlights recreational disturbance as a key threat, and a number of actions are recommended, notably focusing on partnership working and developing strategies to prevent adverse effects. The SPA and bird features of the Ramsar site have been previously highlighted as of concern in earlier HRA iterations by Natural England, leading to the commissioning of visitor survey work to inform this HRA at Publication Draft stage.
- 3.23 This site is therefore taken to appropriate assessment, in terms of the SPA and bird interest of the Ramsar site, in the following section of this report.

Saltfleetby – Theddlethorpe Dunes & Gibraltar Point SAC, Gibraltar Point SPA/Ramsar site

- 3.24 The full citations for these sites can be found at Appendix 3. For the SAC the consideration primarily focuses on Gibraltar Point as the Saltfleetby to Theddlethorpe Dunes are approximately 25km to the north. The SAC at Gibraltar Point is managed as a reserve by Lincolnshire Wildlife Trust and has the benefit of visitor infrastructure to deal with the protection of dune habitats. The SIP for the SAC identifies inappropriate site management as an issue for the SAC, and this should be rectified through the NNR management plan for the site. Recreation pressure is not referred to, and the fact that the dunes are accreting spreading, thus creating new habitat indicates that recreation is not currently an issue for the SAC. However, it is advised that liaison with the Wildlife Trust and Natural England should be on going to ensure that future iterations of the plan HRA, and project level HRAs are fully informed of any potential concerns.

- 3.25 For the SAC, and habitat features of the Ramsar site, it is concluded that the site can be screened out at the likely significant effects stage.
- 3.26 The SPA and bird features of the Ramsar site have been previously highlighted as of concern by Natural England, leading to the commissioning of visitor survey work to inform this HRA at Publication Draft stage.
- 3.27 As noted in Appendix 2, Natural England is progressing a project to develop detailed supplementary advice to underpin the overarching conservation objectives for European sites. Gibraltar Point SPA now has the benefit of supplementary advice produced by Natural England, which refers to the fact that “the Lincolnshire Wildlife Trust has identified disturbance as having an impact on the features of the site.”
- 3.28 This site is therefore taken to appropriate assessment, in terms of the SPA and the bird interest of the Ramsar site, in the following section of this report.

Screening table

- 3.29 Table 2 takes each policy in turn and considers whether there is a likely significant effect. It identifies where modifications to the plan could be made, because of a need for clarifications, corrections or instructions for the development project HRA, or where more detailed assessment at appropriate assessment is required. It is a record of assessment for the competent authority, and informs the next stage of plan making. The screening table, as with any part of this assessment, is not finalised until the local plan itself is finalised, and can be revisited as necessary as any further modifications to the plan are proposed. Table 2 provides a record of screening with recommendations, and then a record of a check that those recommendations were then taken forward at Publication stage (previously presented in a separate addendum, but now incorporated). A final column in the table now records the re-check at Proposed Main Modifications after Examination in Public. Following consultation on the Main Modifications, an additional two main modifications were agreed and resulted in a further Main Modifications consultation in November 2018, both were checked and did not pose any additional risk or introduce any new impact pathway for any European site. A record has been added to the end of the screening table (Table 2) below.
- 3.30 Where likely significant effects can be avoided, the risk is not such that further assessment of impacts is required, but rather that the impacts can be simply avoided with straightforward clarifications, corrections or instructions for the development project HRA, which remove any uncertainty. In order to ensure conformity with the recent Judgment referred to above, the screening for likely significant effects table includes additional explanation where required, as to why the action recommended within the table has been proposed at the screening stage, because it constitutes a clarification rather than ‘mitigation’ that should be considered within an appropriate assessment.
- 3.31 Where risks to European sites are identified but further scrutiny of information, further evidence gathering or assessment of the nature and extent of impacts is required, the

screening table records a recommendation for those aspects of the plan to be taken to the appropriate assessment.

Table 2: Screening the South East Lincolnshire Local Plan at Proposed Main Modifications (after Examination in Public), for likely significant effects

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
Introductory text	To set context for publication draft version of the Local Plan, which will run up to 2036, including its place alongside other planning documents (Lincolnshire Minerals and Waste Plan, neighbourhood plans and SPDs)	LSE	All	Reference to HRA and SA at 1.3 lacks detail and explanation. 'Cumulative effects' are referred to at 1.3.2 as being covered by monitoring. This sentence is confusing as cumulative effects will form part of the HRA. More information on effective monitoring criteria required here.	1.32 Reword to "A Habitats Regulations Assessment has also been undertaken to ensure that the Local Plan does not give rise to any adverse effects on European sites. Risks have been mitigated for with a number of measures within the plan, notably in relation to recreation pressure on coastal European sites. The Annual Monitoring Report will seek to build on evidence currently available, in order to continually refine the mitigation being applied through the plan and development projects coming forward."	Suitable text now incorporated into section 1.2 of the Plan at Publication. No LSE can now be concluded. Recommendations are for text strengthening and clarity to secure better conformity with the Habitats Regulations, therefore acceptable at the screening stage, no assessment of mitigation required.	No further action required
Context	Highlights that the Local Plan is to be consistent with	No LSE	All	Listed plans and strategies and their	N/A	N/A	No further action required

South East Lincolnshire Local Plan HRA

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
	a range of other plans and strategies.			HRAs have been checked for relevance to this HRA - no additional issues identified.			
Spatial portrait	Pen picture of the South East Lincolnshire area	No LSE	All	2.3.2 refers to The Wash and international wildlife value	N/A	N/A	No further action required
Vision	A vision for the area to be achieved over the plan period	No LSE	All	Includes seeking to have a protected and enhanced natural environment.	N/A	N/A	No further action required
Strategic priorities	12 strategic priorities for the plan to be achieved over the plan period.	No LSE	All	Relevant European site conservation and enhancement references included under sustainable development and the environment.	N/A	N/A	No further action required
Policy 1: Presumption in favour of sustainable development	Refers to adherence to the NPPF and the resumption in favour of sustainable development	No LSE	All	Policy text includes exceptions and this would include where adverse effects on European sites cannot be prevented. Presumption in favour does not include where there is LSE – NPPF allows for this.	N/A	N/A	Now removed. No further action.
Policy 1: Spatial Strategy	Directs development to the sub-regional centres of	No LSE	All	Does not promote a quantum of	N/A	N/A	No further action required

South East Lincolnshire Local Plan HRA

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
	Boston and Spalding, along with nine main service centres			development, only a hierarchical approach. Other policies have identified risks below in relation to the quantum of growth.			
Policy 2: Development management	Qualitative requirements for development proposals	No LSE	All	Includes text relating to sustainable drainage (as previously requested by NE) and natural environment impacts. Supporting text has comprehensive detail in relation to sustainable drainage.	N/A	N/A	Reference to previously allocated areas for minerals safeguarding. Does not allocate. No further action
Policy 3: Design of new development	A qualitative policy to encourage high quality and sustainable design	No LSE	All	Qualitative only, does not promote development that may pose a risk to European sites. Includes positive wording in relation to biodiversity enhancement.	N/A	N/A	No further action required
Policy 4: Approach to flood risk	Directs development to low flood risk areas	No LSE	All	Project level HRAs will need to consider the potential risk to European sites from flooding and/or the installation, modification or	N/A	N/A	No further action required

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
				maintenance of flood defences.			
Policy 5: Meeting physical infrastructure and service needs	Requires adequate infrastructure	No LSE	All	Supporting text refers to green infrastructure. This can form part of mitigation measures for recreation pressure on European sites, so this policy could be used for supporting this.	N/A	N/A	No further action required
Policy 6: Developer contributions	Explains the use of CIL and S106 to provide funds for infrastructure and lists what may be included in the definition.	No LSE	All	Reference is made to open space and natural habitats in the list, thus allowing for mitigation to be funded via CIL and/or S106 if necessary at the project level. Note that viability considerations would not allow for reduced mitigation provision, but rather the LPA would need to find alternative means of securing mitigation.	N/A	N/A	No further action required
Policy 7: Improving SE Lincolnshire's employment land portfolio	Lists employment areas supported by the plan	No LSE	All	The list has been checked and does not raise any screening concerns in relation to European sites.	N/A	N/A	No further action required

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
				However, project level HRA will be required to check for impact pathways and ensure no adverse effects.			
Policy 8: Prestige employment sites	Identifies which sites from the list in policy 7 are prestige sites requiring masterplans	No LSE	All	These sites form part of the previously assessed list in policy 7. Requirement for a masterplan will strengthen protection as each masterplan will need to have a HRA	N/A	N/A	New policy checked, no further action required
Policy 9: Promoting a stronger visitor economy	Identifies the importance of tourism for the economy, and priorities tourism development in the towns	LSE	The Wash and Gibraltar Point re recreation pressure	Some tourism development could lead to significant effects, particularly if adding recreation pressure. The policy has a list of requirements but does not refer to the natural environment/designated sites.	Text should be added to the list of requirements to include “there is adequate evidence to demonstrate that the natural environment will not be adversely affected” This provides a steer to project level HRA.	In paragraph 4.2.3 of supporting text “ensures no adverse impacts upon landscape, heritage or biodiversity” is present. No LSE can now be concluded. This is a clarification only, to inform and steer project level HRA. It is not mitigation	No further action required

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
Policy 10: Meeting objectively assessed housing needs	Housing numbers split by LPA for delivering 'at least 18,300 dwellings' over the plan period	LSE	The Wash and Gibraltar Point re recreation pressure	The quantum of housing is such that there is a potential risk to coastal sites with increased recreation.	AA to assess the new visitor survey information for coastal sites, and to consider potential effects arising from increased recreation. Consideration then given to necessary mitigation in Chapter 7 of the plan (Environment)	requiring assessment. Following completion of the AA, Footprint Ecology and the authority discussed suitable amendments to Policy 28 – The Natural Environment, and its supporting text, in order to prevent adverse effects on site integrity at the Plan level. Recommendations now fully incorporated into Policy 28 and supporting text. AEOI now prevented with mitigation measures in text relating to recreation.	No further action required AA undertaken. Slight increase in housing over plan period does not alter AA conclusions.

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
Policy 11: Distribution of new housing	Settlement allocations for delivering the new housing	LSE	The Wash and Gibraltar Point re recreation pressure	The quantum of housing is such that there is a potential risk to coastal sites with increased recreation.	AA to assess the new visitor survey information for coastal sites, and to consider potential effects arising from increased recreation. Consideration then given to necessary mitigation in Chapter 7 of the plan (Environment)	Following completion of the AA, Footprint Ecology and the authority discussed suitable amendments to Policy 28 – The Natural Environment, and its supporting text, in order to prevent adverse effects on site integrity at the Plan level. Recommendations now fully incorporated into Policy 28 and supporting text. AEOI now prevented with mitigation measures in text relating to recreation.	No further action required AA undertaken. Slight changes to housing distribution, and additional sites Fis017a, Bic004, Mou035 do not alter AA conclusions.
Policy 12: Reserve sites	A series of reserve sites for housing delivery, to come forward in the event that	LSE	The Wash and	The quantum of housing is such that there is a potential risk to coastal	This is a new policy at Proposed Main Modifications stage,	N/A	New policy checked, no further action

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
	allocated sites do not deliver housing at the expected rate.		Gibraltar Point re recreation pressure	sites with increased recreation. This remains the same if reserve sites are used instead of allocations.	but previous AA work covers the quantum of housing in general, and the concentration of housing at Boston and Spalding. AA conclusions not altered by this policy.		required as previous AA recommendations remain valid.
Policies 13 & 14: Boston SUEs	Requirements for the Boston SUEs, and phasing of development/infrastructure, and need for a masterplan	LSE	The Wash and Gibraltar Point re recreation pressure	The quantum of housing is such that there is a potential risk to coastal sites with increased recreation.	AA to assess the new visitor survey information for coastal sites, and to consider potential effects arising from increased recreation. Consideration then given to necessary mitigation in Chapter 7 of the plan (Environment)	Following completion of the AA, Footprint Ecology and the authority discussed suitable amendments to Policy 28 – The Natural Environment, and its supporting text, in order to prevent adverse effects on site integrity at the Plan level. Recommendations now fully incorporated into Policy 28 and supporting text. AEOI now	Two new policies, confirming allocations as a SUE. no further action required as previous AA recommendations remain valid. Need for a masterplan will bring further certainty due to masterplan level HRA.

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
						prevented with mitigation measures in text relating to recreation.	
Policy 15: Spalding SUE	Requirements for the Spalding SUE, and phasing of development/infrastructure	LSE	The Wash and Gibraltar Point re recreation pressure	The quantum of housing is such that there is a potential risk to coastal sites with increased recreation.	AA to assess the new visitor survey information for coastal sites, and to consider potential effects arising from increased recreation. Consideration then given to necessary mitigation in Chapter 7 of the plan (Environment)	Following completion of the AA, Footprint Ecology and the authority discussed suitable amendments to Policy 28 – The Natural Environment, and its supporting text, in order to prevent adverse effects on site integrity at the Plan level. Recommendations now fully incorporated into Policy 28 and supporting text. AEOI now prevented with mitigation measures in text	No further action required as previous AA recommendations remain valid. Need for a masterplan will bring further certainty due to masterplan level HRA.

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
						relating to recreation.	
Policy 16: Holbeach West SUE	Requirements for the Holbeach West SUE, and phasing of development/infrastructure	LSE	The Wash and Gibraltar Point re recreation pressure	The quantum of housing is such that there is a potential risk to coastal sites with increased recreation.	AA to assess the new visitor survey information for coastal sites, and to consider potential effects arising from increased recreation. Consideration then given to necessary mitigation in Chapter 7 of the plan (Environment)	Following completion of the AA, Footprint Ecology and the authority discussed suitable amendments to Policy 28 – The Natural Environment, and its supporting text, in order to prevent adverse effects on site integrity at the Plan level. Recommendations now fully incorporated into Policy 28 and supporting text. AEOI now prevented with mitigation measures in text relating to recreation.	No further action required as previous AA recommendations remain valid. Need for a masterplan will bring further certainty due to masterplan level HRA.

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Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
Policy 17: Providing a mix of housing	Percentage mix of housing types, including affordable housing	No LSE	The Wash and Gibraltar Point re recreation pressure	The LPAs will need to consider the funding sources for any avoidance/mitigation requirements identified through project level HRAs. Some housing types may be exempt from CIL and alternative means of providing mitigation will therefore be required.	N/A	N/A	No further action required
Policy 18: Affordable housing	Requirements for providing adequate affordable housing to meet the needs of the area.	No LSE	The Wash and Gibraltar Point re recreation pressure	As above, the LPAs will need to consider the funding sources for any avoidance/mitigation requirements identified through project level HRAs. Some housing types may be exempt from CIL and alternative means of providing mitigation will therefore be required.	N/A	N/A	No further action required
Policy 19: Rural exceptions sites	Setting out criteria that need to be met in order for a rural exception site to be permitted	LSE	All	The criteria do not include any reference to the natural environment.	An additional criterion could be added, which could cover the natural environment <i>“the scheme can demonstrate that it</i>	Whilst the recommendations have not been added within this specific policy, it is noted that the	No further action required

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
					<i>will not have adverse effects on the natural environment"</i> Other potential impacts, such as the historic environment, could be included in the clause for completeness	policy is qualitative in nature and does not add to the quantum, type or location of development promoted within the plan. Strengthening of the natural environment Policy 28 has been undertaken and this policy will be implemented in conjunction with that.	
Policy 20: Accommodation for gypsies, travellers and travelling showpeople	Setting out criteria that need to be met in order for accommodation sites for gypsies, travellers and travelling showpeople to be permitted	No LSE	All	The criteria for this policy include a clause relating to nature conservation.	N/A Note that such development will need to contribute to required mitigation measures in the same way that any residential development would need to do.	N/A	No further action required. Additional sites will be the subject of project level HRA and will need to be considered as additional dwellings for the purposes of mitigation, as set

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Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
							out in the AA section.
Policy 21: Houses in multiple occupation and the sub-division of dwellings	Setting out criteria that need to be met in order for houses to be permitted for sub-division/multiple occupation	No LSE	All	The criteria for this policy include a clause relating to the natural environment.	N/A	N/A	No further action required
Policy 22: Replacement dwellings in the countryside	Setting out criteria that need to be met in order for permission to be given for a replacement dwelling	No LSE	All	No net increase in dwellings as replacing an existing dwelling. Project level HRA may be required depending on the proposal and location.	N/A	N/A	No further action required
Policy 23: The reuse of buildings in the countryside for residential use	Setting out criteria that need to be met in order for permission to be given for the reuse of a building for residential	LSE	All	The criteria do not include any reference to the natural environment.	An additional criterion could be added, which could cover the natural environment <i>“the scheme can demonstrate that it will not have adverse effects on the natural environment”</i> Other potential impacts, such as the historic environment, could be included in the clause for completeness.	Whilst the recommendations have not been added within this specific policy, it is noted that the policy is qualitative in nature and does not add to the quantum, type or location of development promoted within the plan.	No further action required

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Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
					It is important to note that Permitted Development Rights do not remove the need for a competent authority to undertake a project level HRA.	Strengthening of the natural environment Policy 28 has been undertaken and this policy will be implemented in conjunction with that.	
Policy 24: The retail hierarchy	The hierarchy of town types that are acceptable for retail development	No LSE	All	At a plan level, the policy does not promote development that poses a risk to European sites. Project level HRA may be required depending on the proposal and location.	N/A	N/A	No further action required
Policy 25: Supporting the vitality and viability of Boston and Spalding town centres	Promotes opportunities to support and extend the town centre destination offer (markets, events, retail etc)	No LSE	All	None, the policy is focussed on the economic and community prosperity of the towns	N/A	N/A	New policy at Proposed Main Modifications. No further action required
Policy 26: Primary shopping frontages	Promotes the retention of shopping frontages	No LSE	All	At a plan level, the policy does not promote development that poses a risk to European sites. Project level HRA may be required depending	N/A	N/A	No further action required

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
				on the proposal and location, particularly where converted to residential.			
Policy 27: Additional retail provision	Identifies the volume of additional retail floor space required over the plan period in the main towns	No LSE	All	At a plan level, the policy does not promote development that poses a risk to European sites. Project level HRA may be required depending on the proposal and location.	N/A	N/A	No further action required
Policy 28: The natural environment	Protection of the natural environment, setting out a hierarchy for designated sites.	LSE	All	Whilst this is a strong protective policy, it is advised that this policy and its supporting text provides an opportunity to incorporate some of the mitigation requirements that are considered in the appropriate assessment.	AA to assess the new visitor survey information for coastal sites, and to consider potential effects arising from increased recreation. Policy 23 provides an opportunity to incorporate mitigation, as well as at housing specific policies.	Following completion of the AA, Footprint Ecology and the authority discussed suitable amendments to Policy 28 – The Natural Environment, and its supporting text, in order to prevent adverse effects on site integrity at the Plan level. Recommendations now fully	No further action required. Proposed Main Modifications are for clarity for developers, and do not affect the policy in terms of European site mitigation, established within the AA and now strengthened with the modifications.

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
						incorporated into Policy 28 and supporting text. AEOI now prevented with mitigation measures in text relating to recreation.	
Policy 29: The historic environment	A protective policy for the historic environment.	No LSE	All	Protective only, does not promote development that may pose a risk to European sites.	N/A	N/A	No further action required
Policy 30: Pollution	Minimising the impacts of pollution	LSE	All	The policy wording implies that impacts on that natural environment can occur, as long as deemed 'acceptable.' This is confusing wording and difficult to interpret.	Reword to <i>"Proposals will not be permitted where, individually or cumulatively, there are adverse impacts on..."</i> Consideration has been given to the potential air pollution risk to Grimesthorpe SAC as air quality issues are currently a concern for this site. Given the distance from the plan area it is concluded that the	Policy now refers to adverse impacts on the natural environment. No LSE can now be concluded. The recommendations were made for clarity to ensure better conformity with legislation terminology. This is not mitigation	No further action required

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Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
					likelihood of a project coming forward where likely significant effects could not be ruled out is low and therefore does not warrant specific plan level mitigation. The policy wording provides protection if such a proposal did come forward. Project level HRA and close working with the EA (twin tracking where possible) would be necessary.	requiring assessment.	
Policy 31: Climate change and renewable and low energy	Requiring climate change mitigation measures in new development. Supporting renewable energy initiatives.	No LSE	All	The criteria for this policy include a clause relating to the natural environment.	N/A	N/A	No further action required
Policy 32: Community, health and well-being	Promotes development that encourages community cohesion and wellbeing, and discourages crime and disorder	No LSE	All	At a plan level, the policy does not promote development that poses a risk to European sites. Project level HRA may be required depending on the proposal and location.	N/A	N/A	No further action required

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Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
Policy 33: Delivering a more sustainable transport network	List of transport projects supported by the plan.	No LSE	All	The list has been checked and does not raise any screening concerns in relation to European sites. However, project level HRA will be required to check for impact pathways and ensure no adverse effects.	N/A	N/A	Additional project added does not alter conclusions. No further action required
Policy 34: Delivering the Boston Distributor Road	Separate policy for the Boston Distributor Road	No LSE	All	Checked as part of policy 33 and does not raise any screening concerns in relation to European sites, but project level HRA will be required to check for impact pathways and ensure no adverse effects.	N/A	N/A	New policy, but project previously checked as part of policy 33. No further action required
Policy 35:	Supports the implementation of the Spalding Transport Strategy.	No LSE	All	None – the promotion of the Strategy within the Local Plan does not lead to LSE as the Strategy does not include anything that poses a risk to European sites.	N/A	N/A	No further action required

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Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
Policy 36: Vehicle and cycle parking	Provision of parking in new development.	No LSE	All	At a plan level, the policy does not promote development that poses a risk to European sites. Project level HRA may be required depending on the proposal and location.	N/A	N/A	No further action required
Monitoring and Review explanatory text	Explains the proposals for plan monitoring, which are detailed with each policy.	No LSE	All	Specific monitoring proposals are set out with each policy. These have been checked and commented on where required – see HRA screening above in relation to Policy 23 natural environment. This text only explains the monitoring proposals including monitoring environmental effects.	N/A	N/A	No further action required
Glossary	Key words from the local plan are explained.	No LSE	All	Plan terminology explained only. No risks to European sites	N/A	N/A	No further action required
Appendix 1: SE Lincolnshire Joint Strategic Planning Committee	Explaining the role of the South East Lincolnshire Strategic Planning Committee	No LSE	All	Committee role explained only. No risks to European sites	N/A	N/A	No further action required

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
Appendix 2: Saved Local Plan policy replacement list	Listing all the previous policies from the South Holland and Boston plans that are to be replaced by the new local plan	No LSE	All	Loss of previous policies has been checked. Policies protecting the natural environment and European sites are replaced by Policy 23 in the new plan, and mitigation measures proposed within this HRA, therefore no risk to European sites from the loss of previous policies.	N/A	N/A	Rechecked. No further action required
Appendix 3: References	A list of additional information and evidence	No LSE	All	For further reference only. No risks to European sites	N/A	N/A	No further action required
Appendix 4: Housing allocations	A list of all housing site allocations and numbers of houses proposed at each.	LSE	The Wash and Gibraltar Point re recreation pressure	The quantum of housing is such that there is a potential risk to coastal sites with increased recreation. Housing sites include a number of large allocations of 1,000 plus. Potential risk of use of coastal sites to meet daily GI needs.	AA to assess the new visitor survey information for coastal sites, and to consider potential effects arising from increased recreation. Consideration then given to necessary mitigation in Chapter 7 of the plan (Environment)	Following completion of the AA, Footprint Ecology and the authority discussed suitable amendments to Policy 28 – The Natural Environment, and its supporting text, in order to prevent adverse effects on site integrity at the	No further action required. AA recommendations incorporated into Policy 28.

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Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
						Plan level. Recommendations now fully incorporated into Policy 28 and supporting text. AEOI now prevented with mitigation measures in text relating to recreation.	
Appendix 5: Allocations – infrastructure requirements, constraints and mitigation	Lists the infrastructure requirements and constraints for each allocation	No LSE	All	This is an advisory policy to support the allocations. Any infrastructure would be assessed as part of project level HRA for the allocations when coming forward.	N/A	N/A	No further action required. Project level HRA should cover all aspects of the project, including infrastructure.
Appendix 6: Parking standards	Qualitative policy setting out minimum standards for parking	No LSE	All	At a plan level, the policy does not promote development that poses a risk to European sites. Project level HRA may be required depending on the proposal and location.	N/A	N/A	No further action required
Appendix 7:	Monitoring requirements in line with SA	No LSE	All	Monitoring will be used to inform future HRA	N/A	N/A	No further action required

Policy	Description	Initial LSE screen	Relevant European Sites	Potential risks/issues	Recommendations for plan modifications/proceed to AA	Check of actions undertaken at Publication and measures explanation	Proposed Main Modifications check
Local plan implementation				work, particularly for Policy 28.			
Appendices 8 & 9: Developer contributions for education facilities and health care	Education and health care specific contributions explanation	No LSE	All	No issues in relation to European sites	N/A	N/A	No further action required
Appendix 10: Indicative plans and diagrams	Maps and plans relating to relevant policies	No LSE	All	No specific issues in relation to European sites as maps are to illustrate policies already assessed.	N/A	N/A	No further action required
Further Man Modifications							
FMM001	Former policy number 5: Strategic approach to flood risk (re-numbered as 4) Modification adds clarity in relation to caravans and mobile homes in areas of flood risk	No LSE	All	No issues in relation to European sites	N/A	N/A	Does not introduce any new impact pathways or additional risks. No further action required.
FMMM002	Former Policy 27: Climate change and renewable and low carbon energy (re-numbered as 31). Modification adds clarity in relation to the reading of the policy, which should exclude wind energy.	No LSE	All	No issues in relation to European sites	N/A	N/A	Does not introduce any further impact pathways or additional risks. No further action required.

4. Appropriate Assessment of Recreation Pressure

- 4.1 Once a likely significant effect has been identified, the purpose of the appropriate assessment is to examine all evidence and information in detail to establish the nature and extent of the predicted impacts, in order to answer the question as to whether such impacts will lead to adverse effects on site integrity.
- 4.2 An appropriate assessment should be based on evidence, and that can take different forms (direct evidence, comparable evidence, modelling, expert opinion, Natural England’s advice etc). In reality, appropriate assessments are often undertaken with some evidence, but not enough to give absolute or definitive answers. The assessment is therefore often drawing on the knowledge and experience of the assessor to make scientifically justified decisions about risk.
- 4.3 The ‘precautionary principle’ is an accepted principle that is embedded within the wording of the legislation, and latterly within case decisions, both European and domestic. Essentially, in accordance with Regulation 61 (5), a competent authority must only give effect to a plan, or authorise or undertake a project *“only having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).”* It is for the competent authority to gather the information and evidence necessary to give them certainty that adverse effects will not occur. Fundamentally that therefore means that in the absence of certainty, the plan or project should not proceed (unless the further exceptional tests of Regulation 62 apply). Hence the precaution is in the competent authority’s duty to only allow plans or projects to proceed where there is certainty and to apply a precautionary approach where there is not.
- 4.4 The difficulty in applying the precautionary principle is the need to distinguish between caution in the absence of information, and making the assumption that everything may have an impact unless it is proven otherwise. To assume that everything could potentially affect a European site would exclude many plans and projects for which an impact is highly unlikely, but not yet proven. Essentially, a competent authority must apply the precautionary principle where there is a potential link between a conceivable impact from the plan or project and the European site interest feature as receptor. There should be a credible scientific argument to identify the possibility of an impact, via a particular pathway between impact and receptor.
- 4.5 The screening for likely significant effects in the previous HRA undertaken by the Council concluded that the potential impact of recreation pressure arising from the proposed quantum of new housing in South East Lincolnshire could not be screened out. The HRA recommended that further evidence was gathered in the form of visitor surveys to coastal sites in order to inform the next iteration of the HRA.
- 4.6 This HRA report has re-screened the updated plan and it concludes that the additional information needs to be assessed in order to better understand the nature and extent

of the potential effects on the coastal sites as a result of increased housing in the South East Lincolnshire local plan area.

Scope of the appropriate assessment

4.7 This section of the HRA assesses the new evidence in detail, in order to ascertain whether adverse effects on the coastal European sites can be ruled out, or whether measures are required to mitigate for the potential risks posed by increased housing. The sites screened in at the likely significant effect stage, i.e. those for which appropriate assessment is required, are:

- The Wash SPA and the bird interest features of the Ramsar site
- Gibraltar Point SPA and the bird interest features of the Ramsar site

These SPAs form part of the Wash and North Norfolk Coast European Marine Site.

4.8 There is now a strong body of evidence showing how increasing levels of development, even when well outside the boundary of protected wildlife sites, can have negative impacts on the sites and their wildlife interest. The issues are particularly acute in southern England, where work on heathlands (Mallord 2005; Underhill-Day 2005; Liley & Clarke 2006; Clarke, Sharp & Liley 2008; Sharp *et al.* 2008; Clarke & Liley 2013; Clarke *et al.* 2013) and coastal sites (Saunders *et al.* 2000; Randall 2004; Liley & Sutherland 2007; Clarke, Sharp & Liley 2008; Liley 2008; Stillman *et al.* 2009) demonstrates links between housing, development and nature conservation impacts.

4.9 The nature conservation impacts of development are varied (e.g. Underhill-Day 2005). One particularly difficult and challenging impact relates to the use of sites to meet recreational needs, and the resultant disturbance to waterfowl on coastal sites. Disturbance has been identified by Natural England as a generic issue across many European Marine Sites (see Coyle & Wiggins 2010), and can be an issue for a range of species.

4.10 The screening stage of HRA can be particularly difficult when trying to ascertain the complex question of whether there will be a level of disturbance that could be significant. The impact of recreation is therefore often better considered at the more detailed appropriate assessment stage. With ever increasing understanding of recreation impacts on European sites, there are now a number of mitigation approaches around the country, which seek to prevent adverse effects on European sites arising from new residential development. Evidence to inform appropriate assessments can include studies from similar situations elsewhere, but caution must be taken in directly applying any trends, assumptions or mitigation solutions because each situation is different in terms of the level and distribution of existing housing, the level and distribution of the proposed new housing, the characteristics of the European site and the current threats and sensitivities that each European site has. There is a risk that potential impacts may not be fully mitigated for, or may be unnecessarily mitigated for, if direct evidence from the local area is not considered and approaches elsewhere are simply applied without further thought.

- 4.11 This appropriate assessment section of the HRA focuses on the recreational disturbance of birds at the coastal SPA and Ramsar sites.

Disturbance of SPA/Ramsar site birds

- 4.12 Disturbance to wintering and passage waterfowl can result in:
- A reduction in the time spent feeding due to repeated flushing/increased vigilance (Fitzpatrick & Bouchez 1998; Stillman & Goss-Custard 2002; Bright *et al.* 2003; Thomas, Kvitek & Bretz 2003; Yasué 2005)
 - Increased energetic costs (Stock & Hofeditz 1997; Nolet *et al.* 2002)
 - Avoidance of areas of otherwise suitable habitat, potentially using poorer quality feeding/roosting sites instead (Cryer *et al.* 1987; Gill 1996; Burton *et al.* 2002; Burton, Rehfish & Clark 2002)
 - Increased stress (Regel & Putz 1997; Weimerskirch *et al.* 2002; Walker, Dee Boersma & Wingfield 2006; Thiel *et al.* 2011)
- 4.13 It is difficult to determine the extent to which recreation could result in an ecological effect on birds on a site. Damage or loss of habitat, or species mortality can be more easily measured, and such losses can more readily be identified as significant for the site. Quantifying the effect of disturbance is far more difficult because it requires an understanding of when continued disturbance begins to affect the viability of a population, i.e. the point at which the stress affects health and breeding success to the extent that it is significant for the long-term stability of the population. There may be a degree of tolerance of disturbance before it becomes significant, or before continued temporary impacts have long term permanent effects.
- 4.14 For most large developments or strategic plans involving a large volume of development over a wide area, it will be difficult to conclude no likely significant effect where it is clear that an estuarine site is a focus for recreation, and even more so when there is little other open space in the local area that provides the same experience. If the development is a considerable distance from the European site it is easier to rule in or out if there is visitor data available to indicate the draw that the site has, i.e. the zone within which people will regularly travel to undertake recreation as a particular site. Coastal sites can however have a visitor draw over some considerable distance, and there are added complications of trying to also assess the impacts of holiday makers rather than regular day visitors from more localised residents.
- 4.15 The impacts of disturbance can relate to site conditions that vary temporally such as weather or prey abundance (Goss-Custard *et al.* 2006). Birds may also only be vulnerable at particular times, such as staging during migration (Bechet, Giroux & Gauthier 2004; Yasué 2005). As such, disturbance impacts may therefore occur only at certain times or when particular circumstances coincide. Impacts of disturbance may therefore be difficult to detect.
- 4.16 It is also difficult to record both the level and intensity of disturbance impacts (besides birds simply taking flight) and there is contention about the best approaches (Gill, Norris & Sutherland 2001; Gill 2007). Recording whether birds take flight or not, or how often

they are flushed are simple measures of disturbance, but may not necessarily indicate vulnerability to disturbance (Beale & Monaghan 2004; Yasue 2006; Møller, Nielsen & Garamzegi 2008; Møller 2008; Møller & Erritzøe 2010).

- 4.17 A further challenge is making the links between housing and changes in access levels. Detailed visitor survey work and modelling is required in order to make predictions of changes in access levels as a result of new development. These alone are complex.
- 4.18 Given that development is a permanent change, a HRA must consider the effects on the site for the lifetime of the development. New housing brings a permanent potential impact, and one which may even become more intense over time if recreational activities change over time, for example with the introduction of new water sports. Where an appropriate assessment concludes that adverse effects cannot be ruled out, it must seek measures to prevent such effects from occurring. Mitigation must cover all potential impacts, and for the lifetime of those impacts. Mitigation must therefore be secured into the long term for permanent impacts, in order for a competent authority to have certainty that adverse effects have been ruled out.
- 4.19 Uncertainty can be further exacerbated when use of an estuarine site by waterfowl can fluctuate extensively, for a number of reasons aside from any disturbance, such as food availability, weather conditions and other impacts at breeding or wintering grounds elsewhere, or on migration.
- 4.20 A consistent approach to applying the precautionary principle and responding to uncertainties for estuarine Habitats Regulations Assessment is necessary in light of the complexities of understanding the impacts of disturbance. Otherwise, there is a risk that competent authorities will come to widely differing conclusions, thus placing potential risks on some sites whilst adding unnecessary mitigation requirements at others.
- 4.21 This appropriate assessment therefore uses the newly available survey information, identifies information shortfalls and makes justified decisions for the plan in terms of action to be taken. At the same time, it is also important to have a programme in place to monitor mitigation, and to bridge any information gaps in the future. This is so that competent authorities can have confidence that any mitigation approach is always based on the best available information at the current time, and there is a plan in place to inform any future plan reviews.

Summary of visitor survey findings

- 4.22 The Wash Visitor Survey (Panter & Liley 2016) undertaken by Footprint Ecology includes surveys undertaken during September and November 2015 and then in May 2016. The survey points were 12 locations around the Wash and Gibraltar Point. The survey was augmented by additional survey data from two RSPB reserves, and additional survey work conducted by Footprint Ecology for a commission at other locations around the Wash on the Norfolk coast.

- 4.23 The survey amounted to a total of 608 hours of survey work, counting 2,791 people. The data collected was analysed by Footprint Ecology. The data highlighted that the majority of people visiting the coastal sites were local residents with only a small percentage being holiday or day visitors to the area, with 72% originating from Lincolnshire. Nearly all of these were from the two authority areas that make up the south Lincolnshire plan area, with 42% from Boston Borough and 39% from South Holland District.
- 4.24 Most visits were for dog walking, with bird watching also being a popular reason for visiting. Route lengths varied markedly, depending on location, being between 1.7km and 5.3km. This is notably longer than typical route lengths recorded at other European site locations.
- 4.25 Using the home postcodes of interviewees and the level of growth proposed over the plan period, which amounts to 35% increase in the volume of housing), the visitor survey report is able to predict a 10% increase on current visit levels at the survey points used. Most people suggested that proximity to home was the main reason for choosing to visit, and half of those interviewed lived within 7.5km of the survey point.
- 4.26 The survey data from the RSPB reserves was collected remotely using sensors at car parks located at two RSPB reserves; Frampton Marsh and Freiston Shore.
- 4.27 The survey work found that there are a small number of ‘honey pot’ sites around the Wash receiving higher density of visits, notably at Gibraltar point and Frampton Marsh. The Norfolk survey work identified Snettisham Beach on the Norfolk part of the Wash as a popular destination. The higher volume of visitors at Gibraltar Point and Frampton Marsh is of concern, but both locations are managed as visitor destinations with visitor infrastructure in place. This presents good opportunities for visitor awareness raising at these locations.
- 4.28 Notably, the Norfolk survey work identified that very few visitors to the Norfolk part of the Wash came from Lincolnshire. Additionally, the fact that there was a low density of visitors on functionally linked land is also of relevance to this HRA.

Implications for the South East Lincolnshire Local Plan

- 4.29 The Wash survey work was conducted using standard methodologies that have been tried and tested over a number of years. Footprint Ecology has conducted similar survey work at a number of other European sites, allowing comparison between the visitor use patterns at a range of European sites, for HRA purposes. The survey work identified that visits are relatively low in comparison to other European sites, such as other estuary sites including the Solent, Humber and Exe, but the visitor density for the Wash is comparable to that found at the North Kent estuary sites.
- 4.30 Footprint Ecology has been working with Natural England to identify the characteristics that may make estuary sites more or less vulnerable to visitor pressure. This work is ongoing and not yet finalised or published, but currently does offer some insight that is applicable to the Wash. Taking into account the relatively low level of current housing

(i.e. a low baseline compared with other more urbanised sites), the availability of access to the shoreline and the large extent of mudflat for low tide feeding, a conclusion could be drawn that the Wash is less vulnerable to increased recreation pressure than other European sites.

- 4.31 However, the percentage by which housing will increase over the South East Lincolnshire Local Plan period is considerable at 35%. A predicted 10% increase in visits is derived in the visitor survey report by taking into account where visitors come from and where the new housing is proposed. Conclusions therefore need to be drawn in the context of a relatively low baseline and site characterises that allow for some level of pressure, against a considerable increase from that low baseline over a relatively short period.
- 4.32 The conservation objectives for European sites require the maintenance or restoration of site interest, and the continued function of supporting processes that sustain the interest features. HRAs should be undertaken with this requirement in mind. It is not for the competent authority to act when evidence indicates a decline, but rather it is for the competent authority to act when there is a future risk of decline, which would therefore prevent the site being maintained in terms of its current ecological functioning.
- 4.33 An approach that seeks to maintain, and puts measures in place in light of risk, should be effective but proportionate. Work on other estuary sites where there is considerable pressure and sites are more vulnerable has identified a clear need for a comprehensive and strategic approach, such as at the Exe Estuary, the Solent and for heathland sites under immense pressure from large scale growth, such as the Thames Basin Heaths. In the case of this plan and the Wash SPA we cannot rule out adverse effects on integrity, due to the scale of change in housing, but the implications for the increased recreation pressure are likely to relate to very specific locations where specific measures should be straight forward to establish at project level HRA.

Evidence limitations

- 4.34 It is important to note that whilst the visitor survey work has made a very positive difference to the level of understanding of recreation pressure at the coastal sites, the data is only one half of the story. The data is ‘social data’ providing information on visitor behaviour, origins and volumes. It does not provide any ecological data in terms of how birds may be disturbed, or what the consequences of disturbance may be. It also does not provide any information on how the birds are using the sites, and a particular gap is where the roost sites are located. Given the extensive availability of intertidal feeding, it will be the high tide roost sites that are likely to be more vulnerable to recreation pressure.
- 4.35 It is suggested that whilst mitigation measures should be put in place, as discussed below, this approach also needs to be combined with a programme of additional information gathering and monitoring, and it is recommended that work to map key roost sites would be an obvious next step.

Options for mitigating for the effects of increased recreation pressure

- 4.36 To mitigate for the risk posed by significant visitor increases over the plan period it is recommended that the plan seeks to put mitigation measures in place to maintain the ecological integrity of the site and prevent adverse effects. In light of the nature of the local circumstances and site characteristics, options for mitigation should be targeted to local management of access around the coast, and with some alternative greenspace provision directly linked to the locations of concentrated new development and established at the project HRA level.
- 4.37 Looking at the available evidence, visitor survey data shows that 75% of visitors (all interviewees, all survey points) lived within a radius of 28.7km from the location where interviewed. Using this 75th percentile gives a good indication of how far people typically travel and the kind of radius within which development may have impacts in terms of increased recreation. Looking at individual survey points there was marked variation, for example at eight survey points (i.e. over half) the 75th percentile was under 10km, reflecting much more local access and draw.

Mitigating for housing within 10km of The Wash and Gibraltar Point

- 4.38 It is anticipated that low levels of housing will come forward within 10km of the sites as part of the South East Lincolnshire Local Plan. Most development allocations are concentrated outside this zone. However, if a concentration of new housing was to come forward, its location may be such that additional recreation could pose a risk to sensitive features. As a precaution, it is therefore recommended that any major residential development proposal is the subject of additional project level assessment.
- 4.39 At project level HRA it should be possible to check within a 10km radius for locations where there are sensitive features (bird roost sites, key feeding areas) and ensure there are no risks from increased access and disturbance. Such a check will need to include all access points and footpaths leading from the access points. Where there are risks there may be opportunities to improve signage, utilise visitor hotspots for information provision and give any staff on the ground additional information to convey to visitors. If resourced, these measures could easily be implemented by the local authorities in partnership with nature conservation bodies. Other measures, as appropriate, could include footpath redirection, measures to encourage or discourage use of car parking areas and routes, enforcing dogs on leads in particular zones and the addition of natural features to reduce disturbance such as banking or hedging (which serve to discourage access and reduce visual intrusion).
- 4.40 This approach is recommended due to the low numbers of housing coming forward within 10km and provides a precautionary approach in case there is a concentration of development near sensitive features. Where an overall quantum of development poses a risk, thresholds for development size should not be applied, as each additional house contributes to the potential for adverse effects. In this particular case, the threshold for project level HRA and avoidance and mitigation measures within 10km for major development only, is acceptable because the identified risk is for a concentration of

development that could lead to increased access and disturbance at particular sensitive locations.

- 4.41 Consideration should also be given to how the on-site measures and further evidence gathering, in light of current evidence limitations, can be funded and implemented. Where avoidance and mitigation measures are required, they could be undertaken by the South East Lincolnshire Joint Strategic Planning Committee, could be done in partnership with others, or could be funded by the large developments noted above. It is recommended that the Planning Committee gives some thought to how a programme of mitigation measures could be developed and implemented, in preparation for any major development that may come forward within the 10km.

Mitigating for concentrated housing growth at Boston, Spalding and Holbeach

- 4.42 It is recognised that the plan does include large concentrations of residential development outside the 10km zone, with most development focused at Boston, Spalding and Holbeach. The visitor survey work showed varied travel distances at each survey point, but that overall, 75% of visitors (all interviewees, all survey points) lived within a radius of 28.7km from the location where interviewed. As explained in the analysis above, the percentage by which housing will increase over the South East Lincolnshire Local Plan period is considerable at 35% and this gives a predicted 10% increase in visits. It is therefore recommended that the large volume of housing proposed at Boston, Spalding and Holbeach is adequately mitigated for.
- 4.43 It is advised that adequate greenspace provision should accompany the housing coming forward in these locations. The visitor survey work identified that the primary reason for residents visiting the coast was proximity. It also identified that the majority of visitors were there to walk their dogs. It is therefore likely that provision of adequate greenspace for local dog walking purposes will be an important part of mitigating for the new housing coming forward in at Boston, Spalding and Holbeach, reducing the draw to the coastal sites for daily recreation and dog walking. Greenspace provision for mitigating for European site impacts is usually referred to as Suitable Alternative Natural Greenspace (SANG), and there is now considerable information available in relation to key characteristics required and the monitoring of effectiveness at other sites (Liley, Underhill-Day & Sharp 2009; Liley, Panter & Rawlings 2015).
- 4.44 Appendix 4 of the Local Plan lists the housing allocations sites and the numbers of houses that can be accommodated, for the main sub-regional centres of Boston and Spalding, and then the lower numbers allocated to the main service centres and finally the minor service centres. The plan at Proposed Main Modifications now allows for ‘at least 19,425 dwellings,’ being a slight increase on the previous 18,675 at Publication stage. The majority are allocated for Boston (6111 houses), Spalding (5510 houses) and also at the main service centre of Holbeach (2202 houses). For Boston, Spalding and Holbeach, much of the allocation is provided for within large ‘sustainable urban extensions’ (SUEs) to the settlements.
- 4.45 For Boston, the key SUE sites are Sou006 – Land south of Chain Bridge Road (1515 houses) and Wes002 – Land south of North forty foot Bank (1,138 houses). For Spalding,

the key sites are a SUE comprising of Pin024 – Land north of Vernatt’s Drain (350 houses) and Land west of Spalding Road (676 houses).

- 4.46 Holbeach is the most significant main service centre for the allocations, with Hob048 – Land east of the A151 (750 houses), also being a proposed SUE.
- 4.47 All residential development contributing to the housing allocations for Boston, Spalding and Holbeach should be the subject of project level HRA. These allocations will need to deliver any mitigation identified by the project level HRA, but in addition to any specific mitigation requirements identified, the mitigation package should deliver or appropriately contribute to SANGs provision. These alternative recreation sites should be designed to attract people away from the coast for their daily recreation needs.
- 4.48 It is suggested that rather than implement a formal strategic approach at this stage for South East Lincolnshire, it is advised that the plan should ensure that any housing coming forward as part of these large allocations in Boston, Spalding and Holbeach make provision for SANGs. This will need to be developed as part of a comprehensive project level HRA for the developments in these locations, but the plan should include clear policy direction to ensure that this forms part of project design. Project level HRA should have regard for the route lengths identified in the visitor survey work, and have regard for available information on SANGs in terms of quality and effectiveness.
- 4.49 Whilst a formal strategic approach at the plan level is not deemed necessary at this point in time, the South East Lincolnshire Joint Strategic Planning Committee should give consideration to how best advise developers and plan for SANGs in these three locations, in order to maximise benefits and reduce delays. The Planning Committee may wish to consider what land may be available, or which developments may be best placed to provide SANGs, and which may need to contribute rather than delivering their own SANG. There is an option for the largest developments to bring forward SANGs that have capacity to serve more housing than their own development, and therefore become a more strategic SANG that smaller developments can contribute towards, for example. The South East Lincolnshire Joint Strategic Planning Committee may therefore wish to discuss SANG delivery with developers and it may be beneficial to provide some form of additional information, guidance or masterplans.

5. Recommendations and Next Steps

- 5.1 The HRA at Proposed Main Modifications stage, after Examination in Public, built upon previous HRA work at earlier stages of plan making and re-screened the plan and made recommendations for clarification wording to avoid likely significant effects within the screening table. The appropriate assessment considered the effect of recreation pressure on coastal sites and made recommendations for how mitigation measures should be incorporated into the plan. A further two main modifications were checked and it was concluded that they were not of relevance to the HRA.
- 5.2 In preparing the HRA of the South East Lincolnshire Local Plan, Footprint Ecology has discussed the HRA conclusions with planning officers to highlight the need for mitigation measures to be built into the plan at what is now Policy 28: The Natural Environment, and its supporting text. Footprint Ecology has assisted the planning officers in developing potentially suitable policy and supporting text wording that can be incorporated in response to the findings and recommendations of this HRA; for both the text modifications recommended within the screening table and the mitigation measures proposed for policy wording in response to the appropriate assessment of recreation pressure.
- 5.3 A check was made at Publication stage to ensure that all recommendations had been incorporated. This was provided as an addendum, for consideration by the Examining Inspector. The content of that addendum was then incorporated into this HRA at Proposed Main Modifications stage, to provide a complete HRA report.
- 5.4 A further HRA check, in terms of main modifications proposed prior to Adoption stage for the plan, is provided for in the screening table. None of the Proposed Main Modifications require appropriate assessment, and the findings of the appropriate assessment, that form the basis of mitigation measures in Policy 28, remain valid in light of all modifications. It was concluded that the Local Plan at Proposed Main Modifications stage is in conformity with the Habitats Regulations and relevant case law. The further two Main Modifications similarly gave a conclusion of no additional risk or new impact pathway. At Adoption stage, with all changes incorporated, it can be concluded in this final HRA report that the plan will not lead to adverse effects on European site integrity.
- 5.5 Additionally, it is advised that in light of the recommendations made within this HRA, the South East Lincolnshire Joint Strategic Planning Committee should develop a programme of action that can then be pursued and used to inform updated approaches to mitigation in light of new information and subsequent plan reviews. This should seek to work positively with partners such as Natural England and nature conservation organisations involved in managing and monitoring the coastal sites.

6. References

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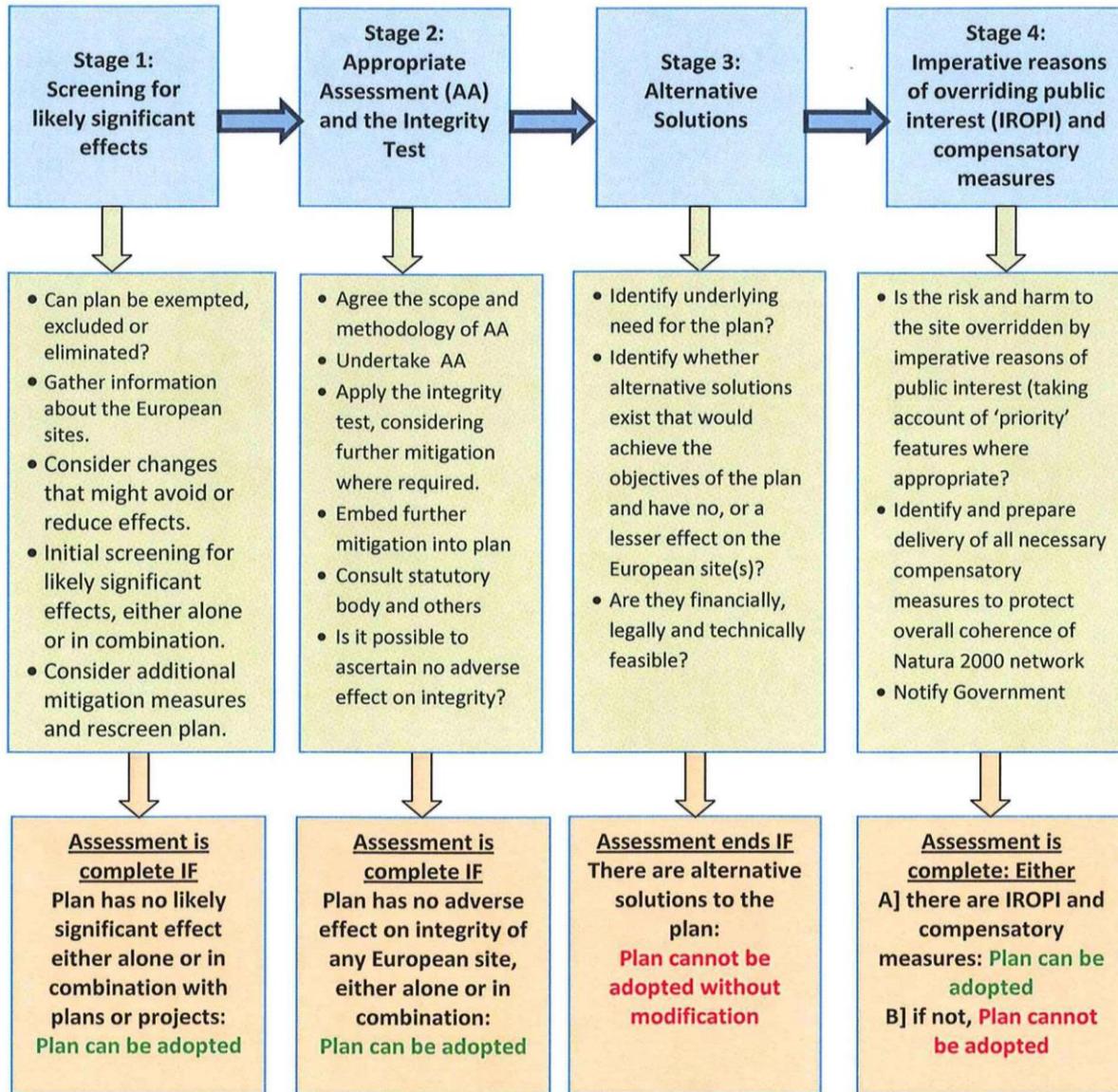
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7. Appendix 1 - The Habitats Regulations Assessment Process

- 7.1 The designation, protection and restoration of European wildlife sites is embedded in the Conservation of Habitats and Species Regulations 2017, as amended, which are commonly referred to as the ‘Habitats Regulations.’ Recent amendments to the Habitats Regulations were made in 2012, and the Habitats Regulations then consolidated in 2017, with a further amendment in 2018. The recent amendments do not substantially affect the principles of European site assessment as defined by the 2010 Regulations, the focus of this report undertaken for South East Lincolnshire.
- 7.2 The Habitats Regulations are in place to transpose European legislation set out within the Habitats Directive (Council Directive 92/43/EEC), which affords protection to plants, animals and habitats that are rare or vulnerable in a European context, and the Birds Directive (Council Directive 2009/147/EC), which originally came into force in 1979, and which protects rare and vulnerable birds and their habitats. These key pieces of European legislation seek to protect, conserve and restore habitats and species that are of utmost conservation importance and concern across Europe. Although the Habitats Regulations transpose the European legislation into domestic legislation, the European legislation still directly applies, and in some instances it is better to look to the parent Directives to clarify particular duties and re-affirm the overarching purpose of the legislation.
- 7.3 European sites include Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) classified under the Birds Directive. The suite of European sites includes those in the marine environment as well as terrestrial, freshwater and coastal sites. European sites have the benefit of the highest level of legislative protection for biodiversity. Member states have specific duties in terms of avoiding deterioration of habitats and species for which sites are designated or classified, and stringent tests have to be met before plans and projects can be permitted, with a precautionary approach embedded in the legislation, i.e. it is necessary to demonstrate that impacts will not occur, rather than they will. The overarching objective is to maintain sites and their interest features in an ecologically robust and viable state, able to sustain and thrive into the long term, with adequate resilience against natural influences. Where sites are not achieving their potential, the focus should be on restoration.
- 7.4 The UK is also a contracting party to the Ramsar Convention, which is a global convention to protect wetlands of international importance, especially those wetlands utilised as waterfowl habitat. In order to ensure compliance with the requirements of the Convention, the UK Government expects all competent authorities to treat listed Ramsar sites as if they are part of the suite of designated European sites, as a matter of government policy, as set out in Section 118 of the National Planning Policy Framework. Most Ramsar sites are also a SPA or SAC, but the Ramsar features and boundary lines may vary from those for which the site is designated as a SPA or SAC.

- 7.5 It should be noted that in addition to Ramsar sites, the National Planning Policy Framework also requires the legislation to be applied to potential SPAs and possible SACs, and areas identified or required for compensatory measures where previous plans or projects have not been able to rule out adverse effects on site integrity, yet their implementation needs meet the exceptional tests of Regulation 64 of the Habitats Regulations, as described below.
- 7.6 The step by step process of HRA is summarised in the diagram below. Within the Habitats Regulations, local planning authorities, as public bodies, are given specific duties as ‘competent authorities’ with regard to the protection of sites designated or classified for their species and habitats of European importance. Competent authorities are any public body individual holding public office with a statutory remit and function, and the requirements of the legislation apply where the competent authority is undertaking or implementing a plan or project, or authorising others to do so. Regulation 63 of the Habitats Regulations sets out the HRA process for plans and projects, which includes development proposals for which planning permission is sought. Additionally, Regulation 105 specifically sets out the process for assessing emerging land use plans.
- 7.7 The step by step approach to HRA is the process by which a competent authority considers any potential impacts on European sites that may arise from a plan or project that they are either undertaking themselves, or permitting an applicant to undertake. The step by step process of assessment can be broken down into the following stages, which should be undertaken in sequence:
- Check that the plan or project is not directly connected with or necessary for the management of the European site
 - Check whether the plan or project is likely to have a significant effect on any European site, from the plan or project alone
 - Check whether the plan or project is likely to have a significant effect on any European site, from the plan or project in-combination with other plans or projects
 - Carry out an ‘appropriate assessment’
 - Ascertain whether an adverse effect on site integrity can be ruled out
- 7.8 A competent authority may consider that there is a need to undertake further levels of evidence gathering and assessment in order to have certainty, and this is the appropriate assessment stage. At this point the competent authority may identify the need to add to or modify the project in order to adequately protect the European sites, and these mitigation measures may be added through the imposition of particular restrictions and conditions.
- 7.9 For plans, the stages of HRA are often quite fluid, with the plan normally being prepared by the competent authority itself. This gives the competent authority the opportunity to repeatedly explore options to prevent impacts, refine the plan and rescreen it to demonstrate that all potential risks to European sites have been successfully dealt with.

- 7.10 When preparing a plan, a competent authority may therefore go through a continued assessment as the plan develops, enabling the assessment to inform the development of the plan. For example, a competent authority may choose to pursue an amended or different option where impacts can be avoided, rather than continue to assess an option that has the potential to significantly affect European site interest features.
- 7.11 After completing an assessment a competent authority should only approve a project or give effect to a plan where it can be ascertained that there will not be an adverse effect on the integrity of the European site(s) in question. In order to reach this conclusion, the competent authority may have made changes to the plan, or modified the project with restrictions or conditions, in light of their Appropriate Assessment findings.
- 7.12 Where adverse effects cannot be ruled out, there are further exceptional tests set out in Regulation 64 for plans and projects and in Regulation 107 specifically for land use plans. Exceptionally, a plan or project could be taken forward for imperative reasons of overriding public interest where adverse effects cannot be ruled out and there are no alternative solutions. It should be noted that meeting these tests is a rare occurrence and ordinarily, competent authorities seek to ensure that a plan or project is fully mitigated for, or it does not proceed.
- 7.13 In such circumstances where a competent authority considers that a plan or project should proceed under Regulations 64 or 107, they must notify the relevant Secretary of State. Normally, planning decisions and competent authority duties are then transferred, becoming the responsibility of the Secretary of State, unless on considering the information, the planning authority is directed by the Secretary of State to make their own decision on the plan or project at the local level. The decision maker, whether the Secretary of State or the planning authority, should give full consideration to any proposed 'overriding reasons' for which a plan or project should proceed despite being unable to rule out adverse effects on European site interest features, and ensure that those reasons are in the public interest and are such that they override the potential harm. The decision maker will also need to secure any necessary compensatory measures, to ensure the continued overall coherence of the European site network if such a plan or project is allowed to proceed.



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Figure 1: Outline of the assessment of plans under the Habitat Regulations

8. Appendix 2 – European Site Conservation Objectives

- 8.1 As required by the Directives, ‘Conservation Objectives’ have been established by Natural England, which should define the required ecologically robust state for each European site interest feature. All sites should be meeting their conservation objectives. When being fully met, each site will be adequately contributing to the overall favourable conservation status of the species or habitat interest feature across its natural range. Where conservation objectives are not being met at a site level, and the interest feature is therefore not contributing to overall favourable conservation status of the species or habitat, plans should be in place for adequate restoration.
- 8.2 Natural England has embarked on a project to renew all European site Conservation Objectives, in order to ensure that they are up to date, comprehensive and easier for developers and consultants to use to inform project level Habitats Regulations Assessments in a consistent way. In 2012, Natural England issued now a set of generic European site Conservation Objectives, which should be applied to each interest feature of each European site. These generic objectives are the first stage in the project to renew conservation objectives, and it is anticipated that the second stage, which is to provide more detailed and site specific information for each site to support the generic objectives, will follow shortly.
- 8.3 The new list of generic Conservation Objectives for each European site include an overarching objective, followed by a list of attributes that are essential for the achievement of the overarching objective. Whilst the generic objectives currently issued are standardised, they are to be applied to each interest feature of each European site, and the application and achievement of those objectives will therefore be site specific and dependant on the nature and characteristics of the site. The second stage, provision of the more supplementary information to underpin these generic objectives, will provide much more site specific information, and this detail will play a fundamental role in informing HRAs, and importantly will give greater clarity to what might constitute an adverse effect on a site interest feature.
- 8.4 In the interim, Natural England advises that Habitats Regulations Assessments should use the generic objectives and apply them to the site specific situation. This should be supported by comprehensive and up to date background information relating to the site.
- 8.5 For SPAs the overarching objective is to:
- 8.6 ‘Avoid the deterioration of the habitats of qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.’
- 8.7 This is achieved by, subject to natural change, maintaining and restoring:
- The extent and distribution of the habitats of the qualifying features.
 - The structure and function of the habitats of the qualifying features.

- The supporting processes on which the habitats of the qualifying features rely.
- The populations of the qualifying features.
- The distribution of the qualifying features within the site.

8.8 For SACs the overarching objective is to:

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

8.9 This is achieved by, subject to natural change, maintaining and restoring:

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

8.10 Conservation objectives inform any HRA of a plan or project, by identifying what the interest features for the site should be achieving, and what impacts may be significant for the site in terms of undermining the site's ability to meet its conservation objectives.

9. Appendix 3 – Qualifying Interest Features of Coastal Sites

9.1 Qualifying features of the Wash and Gibraltar Point coastal sites are set out below. Information was taken from the JNCC website.⁹

The Wash SPA

9.2 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:

During the breeding season

- Common Tern *Sterna hirundo*, 152 pairs representing at least 1.2% of the breeding population in Great Britain (Count, as at 1993)
- Little Tern *Sterna albifrons*, 33 pairs representing at least 1.4% of the breeding population in Great Britain (5 year mean, 1992-1996)
- Marsh Harrier *Circus aeruginosus*, 15 pairs representing at least 9.4% of the breeding population in Great Britain (Count as at 1995)

Over winter;

- Avocet *Recurvirostra avosetta*, 110 individuals representing at least 8.7% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)
- Bar-tailed Godwit *Limosa lapponica*, 11,250 individuals representing at least 21.2% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)
- Golden Plover *Pluvialis apricaria*, 11,037 individuals representing at least 4.4% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)
- Whooper Swan *Cygnus cygnus*, 68 individuals representing at least 1.2% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

9.3 This site also qualifies under **Article 4.2** of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

On passage;

- Ringed Plover *Charadrius hiaticula*, 1,185 individuals representing at least 2.4% of the Europe/Northern Africa - wintering population (5 year peak mean 1991/2 - 1995/6)
- Sanderling *Calidris alba*, 1,854 individuals representing at least 1.9% of the Eastern Atlantic/Western & Southern Africa - wintering population (2 year mean Aug 1994 - 1995)

⁹ <http://jncc.defra.gov.uk/> accessed 20/10/16

Over winter;

- Black-tailed Godwit *Limosa limosa islandica*, 859 individuals representing at least 1.2% of the wintering Iceland - breeding population (5 year peak mean 1991/2 - 1995/6)
- Curlew *Numenius arquata*, 3,835 individuals representing at least 1.1% of the wintering Europe - breeding population (5 year peak mean 1991/2 - 1995/6)
- Dark-bellied Brent Goose *Branta bernicla bernicla*, 22,248 individuals representing at least 7.4% of the wintering Western Siberia/Western Europe population (5 year peak mean 1991/2 - 1995/6)
- Dunlin *Calidris alpina alpina*, 35,620 individuals representing at least 2.5% of the wintering Northern Siberia/Europe/Western Africa population (5 year peak mean 1991/2 - 1995/6)
- Grey Plover *Pluvialis squatarola*, 9,708 individuals representing at least 6.5% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)
- Knot *Calidris canutus*, 186,892 individuals representing at least 53.4% of the wintering Northeastern Canada/Greenland/Iceland/Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)
- Oystercatcher *Haematopus ostralegus*, 25,651 individuals representing at least 2.9% of the wintering Europe & Northern/Western Africa population (5 year peak mean 1991/2 - 1995/6)
- Pink-footed Goose *Anser brachyrhynchus*, 33,265 individuals representing at least 14.8% of the wintering Eastern Greenland/Iceland/UK population (5 year peak mean 1991/2 - 1995/6)
- Pintail *Anas acuta*, 923 individuals representing at least 1.5% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)
- Redshank *Tringa totanus*, 2,953 individuals representing at least 2.0% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)
- Shelduck *Tadorna tadorna*, 15,981 individuals representing at least 5.3% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)
- Turnstone *Arenaria interpres*, 717 individuals representing at least 1.0% of the wintering Western Palearctic - wintering population (5 year peak mean 1991/2 - 1995/6)

9.4 The area qualifies under **Article 4.2** of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

- Over winter, the area regularly supports 400,273 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Black-tailed Godwit *Limosa limosa islandica*, Avocet *Recurvirostra avosetta*, Golden Plover *Pluvialis apricaria*, Bar-tailed Godwit *Limosa lapponica*, Pink-footed Goose *Anser brachyrhynchus*, Dark-bellied Brent Goose *Branta bernicla bernicla*, Shelduck *Tadorna tadorna*, Pintail *Anas acuta*, Oystercatcher *Haematopus*

ostralegus, Grey Plover *Pluvialis squatarola*, Whooper Swan *Cygnus cygnus*, Dunlin *Calidris alpina alpina*, Sanderling *Calidris alba*, Curlew *Numenius arquata*, Redshank *Tringa totanus*, Turnstone *Arenaria interpres*, Little Grebe *Tachybaptus ruficollis*, Cormorant *Phalacrocorax carbo*, White-fronted Goose *Anser albifrons albifrons*, Wigeon *Anas penelope*, Mallard *Anas platyrhynchos*, Ringed Plover *Charadrius hiaticula*, Lapwing *Vanellus vanellus*, Knot *Calidris canutus*, Whimbrel *Numenius phaeopus*.

Gibraltar Point SPA

9.5 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:

During the breeding season;

- Little Tern *Sterna albifrons*, 23 pairs representing at least 1.0% of the breeding population in Great Britain (5 year mean, 1992-1996)

Over winter;

- Bar-tailed Godwit *Limosa lapponica*, 719 individuals representing at least 1.4% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

9.6 This site also qualifies under **Article 4.2** of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

Over winter;

- Grey Plover *Pluvialis squatarola*, 2,017 individuals representing at least 1.3% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)
- Knot *Calidris canutus*, 10,155 individuals representing at least 2.9% of the wintering Northeastern Canada/Greenland/Iceland/Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

9.7 The area qualifies under **Article 4.2** of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

- Over winter, the area regularly supports 22,137 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Oystercatcher *Haematopus ostralegus*, Knot *Calidris canutus*, Grey Plover *Pluvialis squatarola*, Bar-tailed Godwit *Limosa lapponica*.

North Norfolk Coast and the Wash SAC

9.8 Annex I habitats that are a primary reason for selection of this site

1110 Sandbanks which are slightly covered by sea water all the time

On this site sandy sediments occupy most of the subtidal area, resulting in one of the largest expanses of sublittoral **sandbanks** in the UK. It provides a representative example of this habitat type on the more sheltered east coast of England. The subtidal sandbanks vary in composition and include coarse sand through to mixed sediment at the mouth of the embayment. Sublittoral communities present include large dense beds of brittlestars *Ophiothrix fragilis*. Species include the sand-mason worm *Lanice conchilega* and the tellin *Angulus tenuis*. Benthic communities on sandflats in the deeper, central part of the Wash are particularly diverse. The subtidal sandbanks provide important nursery grounds for young commercial fish species, including plaice *Pleuronectes platessa*, cod *Gadus morhua* and sole *Solea solea*.

1140 Mudflats and sandflats not covered by seawater at low tide

The Wash, on the east coast of England, is the second-largest area of intertidal flats in the UK. The sandflats in the embayment of the Wash include extensive fine sands and drying banks of coarse sand, and this diversity of substrates, coupled with variety in degree of exposure, means that there is a high diversity relative to other east coast sites. Sandy intertidal flats predominate, with some soft mudflats in the areas sheltered by barrier beaches and islands along the north Norfolk coast. The biota includes large numbers of polychaetes, bivalves and crustaceans. Salinity ranges from that of the open coast in most of the area (supporting rich invertebrate communities) to estuarine close to the rivers. Smaller, sheltered and diverse areas of intertidal sediment, with a rich variety of communities, including some eelgrass *Zostera*spp. beds and large shallow pools, are protected by the north Norfolk barrier islands and sand spits.

1160 Large shallow inlets and bays

The Wash is the largest embayment in the UK, and represents **Large shallow inlets and bays** on the east coast of England. It is connected via sediment transfer systems to the north Norfolk coast. Together, the Wash and North Norfolk Coast form one of the most important marine areas in the UK and European North Sea coast, and include extensive areas of varying, but predominantly sandy, sediments subject to a range of conditions. Communities in the intertidal include those characterised by large numbers of polychaetes, bivalve and crustaceans. Sublittoral communities cover a diverse range from the shallow to the deeper parts of the embayments and include dense brittlestar beds and areas of an abundant reef-building worm ('ross worm') *Sabellaria spinulosa*. The embayment supports a variety of mobile species, including a range of fish and **1365 Common seal *Phoca vitulina***.

1170 Reefs

The Wash is the largest embayment in the UK with extensive areas of subtidal mixed sediment. In the tide-swept approaches to the Wash, with a high loading of suspended sand, the relatively common tube-dwelling polychaete worm *Sabellaria spinulosa* forms areas of biogenic **reef**. These structures are varied in nature, and include reefs which stand up to 30 cm proud of the seabed and which extend for hundreds of metres (Foster-Smith & Sotheran 1999). The reefs are thought to extend into The Wash where super-abundant *S. spinulosa* occurs and where reef-like structures such as concretions and crusts have been recorded. The site and its surrounding waters is considered particularly important as it is the only currently known location of well-developed stable *Sabellaria* reef in the UK. The reefs are particularly important components of the sublittoral as they are diverse and productive habitats which support many associated species (including epibenthos and crevice fauna) that would not otherwise be found in predominantly sedimentary areas. As such, the fauna is quite distinct from other biotopes found in the site. Associated motile species include large numbers of polychaetes, mysid shrimps, the pink shrimp *Pandalus montagui*, and crabs. *S. spinulosa* is considered to be an important food source for the commercially important pink shrimp *P. montagui* (see overview in Holt *et al.* 1998).

1310 Salicornia and other annuals colonizing mud and sand

The largest single area of this vegetation in the UK occurs at this site on the east coast of England, which is one of the few areas in the UK where saltmarshes are generally accreting. The proportion of the total saltmarsh vegetation represented by **Salicornia and other annuals colonising mud and sand** is high because of the extensive enclosure of marsh in this site. The vegetation is also unusual in that it forms a pioneer community with common cord-grass *Spartina anglica* in which it is an equal component. The inter-relationship with other habitats is significant, forming a transition to important dune, saltmeadow and halophytic scrub communities.

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

This site on the east coast of England is selected both for the extensive ungrazed saltmarshes of the North Norfolk Coast and for the contrasting, traditionally grazed saltmarshes around the Wash. The Wash saltmarshes represent the largest single area of the habitat type in the UK. The **Atlantic salt meadows** form part of a sequence of vegetation types that are unparalleled among coastal sites in the UK for their diversity and are amongst the most important in Europe. Saltmarsh swards dominated by sea-lavenders *Limonium* spp. are particularly well-represented on this site. In addition to typical lower and middle saltmarsh communities, in North Norfolk there are transitions from upper marsh to freshwater reedswamp, sand dunes, shingle beaches and mud/sandflats.

1420 Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)

The Wash and North Norfolk Coast, together with the North Norfolk Coast, comprises the only area in the UK where all the more typically Mediterranean species that characterise **Mediterranean and thermo-Atlantic halophilous scrubs** occur together.

The vegetation is dominated by a shrubby cover up to 40 cm high of scattered bushes of shrubby sea-blite *Suaeda vera* and sea-purslane *Atriplex portulacoides*, with a patchy cover of herbaceous plants and bryophytes. This scrub vegetation often forms an important feature of the upper saltmarshes, and extensive examples occur where the drift-line slopes gradually and provides a transition to dune, shingle or reclaimed sections of the coast. At a number of locations on this coast perennial glasswort *Sarcocornia perennis* forms an open mosaic with other species at the lower limit of the sea-purslane community.

- 9.9 Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

1150 Coastal lagoons * Priority feature

- 9.10 Annex II species that are a primary reason for selection of this site

1365 Harbour seal *Phoca vitulina*

The Wash, on the east coast of England, is the largest embayment in the UK. The extensive intertidal flats here and on the North Norfolk Coast provide ideal conditions for **Harbour seal *Phoca vitulina*** breeding and hauling-out. This site is the largest colony of common seals in the UK, with some 7% of the total UK population.

- 9.11 Annex II species present as a qualifying feature, but not a primary reason for site selection

1355 Otter *Lutra lutra*

Saltfleetby–Theddlethorpe Dunes and Gibraltar Point SAC

- 9.12 Annex I habitats that are a primary reason for selection of this site

2120 "Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")"

The dune system on the composite site Saltfleetby–Theddlethorpe Dunes and Gibraltar Point contains good examples of **Shifting dunes** within a complex site that exhibits a range of dune types. At this site the *Ammophila*-dominated dunes are associated with lyme-grass *Leymus arenarius* and sand sedge *Carex arenaria*. These shifting dunes are part of a successional transition with **2130 Fixed dunes with herbaceous vegetation** and **2160 Dunes with *Hippophae rhamnoides***.

2130 "Fixed coastal dunes with herbaceous vegetation ("grey dunes")" * Priority feature

Within this dune complex on the east coast of England there are extensive areas of **fixed dune** vegetation within largely intact geomorphologically-active systems, with representation of early successional stages on the seaward side, and more stable areas. The lime-rich dunes support a rich and diverse flora, dominated in places by red fescue *Festuca rubra* and with unusual species including pyramidal orchid *Anacamptis*

pyramidalis, bee orchid *Orchis apifera*, sea-holly *Eryngium maritimum*, lesser meadow-rue *Thalictrum minus* and sea campion *Silene maritima*. The fixed dunes are part of a successional transition, and the rapidly-accreting dunes on the seaward sand bars and shingle banks make this an important site for research into the processes of coastal development.

2160 Dunes with *Hippophae rhamnoides*

- 9.13 This site supports a good example of **Dunes with *Hippophae rhamnoides*** in the main part of its natural range in the UK. This habitat develops on dune areas and is present in a range of successional stages from early colonisation to mature scrub associated with other species such as elder *Sambucus nigra*, hawthorn *Crataegus monogyna* and ivy *Hedera helix*, typically associated with an understorey of ruderal species. These stands of scrub are important for both migratory and breeding birds.

2190 Humid dune slacks

The **Humid dune slacks** at this site are part of a successional transition between a range of dune features, and some have developed from saltmarsh to freshwater habitats after becoming isolated from tidal inundation by sand deposition. There is a range of different communities present, many of which are species-rich. The species present depend on the wetness of the slack, its location within the system and the management history. Some of the drier slacks support a very wide range of species; this has been encouraged by management. The wetter slacks often have more permanent standing water and are composed of stands of sedges and rushes.

- 9.14 Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

2110 Embryonic shifting dunes

Gibraltar Point Ramsar site

- 9.15 Ramsar criterion 1

- The dune and saltmarsh habitats present on the site are representative of all the stages of colonisation and stabilisation. There is a fine example of freshwater marsh containing sedges *Carex* spp., rushes *Juncus* spp., and ferns, including adder's-tongue fern *Ophioglossum vulgatum*. Also most northerly example of nationally rare saltmarsh/dune communities containing sea heath *Frankenia laevis*, rock sea lavender *Limonium binervosum* and shrubby seablite *Suaeda vera*. Information Sheet on Ramsar Wetlands (RIS), page 3 Ramsar Information Sheet: UK11027 Page 3 of 10 Gibraltar Point Produced by JNCC: Version 3.0, 13/06/2008

- 9.16 Ramsar criterion 2
- Supports an assemblage of wetland invertebrate species of which eight species are listed as rare in the British Red Data Book and a further four species listed as vulnerable.
- 9.17 Ramsar criterion 5
- Assemblages of international importance: Species with peak counts in winter: 53072 waterfowl (5 year peak mean 1998/99-2002/2003)
- 9.18 Ramsar criterion 6
- Species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species with peak counts in spring/autumn: Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa -wintering 2793 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3) Sanderling , *Calidris alba*, Eastern Atlantic 971 individuals, representing an average of 4.7% of the GB population (5 year peak mean 1998/9- 2002/3 - spring peak) Bar-tailed godwit , *Limosa lapponica lapponica*, W Palearctic 3468 individuals, representing an average of 2.8% of the population (5 year peak mean 1998/9-2002/3) Species with peak counts in winter: Dark-bellied brent goose, *Branta bernicla bernicla*, 682 individuals, representing an average of 0.6% of the GB population (5 year peak mean 1998/9- 2002/3) Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species with peak counts in spring/autumn: Red knot , *Calidris canutus islandica*, W & Southern Africa (wintering) 33930 individuals, representing an average of 7.5% of the population (5 year peak mean 1998/9-2002/3).

The Wash Ramsar site

- 9.19 Ramsar Criterion 1
- The Wash is a large shallow bay comprising very extensive saltmarshes, major intertidal banks of sand and mud, shallow water and deep channels.
- 9.20 Ramsar criterion 3
- Qualifies because of the inter-relationship between its various components including saltmarshes, intertidal sand and mud flats and the estuarine waters. The saltmarshes and the plankton in the estuarine water provide a primary source of organic material which, together with other organic matter, forms the basis for the high productivity of the estuary.
- 9.21 Ramsar criterion 5
- Assemblages of international importance: Species with peak counts in winter: 292541 waterfowl (5 year peak mean 1998/99-2002/2003)
- 9.22 Ramsar criterion 6

- Species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species with peak counts in spring/autumn: Eurasian oystercatcher, *Haematopus ostralegus ostralegus*, Europe & NW Africa -wintering 15616 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/9-2002/3) Grey plover, *Pluvialis squatarola*, E Atlantic/W Africa - wintering 13129 individuals, representing an average of 5.3% of the population (5 year peak mean 1998/9-2002/3 - spring peak) Red knot, *Calidris canutus islandica*, W & Southern Africa (wintering) 68987 individuals, representing an average of 15.3% of the population (5 year peak mean 1998/9-2002/3) Sanderling, *Calidris alba*, Eastern Atlantic 3505 individuals, representing an average of 2.8% of the population (5 year peak mean 1998/9-2002/3) Eurasian curlew, *Numenius arquata arquata*, *N. a. arquata* Europe (breeding) 9438 individuals, representing an average of 2.2% of the population (5 year peak mean 1998/9-2002/3) Common redshank, *Tringa totanus totanus*, 6373 individuals, representing an average of 2.5% of the population (5 year peak mean 1998/9-2002/3) Ruddy turnstone, *Arenaria interpres interpres*, NE Canada, Greenland/W Europe & NW Africa 888 individuals, representing an average of 1.7% of the GB population (5 year peak mean 1998/9- 2002/3) Species with peak counts in winter: Pink-footed goose, *Anser brachyrhynchus*, Greenland, Iceland/UK 29099 individuals, representing an average of 12.1% of the population (5 year peak mean 1998/9-2002/3) Dark-bellied brent goose, *Branta bernicla bernicla*, 20861 individuals, representing an average of 9.7% of the population (5 year peak mean 1998/9-2002/3) Common shelduck, *Tadorna tadorna*, NW Europe 9746 individuals, representing an average of 3.2% of the population (5 year peak mean 1998/9-2002/3) Northern pintail, *Anas acuta*, NW Europe 431 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9- 2002/3) Dunlin, *Calidris alpina alpina*, W Siberia/W Europe 36600 individuals, representing an average of 2.7% of the population (5 year peak mean 1998/9-2002/3) Bar-tailed godwit, *Limosa lapponica lapponica*, W Palearctic 16546 individuals, representing an average of 13.7% of the population (5 year peak mean 1998/9-2002/3) Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species with peak counts in spring/autumn: Ringed plover, *Charadrius hiaticula*, Europe/Northwest Africa 1500 individuals, representing an average of 2% of the population (5 year peak mean 1998/9- 2002/3) Black-tailed godwit, *Limosa limosa islandica*, Iceland/W Europe 6849 individuals, representing an average of 19.5% of the population (5 year peak mean 1998/9-2002/3) Species with peak counts in winter: European golden plover, *Pluvialis apricaria apricaria*, *P. a. altifrons* Iceland & Faroes/E Atlantic 22033 individuals, representing an average of 2.3% of the population (5 year peak mean 1998/9-2002/3) Northern lapwing, *Vanellus vanellus*, Europe - breeding 46422 individuals, representing an average of 1.3% of the population (5 year peak mean 1998/9-2002/3)