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Wells-next-the-Sea Neighbourhood Plan

Report to Inform Habitats Regulations Assessment

Wells-next-the-Sea Neighbourhood Plan Group

April 2023

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Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
0	December 2022	Draft issued for client comment	JR	Dr James Riley	Technical Director
1	March 2023	Updated in HRA in response to client comments and inclusion of further evidence base	JR	Dr James Riley	Technical Director

Distribution List

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1. Introduction

1.1 AECOM was appointed by Wells-next-the-Sea Neighbourhood Plan Group to undertake a Report to Inform the Habitats Regulations Assessment (HRA) of the Wells-next-the-Sea Neighbourhood Plan (WntSNP) 2023-2036. This is to inform the planning group and local council (North Norfolk District Council, as Competent Authority) of the potential effects of Neighbourhood Plan (NP) development on European sites (Special Areas of Conservation, SACs, Special Protection Areas, SPAs, and Ramsar sites designated under the Ramsar convention), and how they are being, or should be, addressed in the draft NP.

1.2 The WntSNP contains policies on the environment, heritage and protection for historical features in the community, infrastructure and access, and policies relating to sustainability and climate change.

1.3 For the purpose of informing this report, policies contained within the North Norfolk Local Development Framework, Core Strategy, which is the current Local Plan at the time of writing (adopted in 2008) and the emerging new Local Plan have been considered.

1.4 The objective of this report is to identify if any policies and / or sites proposed for potential allocation in the WntSNP have the potential to cause Likely Significant Effects (LSEs) and, where identified, adverse effects on the integrity of European sites, either in isolation or in combination with other plans and projects, and to determine whether site-specific or policy mitigation measures are required.

Local Context

1.5 The parish of Wells-next-the-Sea is located on the North Norfolk Coast between the coastal resorts of Hunstanton (15 miles to the west) and Cromer (20 miles to the east). The county town of Norwich is 32 miles to the southeast, the town of Fakenham 10 miles to the south and Blakeney 8 miles to the east. The town of Wells is located within North Norfolk District and within the Norfolk Coast Area of Outstanding Natural Beauty.

1.6 The civil parish has an area of 16.31 km^2 (6.30 square miles) and in 2001 had a population of 2,451, reducing to 2,165 at the 2011 census. Nearby villages include Blakeney, Burnham Market, Burnham Thorpe, Holkham and Walsingham all of which are popular with holiday makers and second homeowners. The major landowner in the parish is the Holkham Estate (the seat of the Earl of Leicester) and is based in nearby Holkham Hall.

1.7 Wells-next-the-Sea is a historic commercial port and former ship-building centre and is now the only major harbour along the North Norfolk coast. It retains a small fishing fleet and until recently was a base for windfarm and work vessels as well as home to many leisure and private boats and yachts.

1.8 The town and local coastline is also a popular holiday and tourist destination and busy in summer with swimmers, windsurfers, water skiers, kayakers and walkers around the harbour, beaches, and marshes.

Legislative Context

1.9 The United Kingdom (UK) left the European Union (EU) on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 ("the Withdrawal Act"). The Withdrawal Act retains the body of existing EU-derived law within our domestic law. The most recent amendments to the Habitats Regulations – the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – make it clear that the need for HRA continues post-Brexit.

1.10 The HRA process applies the 'Precautionary Principle'[1] to European sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the European site(s) in question. Plans and projects with predicted adverse impacts on European sites may still be permitted if there are no alternatives to them and there are Imperative Reasons of Over-riding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

1.11 The need for Appropriate Assessment (AA, **Box 1**) is set out in the Conservation of Habitats and Species Regulations 2017 (as amended).

Box 1: The legislative basis for Appropriate Assessment

Conservation of Habitats and Species Regulations 2017 (As Amended)

With specific reference to Neighbourhood Plans, Regulation 106(1) states that:

"A qualifying body which submits a proposal for a neighbourhood development plan must provide such information as the competent authority [the Local Planning Authority] may reasonably require for the purpose of the assessment under regulation 105… [which sets out the formal process for determination of 'likely significant effects' and the appropriate assessment']."

1.12 It is therefore important to note that this report has two purposes:

- To assist the Qualifying Body (Wells-next-the-Sea Town Council) in preparing their plan by recommending (where necessary) any adjustments required to protect European sites, thus making it more likely their plan will be deemed compliant with the Conservation of Habitats and Species Regulations 2017 (as amended); and
- On behalf of the Qualifying Body, to assist the Local Planning Authority (North Norfolk District Council) to discharge their duty under Regulation 105 (in their role as 'plan-making authority' within the meaning of that regulation) and Regulation 106 (in their role as 'competent authority') and reach the formal HRA decision.

1.13 As 'competent authority', the legal responsibility for ensuring that a decision of LSEs is made, an AA (where required) is undertaken, and Natural England are consulted, falls on the local planning authority. However, they are entitled to request from the Qualifying Body the necessary information on which to base their judgment and that is a key purpose of this report.

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

1.14 Over the years, the term HRA has come into wide currency to describe the overall process set out in the Habitats Regulations, from screening through to identification of IROPI. This has arisen in order to distinguish the overall process from the individual stage of AA. Throughout this report the term HRA is used for the overall process and the use of AA is restricted to the specific stage of that name.

1.15 In spring 2018 the 'Sweetman' European Court of Justice ruling[2] clarified that 'mitigation' (i.e., measures that are specifically introduced to avoid or reduce a harmful effect on a European site that would otherwise arise) should **not** be taken into account when forming a view on LSEs. Mitigation should instead only be considered at the AA stage. This HRA has been cognisant of that ruling.

Scope of the HRA

1.16 There are no standard criteria for determining the ultimate physical scope of an HRA of a Plan document. Therefore, in considering the physical scope of the assessment, we were guided primarily by the identified impact pathways (called the source-pathway-receptor model) rather than by arbitrary 'zones'. Current guidance suggests that the following international sites be included in the scope of assessment:

- All sites within the boundary of Wells-next-the-Sea; and,
- Other sites shown to be linked to development within the Parish boundary through a known impact 'pathway' (discussed below).

1.17 Briefly defined, impact pathways are routes by which the implementation of a policy within a Neighbourhood Plan document can lead to an effect upon a European site. An example of this would be new residential development resulting in an increased population and thus increased recreational pressure, which could then affect European sites by, for example, disturbance of wintering or breeding birds.

1.18 Guidance from the Ministry of Housing, Communities and Local Government (MHCLG) states that the HRA should be 'proportionate to the geographical scope of the [plan policy]' and that 'an AA need not be done in any more detail, or using more resources, than is useful for its purpose' (MHCLG, 2006, p.6). More recently, the Court of Appeal ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be 'achieved in practice' to satisfy that the proposed development would have no adverse effect, then this would suffice. In this case the High Court ruled that for 'a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of Reg 61 of the Habitats Regulations'.

The Layout of this Report

1.19 **Chapter 2** of this report explains the methodology by which this HRA has been carried out, including the three essential tasks that form part of HRA. **Chapter 3** provides details of the relevant European sites, including Conservation

[2] People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

Objectives and current pressures and threats. **Chapter 4** provides detailed background on the main impact pathways identified in relation to the WntSNP and the relevant European sites. **Chapter 5** undertakes the screening assessment of LSEs of the Plan policies and sites potentially proposed for allocation. The AA is undertaken in **Chapter 6**. The conclusions and recommendations arising from the HRA process are provided in **Chapter 7**.

Quality Assurance

1.20 This report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2015 and 14001:2015, ISO 44001:2017 and ISO 45001:2018. In addition, our IMS requires careful selection and monitoring of the performance of all sub-consultants and contractors.

1.21 All AECOM Ecologists working on this project are members (at the appropriate level) of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2017).

2. Methodology

Introduction to HRA Methodology

2.1 The HRA will be carried out with reference to the general EC guidance on HRA[3] and that of the UK government[4].

2.2 Figure 1 below outlines the stages of HRA. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the Plan until no significant adverse effects remain.

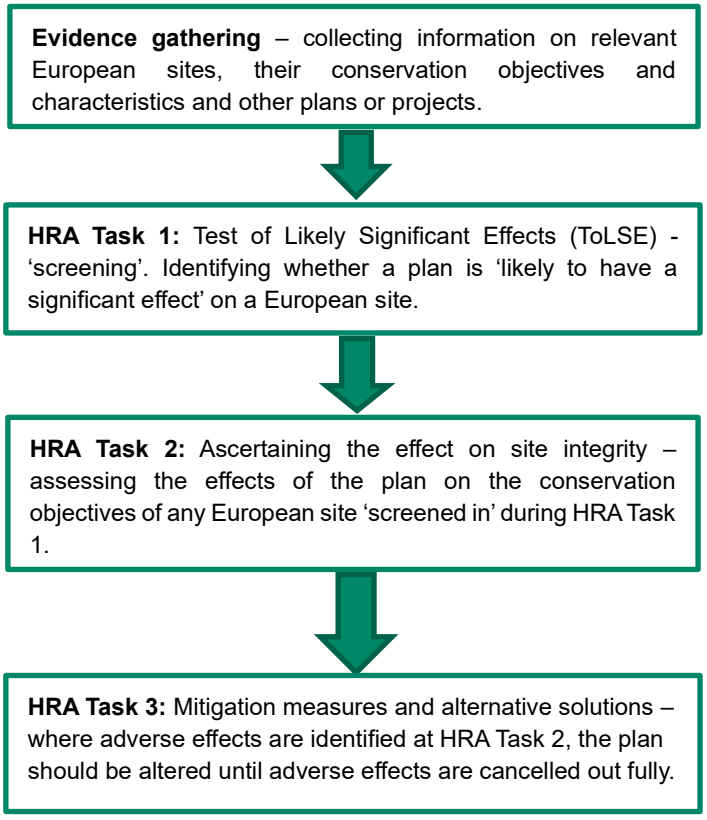


Figure 1: Four Stage Approach to Habitats Regulations Assessment. Source EC, 2011.

Description of HRA Tasks

HRA Task 1 – Likely Significant Effects (LSEs) Screening

2.3 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a LSEs screening - essentially a brief, high-level assessment to decide whether the full subsequent stage known as AA is required. The essential question is:

[3] European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive.
[4] https://www.gov.uk/guidance/appropriate-assessment

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

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

2.5 The LSEs screening is based on identification of the impact source, its pathway to receptors and an appraisal of the specific European site receptors. These are normally designated features but also include habitats and species fundamental for designated features to achieve favourable conservation status (notably functionally linked habitats outside the European site boundary).

2.6 In the Waddenzee case[5], the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive, including that:

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

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

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

HRA Task 2 – Appropriate Assessment

2.9 Where it is determined that a conclusion of 'no LSEs' cannot be drawn, the analysis must proceed to the next stage of HRA known as AA. Case law has clarified that AA is not a technical term. In other words, there are no particular technical analyses, or level of technical analysis, that are classified by law as belonging to AA rather than the screening process. AA refers to whatever level of assessment is appropriate to form a conclusion regarding effects on the integrity (coherence of structure and function) of European Sites in light of their Conservation Objectives.

2.10 By virtue of the fact that it follows LSEs screening, there is a clear implication that the analysis will be more detailed than undertaken at the previous stage. One of the key considerations during AA is whether there is available mitigation that would entirely address the potential effect. In practice, the AA would take any policies or proposed sites that could not be dismissed following the high-level

[5] Case C-127/02

screening analysis and evaluate the potential for an effect in more detail, with a view to concluding whether there would be an adverse effect on site integrity (in other words, disruption of the coherent structure and function of the European site(s)).

2.11 In 2018 the Holohan ruling[6] handed down by the European Court of Justice included among other provisions paragraph 39 of the ruling stating that '*As regards other habitat types or species, which are present on the site, but for which that site has not been listed, and with respect to habitat types and species located outside that site, … typical habitats or species must be included in the appropriate assessment, if they are necessary to the conservation of the habitat types and species listed for the protected area*' [emphasis added].

2.12 In evaluating significance, AECOM will rely on professional judgement as well as the results of bespoke studies, supported by appropriate evidence/data, and previous stakeholder consultation regarding the impacts of development on the European sites considered within this assessment.

HRA Task 3 – Mitigation

2.13 Where necessary, measures will be recommended for incorporation into the Plan in order to avoid or mitigate adverse effects on European sites. For example, there is considerable precedent, both nationally and locally, concerning the level of detail that a Plan document needs to contain regarding mitigation for recreational impacts on European sites. The implication of this precedent is that it is not necessary for all measures that will be deployed to be fully developed prior to adoption of the Plan, but the Plan must provide an adequate policy framework within which these measures can be delivered.

2.14 When discussing 'mitigation' for a NP document, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the detail of the mitigation measures themselves since the NP document is a higher level policy document.

Geographical Scope of the HRA

2.15 There are no standard criteria for determining the ultimate physical scope of an HRA. Rather, the source-pathway-receptor model should be used to determine whether there is any potential pathway connecting development to any European sites.

2.16 In the case of the WntSNP, an area extending to 10 km from the Parish boundary was selected in which European sites were identified. European sites with hydrological sensitivities were also considered. A search radius of 10km has been used for this analysis on the basis that any potential for aquatic pollution effects at greater distances is likely to be negligible due to dilution factors.

[6] Case C-461/17

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

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

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

2.19 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e., to ensure that those projects or plans (which in themselves may have minor impacts) are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan or policy would otherwise be screened out because its individual contribution is inconsequential.

2.20 The following plans are considered to have the potential to act in-combination with the WntSNP:

- North Norfolk Local Development Framework – Core Strategy (July 2008)

Core Strategy (incorporating Development Control Policies) Adopted 2008 (north-norfolk.gov.uk)

- North Norfolk Local Plan 2016 -2036. Regulation 19 Version

https://wellstc.norfolkparishes.gov.uk/files/2022/01/local-plan-proposed-submission-version-reg-19-publication.pdf

- Anglian Water – Water Resources Management Plan, 2020 - 2045

https://www.anglianwater.co.uk/siteassets/household/about-us/wrmp-report-2019.pdf

- Old Hunstanton to Kelling Hard Shoreline Management Plan (SMP5)

http://eacg.org.uk/smp5.asp

2.21 It should be noted that, while the broad potential impacts of these other projects and plans has been considered, this assessment does not undertake full HRA on each of these plans. Instead, existing HRAs that have been carried out for surrounding authorities and plans were drawn upon.

2.22 Within this document, each site proposed for potential allocation and policy within the NP is subjected to HRA screening (summarised in Tables 5 and 6 respectively). LSEs are then scrutinised in more detail in the main body of the report and where necessary an AA is undertaken.

3. European Sites

3.1 In the case of the WntSNP, it has been determined that the European sites identified in Table 1 require consideration. The locations of these European sites in relation to the WntSNP boundary are shown in Appendix A.

Table 1. European sites for consideration and their location in relation to Wells-next-the-Sea Parish boundary.

European site	Location and reason for inclusion
North Norfolk Coast SAC	**Within the WntSNP boundary.** Susceptible to recreational pressure and changes in air quality.
The Wash & North Norfolk Coast SAC	**Within the WntSNP boundary.** Susceptible to recreational pressure and changes in air quality.
North Norfolk Coast SPA/ Ramsar	**Within the WntSNP boundary**. Susceptible to recreational pressure, noise and visual disturbance to wintering birds and potential loss of functionally linked habitats.

Source: www.magic.defra.gov.uk

3.2 This was based upon a search of surrounding European sites and the vulnerabilities of their designated features. All the above sites were subjected to the initial screening exercise. It should be noted that the presence of a conceivable pathway linking the parish to a European site does not mean that LSEs will occur.

3.3 The reason for designation, Conservation Objectives and environmental vulnerabilities of the European sites are detailed below.

North Norfolk Coast SAC

Introduction

3.4 The North Norfolk Coast contains a large, active series of dunes on shingle barrier islands and spits and is little affected by development. The exceptional length and variety of the dune/beach interface is reflected in the high total area of embryonic dune. Sand couch *Elytrigia juncea* is the most prominent sand-binding grass. The site supports a large area of shifting dune vegetation, which is also varied but dominated by marram *Ammophila arenaria*. The fixed dunes are rich in lichens and drought-avoiding winter annuals such as common whitlowgrass *Erophila verna,* early forget-me-not *Myosotis ramosissima* and common cornsalad *Valerianella locusta*. The main communities represented are marram with red fescue *Festuca rubra* and sand sedge *Carex arenaria*, with lichens such as *Cetraria aculeata*. The dune slacks within this site are comparatively small and the Yorkshire-fog *Holcus lanatus* community predominates. They are calcareous and the communities occur in association

with swamp communities. Some of the slacks support the liverwort petalwort *Petalophyllum ralfsii.*

3.5 The site encompasses a number of small percolation lagoons the most notable of which are Blakeney Spit Pools, a lagoon system of six small pools between a shingle ridge and saltmarsh. The bottom of each pool is shingle overlain by soft mud. The fauna of the lagoons includes a nationally rare species, the lagoonal mysid shrimp *Paramysis nouveli.*

Reason for Designation[7]

3.6 Qualifying Annex I habitats:

- Coastal lagoons*
- Fixed dunes with herbaceous vegetation (grey dunes). (Dune grassland)*
- Embryonic shifting dunes
- Humid dune slacks
- Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*). (Mediterranean saltmarsh scrub)
- Perennial vegetation of stony banks. (Coastal shingle vegetation outside the reach of waves)
- Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes). (Shifting dunes with marram)

3.7 Annex I priority habitats are denoted by an asterisk (*).

3.8 Qualifying Annex II species:

- Otter *Lutra lutra*
- Petalwort

Conservation Objectives[8]

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

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

- *The extent and distribution of qualifying natural habitats and habitats of qualifying species*
- *The structure and function (including typical species) of qualifying natural habitats*
- *The structure and function of the habitats of qualifying species*

[7] http://publications.naturalengland.org.uk/publication/6270240262455296
[8] Ibid

- *The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely*
- *The populations of qualifying species, and,*
- *The distribution of qualifying species within the site."*

Current Pressures and Threats

3.9 The Site Improvement Plan[9] identifies the following pressures and threats to the SAC:

- Public access/ disturbance
- Siltation
- Fisheries: Recreational marine and estuarine
- Invasive species
- Inappropriate coastal management
- Fisheries: commercial marine and estuarine
- Coastal squeeze
- Change in land management
- Air Pollution: impact of atmospheric nitrogen deposition

The Wash & North Norfolk Coast SAC

Introduction

3.10 The Wash is the largest embayment in the UK. 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. Subtidal 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, otter and common seal *Phoca vitulina*. The extensive intertidal flats provide ideal conditions for common seal breeding and hauling-out.

3.11 The site contains the largest single area of saltmarsh in the UK and is one of the few areas in the UK where saltmarshes are generally accreting. The proportion of the total saltmarsh vegetation represented by glasswort *Salicornia* and other colonising annuals is high because of the extensive enclosure of marsh in this site and is also unusual in that it forms a pioneer community with common cord-grass *Spartina anglica*. There are large ungrazed saltmarshes on the North Norfolk Coast and traditionally grazed saltmarshes around the Wash. Saltmarsh swards dominated by sea-lavenders *Limonium* spp. are particularly well-

[9] http://publications.naturalengland.org.uk/publication/5327498292232192

represented. In North Norfolk, in addition to typical lower and middle saltmarsh communities, there are transitions from upper marsh to tidal reed-swamp, sand dunes (which are largely within the adjacent North Norfolk Coast SAC), shingle beaches and mud/sandflats. Mediterranean saltmarsh scrub vegetation is dominated by a shrubby cover up to 1 metre high of 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.

Reason for Designation[10]

3.12 Qualifying Annex I habitats:

- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Coastal lagoons*
- Large shallow inlets and bays
- Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*). (Mediterranean saltmarsh scrub)
- Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats)
- Reefs
- *Salicornia* and other annuals colonising mud and sand. (Glasswort and other annuals colonising mud and sand)
- Sandbanks which are slightly covered by sea water all the time. (Subtidal sandbanks)

3.13 Annex I priority habitats are denoted by an asterisk (*).

3.14 Qualifying Annex II species:

- Common seal
- Otter

Conservation Objectives[11]

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

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

[10] http://publications.naturalengland.org.uk/publication/5950176598425600
[11] I bid

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

Current Pressures and Threats

3.15 The Site Improvement Plan[12] identifies the following pressures and threats to the SAC:

- Public access/ disturbance
- Siltation
- Fisheries: Recreational marine and estuarine
- Invasive species
- Inappropriate coastal management
- Fisheries: commercial marine and estuarine
- Coastal squeeze
- Change in land management
- Air Pollution: impact of atmospheric nitrogen deposition

North Norfolk Coast SPA / Ramsar

Introduction

3.16 A stretch of coastline consisting of shingle beaches, dunes, saltmarsh, intertidal mud and sand flats, brackish lagoons, reedbeds, and grazing marshes. The site supports nationally and internationally important numbers of various species of breeding or wintering waterbirds. It also includes several important botanical areas and is a centre for tourism and general recreation

Reason for Designation

3.17 The **SPA** is designated for[13]:

Breeding:

- Sandwich tern *Sterna sandvicensis*

[12] http://publications.naturalengland.org.uk/publication/5327498292232192
[13] http://publications.naturalengland.org.uk/publication/4732349359063040

- Common tern *Sterna hirundo*
- Little tern *Sterna albifrons*
- Bittern *Botaurus stellaris*
- Marsh harrier *Circus aeruginosus*
- Montagu's harrier *Circus pygargus*
- Avocet *Recurvirostra avosetta*
- Arctic tern *Sterna paradisaea*
- Kingfisher *Algedo atthis*
- Short-eared owl *Asio flammeus*
- Gadwall *Anas strepera*
- Shoveler *Anas clypeata*
- Garganey *Anas querauedula*
- Black-tailed godwit *Limosa limosa*
- Bearded tit *Panurus biarmicus*
- Parrot crossbill *Loxia pytyopsittacus*

Supporting over winter:

- Dark-bellied brent goose *Branta bernicla bernicla*
- Pink-footed goose *Anser brachyrhynchus*
- Knot *Calidris canutus*
- Wigeon *Anas Penelope*
- European white-fronted goose *Anser albifrons albifrons*
- Pintail *Anas acuta*
- Shelduck *Tadorna tadorna*
- Grey plover *Pluvialis squatarola*
- Ringed plover *Charadrius hiaticula*
- Oystercatcher *Haematopus ostralegus*
- Redshank *Tringa tetanus*

3.18 The Ramsar is designated for[14]:

Criterion 1: The site is one of the largest expanses of undeveloped coastal habitat of its type in Europe. It is a particularly good example of a marshland coast with intertidal sand and mud, saltmarshes, shingle banks and sand dunes. There are

[14] https://jncc.gov.uk/jncc-assets/RIS/UK11048.pdf

a series of brackish-water lagoons and extensive areas of freshwater grazing marsh and reed beds.

Criterion 2: Supports at least three British Red Data Book and nine nationally scarce vascular plants, one British Red Data Book lichen and 38 British Red Data Book invertebrates.

Criterion 5: Assemblages of international importance – species with peak counts in winter.

Criterion 6: species/populations occurring at levels of international importance.

Species regularly supported during the breeding season:

- Sandwich tern
- Common tern
- Little tern

Species with peak counts in spring/autumn:

- Knot

Species with peak counts in winter:

- Pink-footed goose
- Dark-bellied brent goose
- Wigeon
- Pintail

Conservation Objectives[15]

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

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

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

[15] http://publications.naturalengland.org.uk/publication/4732349359063040 https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9020309&SiteName=outer%20thames&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&HasCA=1&NumMarineSeasonality=3&SiteNameDisplay=Outer%20Thames%20Estuary%20SPA#hlco [accessed 18/10/2022]

Current Pressures and Threats

3.19 The Site Improvement Plan[16] identifies the following pressures and threats to the SPA:

- Inappropriate water levels
- Public access/ disturbance
- Fisheries: Recreational marine and estuarine
- Inappropriate coastal management
- Fisheries: Commercial marine and estuarine
- Predation
- Coastal squeeze
- Changes in species distributions

3.20 The Information Sheet on Ramsar Wetlands[17] does not identify any additional factors (past, present or potential) adversely affecting the site's ecological character.

[16] http://publications.naturalengland.org.uk/publication/5327498292232192
[17] https://jncc.gov.uk/jncc-assets/RIS/UK11048.pdf

4. Background to Impact Pathways

4.1 In carrying out an HRA it is important to avoid confining oneself to effectively arbitrary boundaries (such as Local Authority or parish boundaries), but to use an understanding of the various ways in which Land Use Plans can impact on European sites to evaluate whether development is connected with European sites, in some cases many kilometres distant. Briefly defined, impact pathways are routes by which a change in activity associated with a development can lead to an effect upon a European site. As highlighted earlier, it is also important to bear in mind CLG guidance which states that the AA should be '*proportionate to the geographical scope of the [plan policy]*' and that '*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*' (CLG, 2006, p.6[18]).

4.2 Based upon Natural England's Site Improvement Plans (SIPs) and professional judgement, there are several impact pathways that require consideration regarding development proposals within the WntSNP area and the relevant European sites.

4.3 The following impact pathways are considered relevant to the HRA of the Wells-next-to-Sea Neighbourhood Plan.

- Public access/ recreational pressure;
- Urban impacts;
- Loss of functionally linked habitat;
- Noise and visual disturbance from construction;
- Changes in air quality;
- Water resources; and
- Water quality.

Background to Recreational Pressure

4.4 There is growing concern over the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfil Conservation Objectives while also providing recreational opportunity. Various research reports have provided compelling links between changes in housing and access levels and impacts on European protected sites[19] [20].

4.5 Recreational use of a site has the potential to:

- Cause disturbance to sensitive species such as wintering wildfowl;

[18] Department for Communities and Local Government. 2006. *Planning for the Protection of European Sites: Appropriate Assessment*. http://www.communities.gov.uk/index.asp?id=1502244

[19] Liley D, Clarke R.T., Mallord J.W., Bullock J.M. 2006a. The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. Natural England / Footprint Ecology.

[20] Liley D., Clarke R.T., Underhill-Day J., Tyldesley D.T. 2006b. Evidence to support the appropriate Assessment of development plans and projects in south-east Dorset. Footprint Ecology / Dorset County Council.

- Prevent appropriate management or exacerbate existing management difficulties;
- Cause damage through erosion, trampling and fragmentation; and
- Cause eutrophication as a result of dog fouling.

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

Bird Disturbance

4.7 Disturbance effects can have negative impacts on qualifying birds in various ways, with reduced chick provisioning and increased nest predation as a result of adults being flushed from the nest and deterred from returning to it by the presence of people and dogs likely to be a particular problem. A literature review on the effects of human disturbance on breeding birds found that 36 out of 40 studies reported reduced breeding success as a consequence of disturbance[21]. The main reasons given for the reduction in breeding success were nest abandonment and increased predation of eggs or young. Studies of other species have shown that birds nest at lower densities in disturbed areas, particularly when there is weekday as well as weekend pressure[22].

4.8 Studies have shown that birds are more significantly affected by dog walkers than by people alone, with birds flushing more frequently, at greater distances and for longer (Underhill-Day, 2005). In addition, dogs, rather than people, tend to be the cause of many management difficulties, notably by worrying grazing animals, and can cause eutrophication near paths. Nutrient-poor habitats are particularly sensitive to the fertilising effect of inputs of phosphates, nitrogen and potassium from dog faeces[23].

4.9 Underhill-Day (2005) summarises the results of visitor studies that have collected data on the use of semi-natural habitat by dogs. In surveys where 100 observations or more were reported, the mean percentage of visitors who were accompanied by dogs was 54.0%.

4.10 A study of bird disturbance in North Kent was undertaken in 2010/2011 by Footprint Ecology[24]. It focused on recreational disturbance to wintering waterfowl on intertidal habitats along the North Kent shoreline, stretching between Gravesend and Whitstable and encompassing the following three SPAs: the Thames Estuary and Marshes SPA, Medway Estuary and Marshes SPA and Swale SPA. From 1,400 events (records of visitors in the bird survey areas) occurring within 200m of the birds, 3,248 species-specific observations were noted of which:

[21] Hockin, D., M. Oundsted, M. Gorman, D. Hill, V. Keller and M.A. Barker (1992) – Examination of the effects of disturbance on birds with reference to its importance in ecological assessments. *Journal of Environmental Management*, **36**, 253-286.
[22] Van der Zande, A.N., J.C. Berkhuizen, H.C. van Letesteijn, W.J. ter Keurs and A.J. Poppelaars (1984) – Impact of outdoor recreation on the density of a number of breeding bird species in woods adjacent to urban residential areas. *Biological Conservation,* **30**, 1-39.
[23] Shaw, P.J.A., K. Lankey and S.A. Hollingham (1995) – Impacts of trampling and dog fouling on vegetation and soil conditions on Headley Heath. *The London Naturalist*, **74**, 77-82.
[24] D. Liley & H. Fearnley (Footprint Ecology), 2011. Bird Disturbance Study North Kent.

- 74% resulted in no response.
- 13% resulted in a major flight.
- 5% resulted in a short flight.
- 5% resulted in a short walk.
- 3% resulted in an alert.

4.11 Dog walking accounted for 55% of all major flight observations with a further 15% attributed to walkers without dogs. After controlling for distance, major flights were more likely to occur when activities took place on the intertidal zone (compared to events on the water or events on the shore), when dogs were present and a higher number of dogs were present in visitor groups.

4.12 There were significant differences between species with curlew *Numenius arquata* the species with the highest probability of major flight and teal and black-tailed godwit *Limosa limosa* the lowest. Tide state was also significant with major flights more likely at high tide, after controlling for distance. There was a significant interaction between distance and tide, indicating that the way in which birds responded varied according to tide.

4.13 However, bird disturbance studies need to be treated with care. For instance, the magnitude of disturbance is not necessarily correlated with the impact of disturbance, i.e., the most easily disturbed species are not necessarily those that will suffer the greatest impacts. For example, it has been shown that, in some cases, the most easily disturbed birds simply move to other feeding sites, whilst others may remain (possibly due to an absence of alternative sites) and thus suffer greater population-level impacts[25]. A recent literature review undertaken for the RSPB[26] also urges caution when extrapolating the results of disturbance studies because responses differ between species and may be impacted by local environmental conditions. These facts have to be taken into account when attempting to predict the impacts of future recreational pressure on international sites.

4.14 It should be emphasised that recreational use is not necessarily a problem. Many European sites are also National Nature Reserves or nature reserves managed by Wildlife Trusts and the RSPB. At these sites, access is encouraged and resources are available to ensure that recreational use is managed appropriately.

4.15 Where increased recreational use is predicted to cause adverse impacts on a site, avoidance and mitigation should be considered. Avoidance of recreational impacts at European sites involves locating new development away from such sites; Local Plans and other strategic plans, including NPs, provide the mechanism for this. Where avoidance is not possible, mitigation will usually involve a mix of access management, habitat management and provision of alternative recreational space.

[25] Gill et al. (2001) - Why behavioural responses may not reflect the population consequences of human disturbance. *Biological Conservation,* **97**, 265-268

[26] Woodfield & Langston (2004) - Literature review on the impact on bird population of disturbance due to human access on foot. *RSPB research report* No. 9.

Norfolk Visitor Survey

4.16 A visitor survey across Norfolk was undertaken by Footprint Ecology during 2015 and 2016[27]. The key findings of the survey are as follows:

4.17 Across Norfolk, 6,096 groups of visitors were interviewed representing information from 35,458 people with 3,466 dogs.

- 52% interviewed groups were local residents who made their visit from home.
- 32% of visitors were on holiday.
- 27% of visitors visited the site daily.
- 77% of visitors travelled to their location by car or van, 18% of visitors arrived by foot.
- The most commonly reported activity was dog walking (41%), with walking second at 26%.
- 51% of visitors who arrived by car lived within 5km of their visit location.

4.18 Survey findings specifically for Wells, based on 72 interviewees, were as follows:

- 40% of interviewees were on a short visit from home.
- 53% of interviewees were dog walking.
- 26% of interviewees visit daily.
- 42% arrive by car.
- Median distance from home postcode to the survey point (visitors from home only) was 2km.

4.19 The results also highlighted how an increase in recreational pressure (particularly at the North Coast, the Broads and the Valley Fens) is predicted to be linked with residential development across multiple local authorities.

Trampling Damage

4.20 Coastal habitats are particularly vulnerable to recreational impacts because they are highly dynamic environments that continually change in response to biotic and abiotic factors. Sand dune communities worldwide are characterized by high levels of biodiversity that are often affected by human-induced impacts such as those caused by trampling.

4.21 In order to understand the effects of recreational pressure such as trampling and other processes, fencing experiments have been carried out on coastal dunes. Since dune systems are subjected to different trampling intensities, studies have explored the effects of accessibility on vascular plants cover.

4.22 Generally, plant communities subject to trampling show lower species and structural diversity, since only dominant and tolerant plant species persist.

[27] https://www.north-norfolk.gov.uk/media/3382/visitor-surveys-at-european-protection-sites-2015-16.pdf

Furthermore, limiting trampling appears to produce positive changes in dune vegetation communities after a period of only two years[28].

4.23 A study of paths on a dune system at Winterton, Norfolk, was undertaken by ground and aerial surveys and a map produced of the 35km of major paths in 104ha of dune[29]. Experiments were carried out on the resistance to trampling of a tall *Festuca ovina-Carex arenaria* sward. Estimates were made of the comparative vulnerability of other plant communities. The range extended from *Ammophila arenaria,* which was 10 times as vulnerable, to a short rabbit-grazed sward, 13-14 times as vulnerable. The more vulnerable habitats attracted more people. Forty-two percent of the paths at Winterton occur on the steep slopes dominated by *Ammophila*. Comparisons were made with a similar site at Meijendel where greater recreational pressure necessitated laid-out paths and fencing to control visitors. It was suggested that if visitor pressure increased at Winterton, similar management interventions may also be required there.

Nutrient enrichment

4.24 A major concern for nutrient-poor terrestrial habitats such as dune systems is nutrient enrichment associated with dog fouling, which has been addressed in various reviews (e.g.,[30]). It is estimated that dogs will defecate within 10 minutes of starting a walk and therefore most nutrient enrichment arising from dog faeces will occur within 400m of a site entrance. In contrast, dogs will urinate at frequent intervals during a walk, resulting in a spread-out distribution of urine. For example, in Burnham Beeches National Nature Reserve it is estimated that 30,000 litres of urine and 60 tonnes of dog faeces are deposited annually[31]. While there is little information on the chemical constituents of dog faeces, nitrogen is one of the main components[32]. Nutrient levels are the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in the shift to plant communities that are more typical of improved grasslands.

Summary

4.25 Overall, the following European sites are considered susceptible to recreational pressure within the context of the WntSNP:

- North Norfolk Coast SAC
- The Wash & North Norfolk Coast SAC
- North Norfolk Coast SPA / Ramsar

[28] Santoro, R et.al. (2012) Effects of Trampling Limitation on Coastal Dune Plant Communities. Environmental Management DOI 10.1007/s00267-012-9809-6

[29] L.A. Boorman, R.M. Fuller. Studies on the impact of paths on the dune vegetation at Winterton, Norfolk, England, Biological Conservation, Volume 12, Issue 3, 1977, Pages 203-216.

[30] Taylor K., Anderson P., Taylor R.P., Longden K. & Fisher P. 2005. Dogs, access and nature conservation. English Nature Research Report, Peterborough.

[31] Barnard A. 2003. Getting the facts – Dog walking and visitor number surveys at Burnham Beeches and their implications for the management process. *Countryside Recreation* **11**:16-19.

[32] Taylor K., Anderson P., Liley D. & Underhill-Day J.C. 2006. Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.

Background to Urban Effects

4.26 The list of urbanisation impacts can be extensive, but core impacts can be singled out (note that this list does not imply that all these impacts are expected to occur):

Increased Fly-Tipping

4.27 Whilst fly-tipping is generally considered more of a localised and visual problem, an negative ecological effect of tipping is the introduction of pollutants, plastics and non-native plants to the environment. This can create physical and chemical hazards for wildlife and could potentially damage habitats.

4.28 Residents of Wells-next-the-Sea have fortnightly bin collections[33] and access to a recycling centre to prevent the spread of waste into the environment. This combined with the very open and public nature of the relevant European sites makes it highly unlikely that there will be increased fly-tipping as a result of the WntSNP and this impact pathway is therefore not considered further in this HRA.

Cat Predation

4.29 A survey undertaken in 1997 indicated that nine million British cats brought home 92 million prey items over a five-month period[34]. A large proportion of domestic cats are found in urban settings, and residential development is likely to lead to increased cat predation if the development is located sufficiently close to European sites designated for sensitive bird species (particularly ground nesting birds).

4.30 The average roaming distance of domestic cats is approx. 40-200m from home[35] and LSEs due to cat predation may be an issue where allocated sites are within 200m of an SPA/ Ramsar.

Wildfires / Arson

4.31 Wildfires are a periodic threat across European sites and can adversely affect habitats through direct damage to the vegetation and soils, which results in the reduction of habitat quality and associated wildlife alongside carbon release to atmosphere and watercourses.

4.32 The cause is generally accepted to be of human origin, with deliberate intent or careless behaviour near footpaths and car parks appearing to be the chief cause of ignition. Available research[36, 37] identifies the principle causes of 'wild' fires to be deliberate fire-setting; out-of-control campfires, out-of-control planned fires (e.g., part of moorland management for grouse); and out-of-control bonfires.

4.33 Kirby & Tantram (1999) concluded that fires occurred at higher densities on the fringes of larger conurbations and in sites within developed urban areas, where fire events present a serious risk to ecological integrity. A zone of 500m was used,

[33] https://www.north-norfolk.gov.uk/tasks/environmental-services/view-bin-collections-days/
[34] Woods, M. et al. 2003. Predation of wildlife by domestic cats *Felis catus* in Great Britain. Mammal Review 33, 2 174-188
[35] https://www.petplan.co.uk/pet-information/cat/advice/roaming/
[36] J. C. Underhill-Day, (2005) 'A literature review of urban effects on lowland heaths and their wildlife', English Nature Research Reports, Number 623
[37] J.S. Kirby & D.A.S Tantram (1999) 'Monitoring heathland fires in Dorset: Phase 1' Report to Department of the Environment, Transport and the Regions: Wildlife and Countryside Directorate

based on the maximum likely access distance for average users of greenspaces[38, 39,] and it was found that the degree of development within this zone correlated with incidence of fires (on Dorset Heathlands). There is also evidence to suggest that a significant proportion of deliberate fire setting is by children of school age.

4.34 The age structure of Wells-next-the-Sea parish from the 2011 Census data indicates that the mean age of residents in Wells-next-the-Sea was 51.6 years in the 2011 Census compared with 41.7 years for Norfolk and 47.5 years for North Norfolk. The number of residents aged 65-84 is 4% higher than the North Norfolk average and 7% higher than the county average[40]. Given this age profile it is highly unlikely that there will be an increased risk of wildfire / arson as a result of the WntSNP and this impact pathway is therefore not considered further in this HRA.

4.35 The following European site is considered sensitive to urban effects (in the form of cat predation) due to the implementation of the WntSNP:

- North Norfolk Coast SPA / Ramsar

Background to Loss of Functionally Linked Habitat

4.36 While most European sites have been geographically defined to encompass the key features that are necessary for coherence of their structure and function, and the support of their qualifying features, this is not always the case. A diverse array of qualifying species including birds, bats and amphibians are not confined to the boundary of designated sites.

4.37 For example, the highly mobile nature of both wildfowl and heathland birds implies that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of European sites. Despite not being part of the formal designation, this habitat is still integral to the maintenance of the structure and function of bird populations in the designated site and, therefore, land use plans that may affect such areas should be subject to further assessment. This has been underlined by a recent European Court of Justice ruling (C-461/17, known as the Holohan ruling[41]) which in paragraphs 37 to 40 confirms the need for an AA to consider the implications of a plan or project on habitats and species outside the European site boundary, provided that those implications are liable to affect the Conservation Objectives of the site.

4.38 With regard to birds, functionally linked habitats typically provide habitat for foraging or other ecological functions essential for the maintenance of the designated population e.g., high-tide roosts for coastal waders and waterfowl. Functionally linked habitats may extend up to the maximum foraging distances established for relevant bird species. However, the number of birds foraging will tend to decrease further away from the protected site and thus the importance of the land to the maintenance of the designated population will decrease.

[38] arrison, C, Burgess, J, Millward, A, Dawe, G. 1995. Accessible greenspace in towns and cities: A review of appropriate size and distance criteria. English Nature Research Report No. 153. English Nature, Peterborough.
[39] Box, J. & Harrison, C. 1993. Natural spaces in urban places. Town 19 Country Planning, 62(9): 231-235
[40] www.rsonline.org.uk
[41] The Holohan ruling also requires all the interest features of the European sites discussed to be catalogued (i.e., listed) in the HRA. That is the purpose of Appendix A.

4.39 Natural England's Impact Risk Zones (IRZs)[42] identify the core foraging distances that wintering birds will travel from their SPAs / Ramsars and the guidance that underlies those zones will be utilised in this HRA. The relevant IRZs are shown in Table 2:

Table 2. Natural England's Impact Risk Zones (IRZs) for different groups of designated bird species.

Assemblage	Impact Risk Zone (IRZ, based on core foraging distance)
Wintering birds (except wintering waders and grazing wildfowl; wigeon and geese)	Up to 500m
Dabbling ducks such as teal, mallard and gadwall	Home ranges could extend beyond site boundaries at coastal sites, but less likely to do so at inland water bodies.
Wintering waders (except golden plover and lapwing), brent goose & wigeon	Maximum foraging distance is 2km
Wintering lapwing and golden plover	Maximum foraging distance is 15-20km. Golden plover can forage up to 15km from a roost site within a protected site. Lapwing can also forage similar distances. Both species use lowland farmland in winter and it is difficult to distinguish between designated populations and those present within the wider environment. Developments affecting functionally linked land more than 10km from the site are unlikely to impact significantly on designated populations.
Wintering white-fronted goose, greylag goose, Bewick's swan, whooper swan, pink-footed goose & wintering bean goose	Maximum foraging distance is 10km although studies have shown that pink-footed geese will fly 20km from their roosting site to feed[43]. A bespoke functional land IRZ has replaced the individual Birds 6/7 IRZs for sites supporting the following goose and swan species: pink-footed geese, barnacle goose, Bewick's swan, white-fronted goose and whooper swan. The IRZ is based on GIS distribution records of feeding pink-footed geese from a study undertaken for Natural England by the Wildfowl & Wetlands Trust44

[42] Knight M. (2019). Impact Risk Zones Guidance Summary – Sites of Special Scientific Interest Notified for Birds. Version 1.1. 8pp.
[43] https://monitoring.wwt.org.uk/wp-content/uploads/2018/12/Mapping-feeding-Pinkfeet-in-England-Final-report-vFinal.Jan15-2.pdf [accessed 14/04/2021]
[44] Ibid

Assemblage	Impact Risk Zone (IRZ, based on core foraging distance)
	and the results of work undertaken by the British Trust for Ornithology to identify functionally connected habitat used by barnacle goose, Bewick's swan, white-fronted goose and whooper swan based on WeBS site and BirdTrack data and focuses on only the areas of land that we know are being used as functional habitat by designated populations

4.40 The guidance document further identifies that for SSSIs designated for wintering waterfowl and waders (other than golden plover and lapwing) a maximum of 2km is appropriate for the identification of potential functionally linked habitat, with the exception of wind energy (3km) and airports (10km).

4.41 There is now an abundance of authoritative examples of HRA cases on plans affecting bird populations, where Natural England recognised the potential importance of functionally linked land[45].

4.42 Relevant designated birds, as per the site Conservation Objectives relating to the North Norfolk Coast SPA / Ramsar, are shown in Table 3. The habitats and foraging resources that may be present within the WntSNP boundary are shown in bold.

Table 3. Habitat preferences and diet of designated bird species of the North Norfolk Coast SPA / Ramsar

Designated Bird Feature	Habitat Preferences[46]	Diet[47]
Avocet	Mudflats, lagoons, sandy beaches	Invertebrates, especially insects, crustaceans, worms, but also small fish; sweeps bill from side to side, prey located by touch.
Sandwich tern	Sandy seacoasts, in winter estuaries	Mostly fish by plunge-diving (offshore feeding)
Common tern	Sandy seacoasts, in winter marshes, estuaries	Mostly fish, also crustaceans in some areas, mostly by plunge-diving (offshore feeding)
Dark-bellied brent goose	Tundra, on migration marshes & estuaries	Eelgrass (*Zostera*), also vegetation by **grazing on land** or shallow water
Pink-footed goose	Tundra lakes, rivers & wet meadows	Plant material, including roots, tubers, shoots, leaves, in winter now mostly on **farmland**

[45] Chapman C & Tyldesley D. 2016. Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects – A review of authoritative decisions. Natural England Commissioned Reports 207: 73pp.
[46] Taken from British Trust of Ornithology BirdFacts https://www.bto.org/understanding-birds/birdfacts
[47] Ibid

Designated Bird Feature	Habitat Preferences[46]	Diet[47]
Wigeon	Marsh, lakes, open moor, on migration also estuaries	Mostly leaves, shoots, rhizomes, also some seeds
Knot	Tundra, on migration coastal	Summer, insects and plant material, Winter Inter-tidal invertebrates, especially molluscs
Little tern	Seacoasts, rivers & lakes	Small fish and invertebrates, often hovers before plunge-diving
Bittern	**Reedbeds and marshes**	Mostly fish, amphibians, insects but wide variety, mostly in shallow water in or near cover
Marsh harrier	**Reedbeds and marshes**	**Ground-dwelling animals**, especially in marshy areas, preference for easily caught prey
Montagu's harrier	**Marsh,** moor **& grassland**	**Ground-dwelling animals,** especially in areas with low vegetation

4.43 Generally, the identification of an area as functionally linked habitat is now a relatively straightforward process and it is reasonable to assume that a site <2 ha in size is unlikely to support a large enough population of birds (taking sightlines etc. into account) to constitute 1% of an SPA population. However, the importance of non-designated land parcels may not be immediately apparent and could require the analysis of existing data sources to be firmly established. In some instances, data may not be available at all, requiring further survey work.

4.44 The following European site is considered susceptible to the potential loss of functionally linked habitat in the context of the WntSNP:

- North Norfolk Coast SPA / Ramsar

Background to Noise and Visual Disturbance

4.45 As detailed in the section on recreational pressure above, human activity can affect birds either directly (e.g., by causing them to flee) or indirectly (e.g. by damaging their habitat). Human activity can also lead to behavioural changes (e.g., alterations in feeding behaviour, avoidance of certain areas etc.) and physiological changes (e.g., an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects[48].

4.46 Recreational pressure is not the only potential source of disturbance. Construction work taking place immediately adjacent to the designated site or functionally linked habitats could cause disturbance and displacement of designated birds. While any impact relating to demolition and construction activities will be temporary (birds would likely return once construction work

[48] Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

ceases and the disturbance stimulus is removed) the resulting effect on population survival could be significant if it occurs during the winter / passage period and prevents birds from using feeding areas on which they rely. It should be noted that any operational activities are likely to be permanent and thus their impact could result in a more severe negative impacts on designated bird features.

4.47 The degree of impact that varying levels of noise will have on different species of bird is relatively poorly understood. Several studies have found that an increase in traffic levels on roads leads to a reduction in the bird abundance within adjacent hedgerows - Reijnen et al (1995) examined the distribution of 43 passerine species (i.e., 'songbirds'), of which 60% had a lower density closer to the roadside than further away. By controlling vehicle usage, they also found that the density generally was lower along busier roads than quieter roads[49].

4.48 A recent review on recreational disturbance on the Humber[50] assessed different types of noise disturbance on waterfowl referring to studies relating to aircraft (see Drewitt 1999[51]), traffic (Reijnen, Foppen, & Veenbaas 1997)[52], dogs (Lord, Waas, & Innes 1997[53]; Banks & Bryant 2007[54]) and machinery (Delaney et al. 1999; Tempel & Gutierrez 2003). These studies identified that there is still relatively little work on the effects of different types of water-based craft and the impacts from jet skis, kite surfers, windsurfers etc. (see Kirby et al. 2004[55] for a review). Some types of disturbance are clearly likely to invoke different responses. In very general terms, both distance from the source of disturbance and the scale of the disturbance (noise level, group size) will influence the response (Delaney et al. 1999[56]; Beale & Monaghan 2005[57]). On UK estuaries and coastal sites, a review of WeBS data showed that, among the volunteer WeBS surveyors, driving of motor vehicles and shooting were the two activities most perceived to cause disturbance (Robinson & Pollitt 2002)[58].

4.49 Additionally, animals can be disturbed by the movement of ships. For instance, a DTI study of birds of the North West coast noted that: "*Divers and scoters were absent from the mouths of some busier estuaries, notably the Mersey... Both species are known to be susceptible to disturbance from boats, and their relative scarcity in these areas... may in part reflect the volume of boat traffic in these areas*"[59].

4.50 Three of the most important factors determining the magnitude of disturbance appear to be species sensitivity, proximity of the disturbance source and timing /

[49] Reijnen, R. et al. 1995. The effects of car traffic on breeding bird populations in woodland. III. Reduction of density in relation to the proximity of main roads. Journal of Applied Ecology 32: 187-202
[50] Helen Fearnley Durwyn Liley and Katie Cruickshanks (2012) Results of Recreational Visitor Survey across the Humber Estuary produced by Footprint Ecology
[51] Drewitt, A. (1999) Disturbance effects of aircraft on birds. English Nature, Peterborough.
[52] Reijnen, R., Foppen, R. & Veenbaas, G. (1997) Disturbance by traffic of breeding birds: evaluation of the effect and considerations in planning and managing road corridors. Biodiversity and Conservation, 6, 567-581.
[53] Lord, A., Waas, J.R. & Innes, J. (1997) Effects of human activity on the behaviour of northern New Zealand dotterel Charadrius obscurus aquilonius chicks. Biological Conservation, 82,15-20.
[54] Banks, P.B. & Bryant, J.V. (2007) Four-legged friend of foe? Dog-walking displaces native birds from natural areas. Biology Letters, 3, 611-613.
[55] Kirby, J.S., Clee, C. & Seager, V. (1993) Impact and extent of recreational disturbance to wader roosts on the Dee estuary: some preliminary results. Wader Study Group Bulletin, 68, 53-58.
[56] Delaney, D.K., Grubb, T.G., Beier, P., Pater, L.L.M. & Reiser, H. (1999) Effects of Helicopter Noise on Mexican Spotted Owls. The Journal of Wildlife Management, 63, 60-76.
[57] Beale, C.M. & Monaghan, P. (2005) Modeling the Effects of Limiting the Number of Visitors on Failure Rates of Seabird Nests. Conservation Biology, 19, 2015-2019.
[58] Robinson, J.A. & Pollitt, M.S. (2002) Sources and extent of human disturbance to waterbirds in the UK: an analysis of Wetland Bird Survey data, 1995/96 to 1998/99: Less than 32% of counters record disturbance at their site, with differences in causes between coastal and inland sites. Bird Study, 49, 205.
[59] DTI (2006). Aerial Surveys of Waterbirds in Strategic Wind Farm Areas: 2004/05 Final Report

duration of the disturbance. Generally, the most disturbing activities are likely to be those that involve irregular, infrequent and unpredictable loud noise events, movements or vibrations. Birds are least likely to be disturbed by activities that involve regular, frequent, predictable, quiet patterns of sound, movement and vibration. The further any activity is from the birds, the less likely it is to result in disturbance.

4.51 An increasing amount of research on visual and noise disturbance of waterfowl from construction (and other activities) is now available[60]. Both visual and noise stimuli may elicit disturbance responses, potentially affecting the fitness and survival of waterfowl and waders. Noise is a complex disturbance parameter requiring the consideration of multiple parameters, including its non-linear scale, non-additive effect and the source-receptor distance. A high level of noise disturbance constitutes a sudden noise event of over 60dB or prolonged noise of over 72dB. Bird responses to high noise levels include major flight or the cessation of feeding, both of which might affect the survival of birds particularly if other stressors are present (e.g., cold weather, food scarcity).

4.52 Generally, research has shown that above noise levels of 84dB waterfowl show a flight response, while at levels below 55dB there are no behavioural effects. These two thresholds are therefore considered useful as defining two extremes. The same authors have shown that regular noise levels should be below 70dB at the bird, as birds will habituate to noise levels below this level. Generally, noise is attenuated by 6dB with every doubling of distance from the source. For example, impact piling, which is a particularly noisy construction process of approx.. 110dB at 0.67m from source, will therefore reduce to 67 – 68dB by 100m from the source. Overall, the loudest construction noise will have fallen to below disturbing levels by 100m, and certainly by 200m, from the source even without mitigation.

4.53 Visual disturbance is generally considered to have a higher impact than noise disturbance as, in most instances, visual stimuli will elicit a disturbance response at greater distances than noise. For example, a flight response is triggered in most species when they are approached to within 150m across a mudflat. Visual disturbance can be exacerbated by workers operating equipment outside machinery, undertaking sudden movements and using large machinery. Some species are particularly sensitive to visual disturbance, including curlew (taking flight at 275m), redshank (at 250m), shelduck (at 199m) and bar-tailed godwit (at 163m).

4.54 For the purpose of this assessment, a precautionary buffer of 300m has been used for visual and noise disturbance impacts. The following European site is considered susceptible to visual and noise disturbance within the context of the WntSNP:

- North Norfolk Coast SPA / Ramsar

Background to Atmospheric Pollution

4.55 The main pollutants of concern for European sites are oxides of nitrogen (NOx), ammonia (NH_3) and sulphur dioxide (SO_2) and are summarised in Table 4.

[60] Institute of Estuarine & Coastal Studies (IECS), University of Hull. (2013). Waterbird Disturbance Mitigation Toolkit – Informing Estuarine Planning & Construction Projects. 36pp.

Table 4. Main sources and effects of air pollutants on habitats and species[61].

Pollutant	Source	Effects on habitats and species
Sulphur dioxide (SO_2)	The main sources of SO_2 are electricity generation, and industrial and domestic fuel combustion. However, total SO_2 emissions in the UK have decreased substantially since the 1980's. Another origin of sulphur dioxide is the shipping industry and high atmospheric concentrations of SO_2 have been documented in busy ports. In future years shipping is likely to become one of the most important contributors to SO_2 emissions in the UK.	Wet and dry deposition of SO_2 acidifies soils and freshwater and may alter the composition of plant and animal communities. The magnitude of effects depends on levels of deposition, the buffering capacity of soils and the sensitivity of impacted species. However, SO_2 background levels have fallen considerably since the 1970's and are now not regarded a threat to plant communities. For example, decreases in Sulphur dioxide concentrations have been linked to returning lichen species and improved tree health in London.
Acid deposition	Leads to acidification of soils and freshwater via atmospheric deposition of SO_2, NOx, ammonia and hydrochloric acid. Acid deposition from rain has declined by 85% in the last 20 years, which most of this contributed by lower sulphate levels. Although future trends in S emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, increased N emissions may cancel out any gains produced by reduced S levels.	Gaseous precursors (e.g., SO_2) can cause direct damage to sensitive vegetation, such as lichen, upon deposition. Can affect habitats and species through both wet (acid rain) and dry deposition. The effects of acidification include lowering of soil pH, leaf chlorosis, reduced decomposition rates, and compromised reproduction in birds / plants. Not all sites are equally susceptible to acidification. This varies depending on soil type, bed rock geology, weathering rate and buffering capacity. For example, sites with an underlying geology of granite, gneiss and quartz rich

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

Pollutant	Source	Effects on habitats and species
		rocks tend to be more susceptible.
Ammonia (NH_3)	Ammonia is a reactive, soluble alkaline gas that is released following decomposition and volatilisation of animal wastes and from some chemical processes and vehicle exhausts. It is a naturally occurring trace gas, but ammonia concentrations are directly related to the distribution of livestock. Ammonia reacts with acid pollutants such as the products of SO_2 and NO_X emissions to produce fine ammonium (NH_4+) - containing aerosol. Due to its significantly longer lifetime, NH_4+ may be transferred much longer distances (and can therefore be a significant trans-boundary issue). While ammonia deposition may be estimated from its atmospheric concentration, the deposition rates are strongly influenced by meteorology and ecosystem type	The negative effect of NH_4+ may occur via direct toxicity when uptake exceeds detoxification capacity and via N accumulation. Its main adverse effect is eutrophication, leading to species assemblages that are dominated by fast-growing and tall species. For example, a shift in dominance from heath species (lichens, mosses) to grasses is often seen. As emissions mostly occur at ground level in the rural environment and NH_3 is rapidly deposited, some of the most acute problems of NH_3 deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides (NO_x)	Nitrogen oxides are mostly produced in combustion processes. Half of NO_X emissions in the UK derive from motor vehicles, one quarter from power stations and the rest from other industrial and domestic combustion processes.	Direct toxicity effects of gaseous nitrates are likely to be important in areas close to the source (e.g. roadside verges). A critical level of NOx for all vegetation types has been set to 30 ug/m^3. Deposition of nitrogen compounds (nitrates (NO_3), nitrogen dioxide (NO_2) and nitric acid (HNO_3)) contributes to the total nitrogen deposition

Pollutant	Source	Effects on habitats and species
		and may lead to both soil and freshwater acidification. In addition, NOx contributes to the eutrophication of soils and water, altering the species composition of plant communities at the expense of sensitive species.
Nitrogen deposition	The pollutants that contribute to the total nitrogen deposition derive mainly from oxidized (e.g. NO_X) or reduced (e.g. NH_3) nitrogen emissions (described separately above). While oxidized nitrogen mainly originates from major conurbations or highways, reduced nitrogen mostly derives from farming practices. The N pollutants together are a large contributor to acidification (see above).	All plants require nitrogen compounds to grow, but too much overall N is regarded as the major driver of biodiversity change globally. Species-rich plant communities with high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication. This is because many semi-natural plants cannot assimilate the surplus N as well as many graminoid (grass) species. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O_3)	A secondary pollutant generated by photochemical reactions involving NOx, volatile organic compounds (VOCs) and sunlight. These precursors are mainly released by the combustion of fossil fuels (as discussed above). Increasing anthropogenic emissions of ozone precursors in the UK have led to an increased number of days when ozone levels rise above 40 ppb ('episodes' or 'smog'). Reducing ozone pollution is believed to require action at international level to	Concentrations of O_3 above 40 ppb can be toxic to both humans and wildlife and can affect buildings. High O_3 concentrations are widely documented to cause damage to vegetation, including visible leaf damage, reduction in floral biomass, reduction in crop yield (e.g. cereal grains, tomato, potato), reduction in the number of flowers, decrease in forest production and altered species composition in semi-natural plant communities.

Pollutant	Source	Effects on habitats and species
	reduce levels of the precursors that form ozone.	

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

4.57 NH_3 can have a directly toxic effect upon vegetation, particularly at close distances to the source such as near road verges[62]. NO_x can also be toxic at high concentrations (far above the annual average Critical Level) but generally only in the presence of elevated SO_2 which is very rare in the UK.

4.58 NO_x emissions, however, are dominated by the output of vehicle exhausts (more than half of all emissions). Within a 'typical' housing development, by far the largest contribution to NO_x (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison[63]. Emissions of NO_x could therefore be reasonably expected to increase as a result of greater vehicle use as an indirect effect of the WntSNP.High levels of NO_x and NH_3 are likely to increase the total N deposition to soils, potentially leading to deleterious knock-on effects in resident ecosystems. Increases in nitrogen deposition from the atmosphere can, if sufficiently great, enhance soil fertility and lead to eutrophication. This often has adverse effects on community composition and the quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats[64, 65].

4.59 According to the World Health Organisation, the critical NO_x concentration (critical threshold) for the protection of vegetation is 30 μgm^{-3}. In addition, ecological studies have determined 'Critical Loads' (CLs)[66] of atmospheric N deposition (that is, NO_x combined with ammonia NH_3) for key habitats within European sites.

4.60 According to the Department of Transport's Transport Analysis Guidance, "*Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant*"[67] (see Figure 2).

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

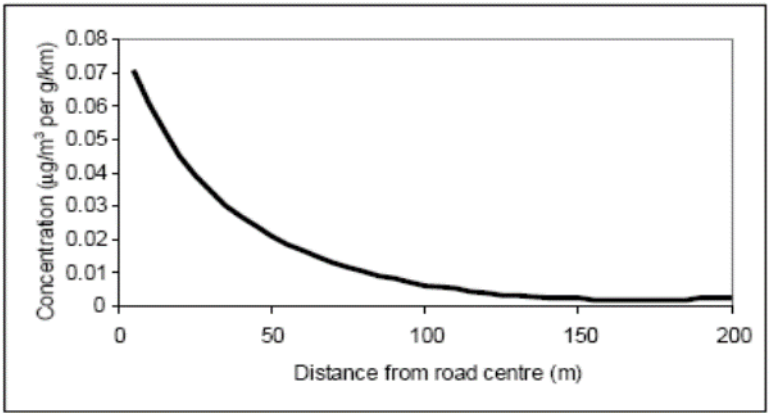


Figure 2: Traffic contribution to concentrations of pollutants at different distances from a road (Source: www.dft.gov.uk/ha/standards/dmrb/vol11/section3/ha20707.pdf)

4.61 This is the distance that has been used in this HRA to determine whether European sites are likely to be significantly affected by development under the WntSNP. The main road to and from Wells-next-the-Sea is the A149, which is the main focus of this HRA.

4.62 The following European sites are considered sensitive to atmospheric pollution arising from the WntSNP:

- North Norfolk Coast SPA / Ramsar / SAC
- The Wash & North Norfolk Coast SAC

Background to Water Resources

4.63 The water level, its flow rates and the mixing conditions are important determinants of the condition of European sites and their qualifying features. Hydrological processes are critical in influencing habitat characteristics in wetlands and coastal waters, including current velocity, water depth, dissolved oxygen levels, salinity and water temperature. In turn these parameters determine the short- and long-term viability of plant and animal species, as well as overall ecosystem composition. Changes to the water flow rate within intertidal habitats can be associated with a multitude of further impact pathways, including substratum loss, smothering and changes in wave exposure, and often interact with coastal squeeze.

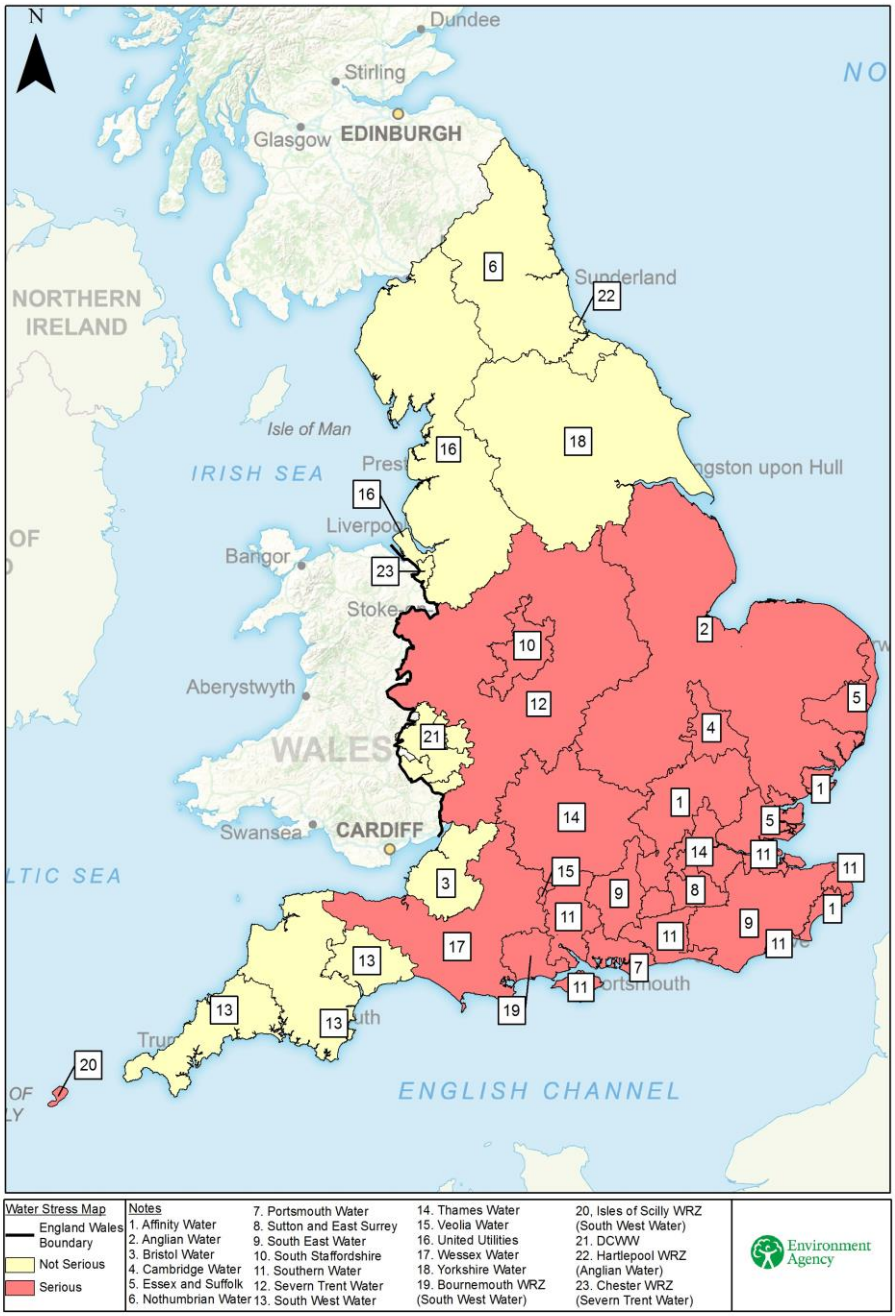
4.64 The unique nature of wetlands combines shallow water and conditions that are ideal for the growth of organisms at the basal level of food webs, which feed many species of birds, mammals, fish and amphibians. Overwintering, migrating and breeding wetland bird species are particularly reliant on these food sources, as they need to build up enough nutritional reserves to sustain their long migration routes or feed their hatched chicks.

4.65 Maintaining a steady water supply is of critical importance for many hydrologically dependent SPAs, SACs and Ramsars. For example, in many wetlands winter flooding is essential for sustaining a variety of foraging habitats for SPA / Ramsar wader and waterbird species. However, different species vary in their requirements for specific water levels. For example, some duck species (e.g. wigeon) have optimum water depth requirements of under 0.3m for successful foraging. In contrast, bittern require deep water surrounding nesting sites to help deter predators.

4.66 For both wetland and coastal habitats, a constant supply of freshwater is fundamental to maintaining their ecological integrity. However, while the natural fluctuation of water levels within narrow limits is desirable, excess or too little water supply might cause the water level to be outside of the required range of qualifying birds, invertebrates or plant species. There are two mechanisms through which urban development might negatively affect the water level in European Sites:

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

It is also noted that Wells-next-the-Sea is located within an area of serious water stress (see



4.67 overleaf), meaning that there are existing pressures on water resources that may be exacerbated by increased water abstraction.

4.68 The following European site is considered sensitive to changes in water resources arising from the WntSNP:

- North Norfolk Coast SPA / Ramsar / SAC
- The Wash & North Norfolk Coast SAC

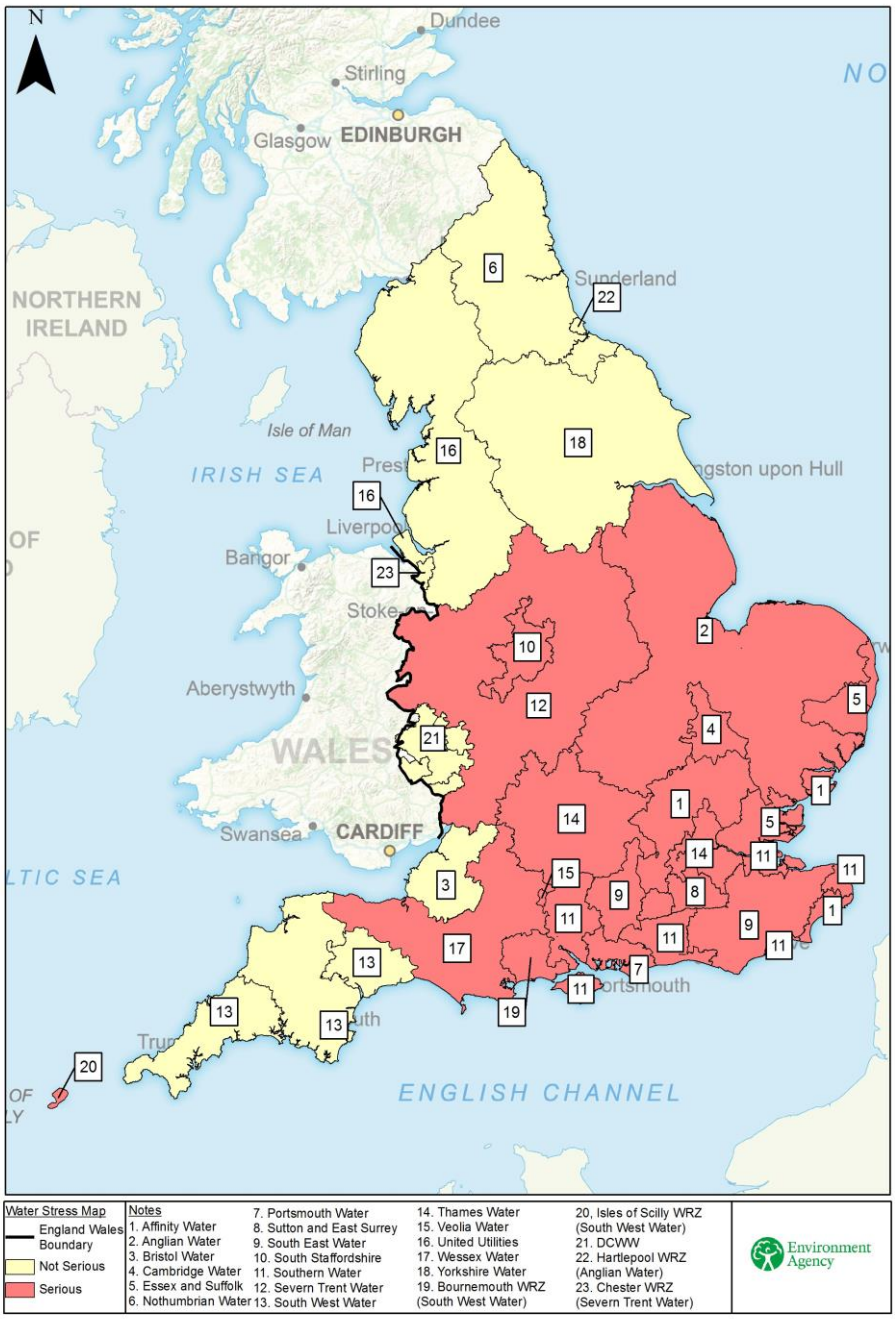


Figure 3: Areas of water stress in England and Wales[68]

Background to Water Quality

4.69 Increased amounts of housing or business development can lead to reduced water quality of rivers and estuarine environments. Sewage and industrial effluent discharges can contribute to increased nutrients and toxic contaminants in European sites leading to unfavourable conditions.

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

[68] Figure adapted from Environment Agency. 2021. Water stressed areas – final classification https://www.gov.uk/government/publications/water-stressed-areas-2021-classification [Accessed on the 21/02/2023]

- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour. Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes that often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In the marine environment, nitrogen is the limiting plant nutrient and so eutrophication is associated with discharges containing available nitrogen.
- Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.
- For sewage treatment works close to capacity, further development may increase the risk of effluent escape into aquatic environments. In many urban areas, sewage treatment and surface water drainage systems are combined, and therefore a predicted increase in flood and storm events could increase pollution risk.

4.71 The following European site is considered sensitive to negative water quality changes arising from the WntSNP:

- North Norfolk Coast SPA / Ramsar / SAC
- The Wash & North Norfolk Coast SAC

Summary of Impact Pathways to be Taken Forward

4.72 Having considered the impact pathways identified at paragraph 4.3, those shown in Table 5 will be taken to the next stage in the HRA process, the LSEs screening.

Table 5. Impact pathways and relevant European sites.

Impact pathway	European site (s) potentially affected
Recreational pressure	North Norfolk Coast SPA / Ramsar / SAC The Wash & North Norfolk Coast SAC
Urban effects	North Norfolk Coast SPA / Ramsar
Loss of functionally linked habitat	North Norfolk Coast SPA / Ramsar
Noise and visual disturbance	North Norfolk Coast SPA / Ramsar

Impact pathway	European site (s) potentially affected
Atmospheric pollution	North Norfolk Coast SPA / Ramsar / SAC The Wash & North Norfolk Coast SAC
Water resources	North Norfolk Coast SPA / Ramsar / SAC The Wash & North Norfolk Coast SAC
Water quality	North Norfolk Coast SPA / Ramsar / SAC The Wash & North Norfolk Coast SAC

5. Likely Significant Effects (LSEs) Screening

Introduction

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

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

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

Approach to Wells-next-to-Sea Neighbourhood Plan Policy Screening

5.3 There are 18 policies within the WntSNP. Policies were screened out of having LSEs on a European site where any of the following reasons applied:

- they are environmentally positive;
- they will not themselves lead to any development or other change;
- they make provision for change but could have no conceivable effect on a European site. This can be because there is no pathway between the policy and the qualifying features or a European site, or because any effect would be positive;
- they make provision for change but could have no significant effect on a European site (i.e., the effect would not undermine the conservation objectives of a European site); or,
- the effects of a policy on any particular European site cannot be ascertained because the policy is too general. For example, a policy may

be screened out if, based on absence of detail in the policy, it is not possible to identify where, when, or how the policy may be implemented, where effects may occur, or which sites, if any, may be affected.

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

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

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

Results of Policy Screening

5.6 The results of the LSEs screening of policies included in the WntSNP are presented in Table 6. Where a policy is shaded green, there are no linking impact pathways to European sites and LSEs can be excluded. Where the screening outcome is shaded orange, LSEs cannot be excluded, and the policy is screened in for AA.

5.7 Of the 18 WntSNP policies, four policies are considered to have the potential to result in LSEs, either alone or in combination with other plans and projects, as they are associated with impact pathways linking to European sites.

Approach to Screening of Potential Sites

5.8 The emerging North Norfolk Local Plan (NNLP, Regulation 18 Version, 2019) proposed an increase of 80 houses in Wells-next-the-Sea during the plan period. In 2020, a Housing Needs Assessment was commissioned by Holkham Estate in partnership with Wells Town Council and Walsingham Estates and supported by Homes for Wells. The study concluded that a further 176 households would be likely to be seeking accommodation in the parish between 2021 and 2041[69], bringing the total to 256 dwellings, just over a three-fold increase of dwellings allocated in the parish in the emerging NNLP.

5.9 The Town Council carried out a Call for Sites to identify opportunities to deliver affordable housing in the Parish and four sites were put forward, one being owned by the Town Council and three by single landowners. Of these, one site (CFS4) has already been proposed as an allocation in the emerging NNLP and cannot be duplicated. Similarly, three other sites (W09, W10 and W13) have

[69] https://drive.google.com/file/d/1DPfmEkZPTFlLuO0THIxgXKcV9knp1Jws/view

already been submitted to the Local Planning Authority during the Local Plan consultation and will, therefore, be covered by the Local Plan HRA.

The sites proposed for potential allocation contained within the WntSNP that will be assessed in this HRA are those previously identified in the North Norfolk Housing and Economic Land Availability Assessment (HELAA), and those where HELAA sites have been extended.

5.10 Table 7 provides a description and Figure 4 shows the distribution of these sites on a map. The potential implications and impact pathways associated with each of the sites have been appraised.

Table 6. Screening table of the policies included in the Wells-next-the-Sea Neighbourhood Plan.

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
Housing and Design		
WNS1: Community Led Housing	Proposals for the development of small-scale affordable housing schemes on sites outside of but immediately adjacent to the settlement boundary will be permitted on an exceptional basis where there is a proven local need and where such housing: a) Remains affordable and available in perpetuity. b) Is available for people identified as being in housing need by virtue of being unable to buy or rent properties in the parish at open market prices. c) Is offered in the first instance to people with a demonstrated local connection as identified by Homes for Wells or in the relevant North Norfolk District Housing Policies (or successor document). d) Is accompanied by evidence of community support and/or participation including through public consultation and engagement. The occupation of this housing should be secured through a legal agreement attached to the planning consent for the housing. The development of such housing should be consistent with polices in this plan governing design, appearance, layout, amenity, highway safety, impacts on historic and natural environment and flood risk. Proposals for housing of this kind should be accompanied by a detailed housing needs assessment which demonstrates that a local need exists,	**Potential for LSEs, screened in for AA.** Policy WNS1 provides general support to small-scale affordable housing schemes on sites immediately outside the settlement boundary. While it identifies Policy CSF2 as the primary site to deliver its objective, it does potentially allow other sites to come forward without a cap on residential development. Notwithstanding this, the policy also states that development of such housing should be consistent with other Neighbourhood Plan policies, including those protecting the natural environment. Therefore, any development on this site has the potential to result in LSEs regarding the following impact pathways:

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	and that the accommodation proposed will contribute to meeting this proven need	• Recreational pressure • Loss of functionally linked habitat
WNS2: The scale and location of new housing	The scale of new housing within the Neighbourhood Area will reflect the position of the town within the overall settlement hierarchy for the district as 'a small growth town'. The focus of new housing development over the plan period will be on specifically identified sites or infill development within the existing defined settlement boundary. This Neighbourhood Plan provides for an additional 45 new dwellings to be developed in the Neighbourhood Plan area up to 2036 in the form of an identified Community Led Housing Development. **Site WELLS1** A site of approximately 1.89ha at Two Furlong Hill is allocated as a Community Led Housing development for dwellings with associated infrastructure. Development of the site will be subject to compliance with other relevant policies in this Neighbourhood Plan and the following site-specific requirements: a) 45 Affordable dwellings will be provided b) Dwelling type to be a mix of houses and bungalows. c) Provision of safe and convenient access from Two Furlong Hill. d) Retention and enhancement of existing trees and hedging on site boundaries.	**Potential for LSEs, screened in for AA.** The policy provides a quantum and location for residential growth. WELLS1 is part of site CFS2 which lies 474m south-west of The Wash & North Norfolk Coast SAC and 530m south-west of North Norfolk Coast SPA / Ramsar / SAC. Therefore, any development on this site has the potential to result in LSEs regarding the following impact pathways: • Recreational pressure • Loss of functionally linked habitat

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	e) Submission, approval and implementation of a Surface Water Management Plan ensuring that there is no adverse effects on European sites and greenfield run off rates are not increased. f) Submission, approval and implementation of a Foul Water Drainage Strategy setting out how additional foul flows will be accommodated within the foul sewerage network. g) Delivery of not less than 0.12 ha of multifunctional open space together with measures for its on-going maintenance and additional off-site contributions in line with Local Plan requirements. Provision of pedestrian and cycle access to link the site with the remainder of the town and the town centre. h) Provision of landscaping to the north and east of the site to minimise the visual impact of the development	
WNS3: Housing Mix	Proposals for new housing should provide for and contribute to a mix of housing that meets local needs (both now and in the future) and enables the creation of a mixed and balanced community. In line with the latest evidence of need, proposals (including those for 10 dwellings or more) should, in particular, include elements of the following: • At least 50 per cent should be small and medium sized homes, 2 and 3 bedrooms. • Opportunities for self-build or custom build. • Housing suitable for those with accessibility needs including bungalows Where affordable housing is proposed as part of a wider scheme it should comprise the following:	**No LSEs, screened out from AA.** The policy does not itself lead to development, but it supports developments that increases the supply of certain housing needs within the neighbourhood. There are no pathways linking this policy to any European sites. Developments will be considered at the planning stage to ensure they comply with this policy, the NPPF and other relevant policies.

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	• 60 per cent Social Affordable Rent • 40 per cent Affordable Routes to home ownership consisting of: ○ 25 per cent (of the overall total) should be First Homes, 15 per cent (of the overall total) should be shared ownership. Affordable Housing development should be of high-quality and be indistinguishable from other dwellings	
WNS4: Principal Residence Dwellings	All new open market housing (excluding replacement dwellings) permitted within the Neighbourhood Area will be restricted to ensure its occupancy as a Principal Residence. This relates to first and future occupation of the dwelling. This is to ensure that there is a supply of new housing for occupation by local people and to address the growth of dwellings used for holiday accommodation (either as a second homes or as holiday lets) which impacts upon the overall balance and sustainability of the settlement. Principal Residence is defined as someone's main or sole residence. Proposals for holiday accommodation will not be permitted unless it is located on an established holiday complex. Proof of residency can include being registered as an elector, and for local services such as health care, schools etc. Occupiers of homes with a Principal Residence condition will be required to keep proof that they are meeting the obligation or condition and be obliged to provide this proof on the request of the North Norfolk District Council.	**No LSEs, screened out from AA.** This is a development management policy and does not allocate sites for development. There are no pathways linking this policy to any European sites. Developments will be considered at the planning stage to ensure they comply with this policy, the NPPF and other relevant policies.

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	These restrictions will be secured prior to the grant of planning permission through appropriate Planning Conditions or Planning Obligations created and enforceable under section 106 of the Town and Country Planning Act 1990, or any subsequent successor legislation.	
WNS5: Infill development and extensions	**Infill** Within the settlement boundary of Wells-next-the-Sea infill development, of individual dwellings or small groups will only be supported where the proposal would: a) Enhance the form and character of the street scene into which it will be inserted b) Reflect the materials, scale, massing and layout of the surrounding properties c) Relate well to the neighbouring development in terms of height, scale and impact on the street scene d) Preserve or enhance the character or appearance of the Conservation Area (where applicable) e) Not have an unacceptable detrimental impact on the living conditions or amenity of the occupants of neighbouring property f) Provide a safe vehicular access which would not have an unacceptable detrimental impact on highway safety g) Have on-site parking which would be provided in accordance with adopted highway standards. **Extensions** Proposals for extensions to existing buildings, including those in holiday let use, will be supported where they met all of the following criteria:	**Potential for LSEs, screened in for AA.** Policy WNS5 does not quantify any residential development, but it explicitly allows for extensions to existing buildings (including those in holiday let use). There is the potential that the policy will lead to an increase in the number of bed spaces, holiday accommodation and overall visitor numbers. Therefore, this policy has the potential to result in LSEs regarding the following impact pathways: • Recreational pressure • Loss of functionally linked habitat

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	h) The extension is appropriate to the scale, massing and design of the main building and its adjacent buildings and should complement the streetscape. i) Alterations and extensions of historic buildings within a conservation area should preserve or enhance their character (where applicable). j) Extensions should not exceed the height of the original or adjacent buildings. Two-storey extensions, where appropriate, should be constructed with a pitch sympathetic to that of the existing roof. k) The design, materials and architectural detailing of extensions should be high-quality and respond to the host building and the local character of the town. l) The impact on the space around the building should avoid overlooking, overshadowing, or overbearing. In particular, overusing the plot size should be avoided. m) Sufficient car parking space can be provided within the curtilage of the building to ensure no additional on-street carparking will be necessary. n) There are no significant impacts on local amenity for nearby residents in terms of noise disturbance and traffic generation	
WNS6: High quality design	The design of all new development in Wells-next-the-Sea will reflect the local distinctiveness and character of the town and seek to enhance its quality. Consideration should be given to the guidance contained in the Well-next-the-Sea Design Guidance and Codes.	**No LSEs, screened out from AA.** This policy will not lead to development, instead it requires developments to be sustainable and of a high quality and sets out a series of design criteria. There are no pathways linking this policy to any European sites.

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		Developments will be considered at the planning stage to ensure they comply with this policy, the NPPF and other relevant policies.
Employment and Retail		
WNS7: Redevelopment opportunities	Three sites are identified within the town as having the potential to provide for redevelopment and environmental enhancement which would improve the vitality and viability of the sites and their immediate surroundings and the visual appearance and character of the area • **Site 1a:** Land south of Maryland (including Great Eastern Way) which is identified for redevelopment for a mix of uses predominantly including Industrial (B2), Commercial, Business and Service Uses including offices (Class E), and Storage (B8) at ground floor with residential above (open market and affordable) • **Site 1b** – Land south of Great Eastern Way and north of Bluebell Gardens which is currently underused and is identified as being suitable for a mixed-use development including light industrial and some car parking, subject to compatibility with adjoining uses. • **Site 2:** Land on south side of Freeman Street (former Ark Royal Public House) which is identified for a mix of uses including Commercial and Business Uses (Class E) and Retail (F2a and E(a)), with some residential and parking.	**Potential for LSEs, screened in for AA.** Sites 1a and 1b are already identified for 'employment generating development' within the emerging North Norfolk Local Plan and will therefore be assessed in the Local Plan HRA. **However, Site 2** lies 67m from The Wash & North Norfolk Coast SAC, 119m from North Norfolk Coast SPA / Ramsar and 185m from North Norfolk Coast SAC. Redevelopment of Site 2 has the potential to result in LSEs regarding the following impact pathways: • Recreational pressure • Visual / noise disturbance • Water quality

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		
WNS8: Retail and the town centre	Proposals will be supported that contribute to achieving a vibrant and bustling town centre comprising a healthy mix of retail, service sector, business, entertainment, cultural and residential uses. Proposals for new or expanded retail in Staithe Street, The Quay and Freeman Street which would reinforce the retail role of the town and promote a diverse town centre will be supported. Proposals that would add to the number of independent retailers will also be supported.	**No LSEs, screened out from AA.** This is an economic policy that maintains the town centre. The provision of retail outlets, in town centres has no bearing on European sites and there are no pathways linking this policy to European sites. Potential future developments will be considered at the planning stage to

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	Proposals for residential development in these areas will be directed to first floor level. Residential development will be supported where it would add to the vitality and viability of the town centre outside of main shopping hours and support the night-time economy. Proposals for retail and other main town centre uses in and around the town centre will be supported where they contribute to the following aims, as appropriate: a) Reinforcing the area's distinctiveness and attractive character as a location where pedestrian activity is prioritised and users have a high sense of safety and belonging. b) Ensuring the impact of vehicular traffic is relatively low and frontage servicing is minimised. c) Supporting good connectivity between the different areas of the town centre by creating a pedestrian friendly environment and extending existing footpaths/pavements to improve pedestrian safety e.g. north side of Station Road. d) Improving accessibility and safety for pedestrians, cyclists, and other town centre users including provision of cycle parking. e) Providing for parking within easy walking distance from the town centre to encourage walking.	ensure they comply with this policy, the NPPF and other relevant policies.
Infrastructure and Access		
WNS9: Visitor parking	Proposals that allow for suitably located temporary/seasonal car parking, for example at the Pitch and Putt site off Beach Road to be made available for visitors at peak times will be supported.	**Potential for LSEs, screened in for AA.** It is to be noted that the purpose of this policy is to manage the existing

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	Such temporary arrangements should be in locations with easy access to the main routes into the town, have safe access and egress and allow for easy pedestrian routes to the town centre, beach, and other facilities	pressures arising from visitors, not to attract more visitors. The aim of the policy is very much about relieving parking pressure elsewhere in the town. Therefore, it is possible that additional formalised parking to cope with existing pressure may not result in an increase in visitors. However, the provision of additional parking facilities could result in an increase in visitor numbers and therefore has the potential to result in LSEs regarding the following impact pathway: • Recreational pressure
WNS10: Opportunities for sustainable transport	Within the Neighbourhood Area, the extent of the former Walsingham to Wells railway track bed and other railway land will be protected from development that would be prejudicial to the re-use of the railway or to the provision of sustainable transport links and facilities. In addition, any areas of land that are either currently in use as or has the potential for the provision of rail freight terminal facilities within the Neighbourhood Area will be protected from development and identified as Land Safeguarded for Sustainable Transport.	**No LSEs, screened out from AA.** This is a strategic policy that provides support for sustainable transport modes. This policy is important because it may, in the future, help reduce the car-based commuter traffic resulting from the WntSNP. This could benefit European sites that are sensitive to atmospheric pollution. There are no pathways linking this policy to any European sites. Developments will be considered at the planning stage to ensure they comply

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		with this policy, the NPPF and other relevant policies.
Environment		
WNS11: Protecting the historic environment	Development proposals should respect the significance and setting of any designated and Non-designated Heritage Assets. Consideration shall be given to maintaining their contribution to the character of the area and their role in framing, punctuating, or terminating key views through, out of and into the town. Particular consideration shall be given to the retention of open spaces and gaps between buildings to sustain the historic form and pattern of development and the setting of heritage assets. **Conservation Area** Development proposals within the Wells-next-the-Sea Conservation Area should respect its historic character and appearance and its setting. This will be achieved by: a) Encouraging the retention and maintenance of traditional buildings and shopfronts which contribute to the overall character of the Conservation Area, whether listed or not. b) Ensuring that new development is sympathetic to the special qualities of the Conservation Area and takes account of its historic significance. c) Protecting the setting of the Conservation Area from development which adversely affects views into or out of the Conservation Area.	**No LSEs, screened out from AA.** This policy will not lead to development itself but instead sets out requirements for developments in order to maintain the local heritage of Wells-next-the-Sea by conserving and enhancing its character and appearance and ensuring the long term survival of heritage assets. There are no pathways linking this policy to any European sites. Developments will be considered at the planning stage to ensure they comply with this policy, the NPPF and other relevant policies.

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	d) Ensuring that new development complements the shape, form and layout of the settlement itself and the attractive relationship which exists between the older buildings and the spaces around and between them. e) Encouraging the maintenance and enhancement of features and details which contribute to the town's local distinctiveness e.g., traditional shopfronts, trees, walls and railings. f) Requiring the use of high-quality traditional building materials and detailing. Within the Conservation Area, use of non-traditional materials such as concrete tiles, artificial slates, plastic and aluminum windows and doors, cement render and modern bricks should be avoided. **Signage and shopfronts** Where new or reconfigured advertising and signage (including shopfronts, highway signage and directional signage) is proposed consideration should be given to its size, design, and siting to ensure that it enhances the character and appearance of the Conservation Area. Proposals that seek to rationalise or reduce the amount of signage in the Conservation Area will be supported.	
WSN12: Non-designated Heritage Assets	The following historic buildings and features are identified as Non-designated Heritage Assets due to their locally important character and historic features: 1) Water Tower (off Warham Road) 2) California Terrace 3) Town Sign near Arch House	**No LSEs, screened out from AA.** This policy will not lead to development itself but instead sets out requirements for developments in order to maintain the local heritage of Wells-next-the-Sea

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	4) Mill Farm buildings 5) Wells Cottage Hospital 6) Wall running down west side of unmade road to Temple Court (no 10 Bases Lane) 7) Whelk sheds 8) Maryland Mill buildings (now vets and antique centre) 9) Old boatbuilding yard, opposite main slipway (now Shipyard studios and Shipyard cottage) 10) Former Railway Station 11) New Farm 12) Manor Farm Development proposals should conserve and enhance these heritage assets having regard to their character, important features, setting and relationship with surrounding buildings or uses. Proposals should demonstrate that consideration has been given to retaining: a) The important asset or historic feature itself b) The most distinctive and important features c) The positive elements of its setting and relationship to its immediate surroundings d) The contribution that the building or historic feature and its setting makes to the character of the local area	by conserving and enhancing its character and appearance and ensuring the long term survival of non-designated heritage assets. There are no pathways linking this policy to any European sites. Developments will be considered at the planning stage to ensure they comply with this policy, the NPPF and other relevant policies.
WNS13: Local Green Spaces	The following are designated as Local Green Spaces: a) The Buttlands. b) Churchyard of St Nicholas and old cemetery. c) Market Lane Cemetery.	**No LSEs, screened out from AA.** This is a protective policy. Each space has been assessed against the NPPF criteria and should be protected

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	d) Home Piece open spaces. e) Turning circle at Bluebell Gardens (primary school). f) Mill Road allotments. g) Mill Road Meadow (north of Mill Road)	because of its value to the local community. There are no pathways linking this policy to any European sites.
WNS14: Important views	The visual scenic value of the landscape and countryside in the parish outside of the defined settlement boundary will be protected from development that may adversely affect this character. Development proposals within or which would affect an important public local view should take account of the view concerned. Developments that would have an unacceptable adverse impact upon the landscape or character of the view concerned will not be supported. 1) Long distance views from the town towards the Quay 2) Views from the lane between Warham Road and Cuckoo Lodge 3) View of the town from Beach Road Bank 4) View from the water tower to the saltmarsh and sea to Blakeney Point 5) View from Beach Road over the marshland to the Meals in the west 6) View from Mill Road, over farmland to the South 7) View from Mill Road over marshes to the north 8) View from Stiffkey Road over farmland and saltmarsh 9) View from the Old Railway Station westward, over Ramm's marsh to the St Nicholas Church	**No LSEs, screened out from AA.** This is a development management policy aimed at protecting important views and does not specifically allocate sites for development. There are no pathways linking this policy to any European sites.
Sustainability and Climate Change		

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
WNS15: Sea level rise and flood risk	Measures that provide for climate change adaptation and mitigation will be supported. This includes creating access corridors for properties affected by tidal surge and incursion as part of new measures to address sea level rise particularly at East Quay. New development will be directed away from areas of known flood risk where possible and should be located so as not to exacerbate existing flooding problems. All new development should be able to demonstrate how it can mitigate its own flooding and drainage impacts, avoid increase of flooding elsewhere and seek to achieve green field run off rates. Proposals that use permeable materials instead of hard standings, will be supported	**No LSEs, screened out from AA.** This is a development management policy aimed at directing new development away from areas at highest risk (whether existing or future). Where development is necessary in such area it should be made safe for its lifetime without increasing flood risk elsewhere. There are no pathways linking this policy to any European sites. Developments will be considered at the planning stage to ensure they comply with this policy, the NPPF and other relevant policies.
WNS16: Pollution	The design of new development should be carefully considered to ensure that it does not adversely affect the amenity of adjacent users or exacerbate existing or cause new pollution problems. This includes pollution (air, noise, dust, vibration, and light) from the use itself and that from traffic generated. Developments that would increase pollution will not be supported unless it can be demonstrated that the impacts can be successfully mitigated.	**No LSEs, screened out from AA.** This is a development management policy aimed at reducing pollution. This could benefit European sites that are sensitive to pollution effects. There are no pathways linking this policy to any European sites. Developments will be considered at the planning stage to ensure they comply

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		with this policy, the NPPF and other relevant policies.
Site Specific Policies		
WNS17: Wells Beach	Wells Beach will continue to be a popular destination for visitors during the Neighbourhood Plan period. Public access to the beach will be maintained and visitors will be encouraged to access the beach via other means of transport than the private car. Proposals that provide for walking and cycling opportunities, including the creation or enhancement of pedestrian and non-motorised access routes to the beach will be encouraged. Proposals to expand the existing Pinewoods holiday park beyond its current footprint will not be supported. Proposals for small scale retail in this area which provides for the day-to day tourism needs of visitors will be supported. Proposals for larger scale retail will be expected to be located within the town centre. Proposals to extend the area of beach huts beyond the existing area currently used for beach huts will only be supported where: a) It can be demonstrated that there will be no adverse impacts upon European Protected Nature Conservation Sites b) It can be demonstrated that there will be no adverse visual impacts upon the local landscape character.	**Potential for LSEs, screened in for AA.** The North Norfolk Coast SPA / Ramsar / SAC lies within the Wells Beach policy area and The Wash & North Norfolk Coast SAC is immediately adjacent. The policy considers European sites in terms of extending the beach hut area only. Encouraging visitor access has the potential for LSEs regarding the following impact pathway linking to European sites: • Recreational Pressure
WNS18: The Harbour	Proposals that would preserve and enhance the character of the Harbour and its role as a working and functioning port will be encouraged. Support	**Potential for LSEs, screened in for AA.**

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
	in principle is also given to proposals that would celebrate the maritime heritage of the town, the connections between the present town and its origins as a harbour and a port and underpin the role of Harbour area as an important asset to the town. Development proposals that would recognise the benefits to the town's employment and tourism provided by the harbour and would result in improvements to onshore facilities that benefit both visiting boats and resident boats will be supported	This is a development management policy aimed at preserving and enhancing the character of the harbour as a functioning port. Furthermore, the policy supports improvements to onshore facilities for visitor and resident boats. Depending on the nature of these improvements, this could lead to an intensification of water-based activities (e.g. through increased provision of boat moorings) and associated impacts on the North Norfolk Coast SPA / Ramsar / SAC. Overall, the policy has the potential for LSEs regarding the following impact pathway linking to European sites: • Recreational Pressure
Proposed Sites (including site reference and indicative number of homes)		
CFS1 Mill Road (by Holkham Estates)	Residential, 20-30 affordable homes	**Potential for LSEs, screened in for AA.**

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		This is a 3.6ha large site, of which c.1ha is to be potentially allocated in the WntSNP. The site lies 740m south-west of The Wash & North Norfolk Coast SAC and 797m south-west of North Norfolk Coast SPA / Ramsar / SAC. Therefore this site must be considered through an AA as there is the potential for LSEs regarding the following impact pathways linking to European sites: • Recreational pressure (The loss of functionally linked habitat has been screened out due to the relatively small size of the site allocation, i.e., <2ha. Visual and noise disturbance has been screened out as the site lies >300m from the SPA / Ramsar).
CFS2 Mill Road (by Wells Town)	Residential, affordable homes	**Potential for LSEs, screened in for AA.** This 7.7ha site comprises allotments and pasture (c. 4ha). The site lies 474m south-west of The Wash & North Norfolk Coast SAC and 530m south-west of North Norfolk Coast SPA / Ramsar /

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		SAC. Therefore this site must be considered through an AA as there is the potential for LSEs regarding the following impact pathways linking to European sites: • Recreational Pressure • Loss of functionally linked habitat (Visual and noise disturbance has been screened out as the site lies >300m from the SPA / Ramsar).
CFS3 (HELAA H0288) Land at Warham Road	Residential, up to 40 affordable homes	**Potential for LSEs, screened in for AA.** This 13ha site comprises arable land. The site lies 760m south of The Wash & North Norfolk Coast SAC and North Norfolk Coast SPA / Ramsar / SAC. Therefore, this site must be considered through an AA as there is the potential for LSEs regarding the following impact pathways linking to European sites: • Recreational Pressure • Loss of functionally linked habitat

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		(Visual and noise disturbance has been screened out as the site lies >300m from the SPA / Ramsar).
H0699 Land adjacent Holkham Road	Residential, affordable homes. Approximately an additional 50-60 dwellings on the land not already included as an emerging allocation (c. 2ha).	**Potential for LSEs, screened in for AA.** This site comprises pasture and lies 480m west of The Wash & North Norfolk Coast SAC, 530 west of North Norfolk Coast SPA / Ramsar and 579m west of North Norfolk Coast SAC. Therefore, this site must be considered through an AA as there is the potential for LSEs regarding the following impact pathways linking to European sites: • Recreational Pressure • Loss of functionally linked habitat (Visual and noise disturbance has been screened out as the site lies >300m from the SPA/ Ramsar).
H1594 Land adjacent The Old Rectory, Church Street	Residential, 1-2 affordable homes	**Potential for LSEs, screened in for AA.** Given the size of the site and scale of development i.e., maximum 2 dwellings,

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		allocation of this site is highly unlikely to result in LSEs alone, however it must also be considered in-combination. The site lies 710m south of The Wash & North Norfolk Coast SAC and 760m south of North Norfolk Coast SPA / Ramsar / SAC. Therefore this allocation must be considered through an AA as there is the potential for LSEs regarding the following impact pathways linking to European sites: • Recreational Pressure (Loss of functionally linked habitat has been screened out due to the relatively small size i.e., <2ha of the site. Visual and noise disturbance has been screened out as the site lies >300m from the SPA / Ramsar)
H1015 Land North of Field View adjacent Stiffkey Road	Residential, up to 5 affordable homes	**Potential for LSEs, screened in for AA.** Given the size of the site and scale of development i.e., maximum 5 dwellings, allocation of this site is highly unlikely to result in LSEs alone, however it must also be considered in-combination. The site lies 636m to the south-west of The

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		Wash & North Norfolk Coast SAC and North Norfolk Coast SPA / Ramsar / SAC. Therefore, this site must be considered through an AA as there is the potential for LSEs regarding the following impact pathways linking to European sites: • Recreational Pressure (Loss of functionally linked habitat has been screened out due to the relatively small size of the allocation i.e., <2ha. Visual and noise disturbance has been screened out as the site lies >300m from the SPA / Ramsar)
H1016 Land at East Quay	Residential, up to 5 affordable homes	**Potential for LSEs, screened in for AA.** Given the size of the site and scale of development i.e., maximum 5 dwellings, allocation of this site is highly unlikely to result in LSEs alone, however it must also be considered in-combination. The site lies adjacent to The Wash & North Norfolk Coast SAC and North Norfolk Coast SPA / Ramsar / SAC. Therefore, this site must be considered through an AA as there is the potential for LSEs

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		regarding the following impact pathways linking to European sites: • Recreational Pressure • Visual and noise disturbance • Water quality (Loss of functionally linked habitat has been screened out due to the relatively small size of the allocation, i.e., <2ha)
H0285 The Old Coal Yard, East Quay	Residential, up to 5 affordable homes	**Potential for LSEs, screened in for AA.** Given the size of the site and scale of development i.e., maximum 5 dwellings, allocation of this site is highly unlikely to result in LSEs alone, however it must also be considered in-combination. The site lies adjacent to The Wash & North Norfolk Coast SAC and North Norfolk Coast SPA / Ramsar / SAC. Therefore, this site must be considered through an AA as there is the potential for LSEs regarding the following impact pathways linking to European sites: • Recreational Pressure • Visual and noise disturbance • Water quality

Policy number / name	Policy summary (full policy details can be found in the NP document)	Likely Significant Effects Screening Assessment
		(Loss of functionally linked habitat has been screened out due to the relatively small size of the site, i.e., <2ha)

Source: Wells-next-the-Sea Town Council

Table 7. Development sites proposed for potential allocation in the Wells-next-the-Sea NP

Allocated site (including site reference)	Site source	Size (ha)	Proposed land use	Indicative number of homes	Distance from European site(s)	Additional comments
CFS1 Mill Road (by Holkham Estates)	HELAA (2017) Neighbourhood Plan Call for Sites (2021)	3.6	Residential (affordable homes)	20-30	740m south-west of The Wash & North Norfolk Coast SAC 797m south-west of North Norfolk Coast SAC/ SPA/ Ramsar	The majority of the site offered for development is proposed for allocation in the draft Local Plan. Therefore, the conclusions of this assessment relate only to the part of the site that can potentially be allocated in the Neighbourhood Plan, which is the land outside the proposed allocation (c.1 ha). The shaded area on Figure 4 shows the HELAA H1011 land. If the proposed site was supported by North Norfolk District Council and the landowner, the settlement boundary could be redrawn in the Neighbourhood Plan to include this land.
CFS2 Mill Road (by Wells Town Council) –	HELAA (2017) Neighbourhood Plan Call for	-	Residential (affordable homes)	-	474m south-west of The Wash & North Norfolk Coast SAC	The site is not currently suitable for development due to a restrictive covenant, a draft Local Plan policy designating

Allocated site (including site reference)	Site source	Size (ha)	Proposed land use	Indicative number of homes	Distance from European site(s)	Additional comments
WELLS1 is within CFS2.	Sites (2021)				530m south-west of North Norfolk Coast SAC/ SPA/ Ramsar	the site as green space and a number of other issues including access, landscape and heritage impact and impact on the Norfolk Coast AONB. If there was evidence to show the issues could be resolved or mitigated through design, the site would be potentially suitable for affordable housing. The shaded area on Figure 4 shows the HELAA H1013 land. If the proposed site was supported by North Norfolk District Council and the landowner, the settlement boundary could be redrawn in the Neighbourhood Plan to include this land.
CFS3 (HELAA H0288) Land At Warham Road	HELAA (2017) Neighbourhood Plan Call for Sites (2021)	13	Residential (affordable homes)	Up to 40	760m south of The Wash & North Norfolk Coast SAC and North Norfolk Coast SAC/ SPA/ Ramsar	The shaded area on Figure 4 shows the CFS land. If the proposed site was supported by North Norfolk District Council and the

Allocated site (including site reference)	Site source	Size (ha)	Proposed land use	Indicative number of homes	Distance from European site(s)	Additional comments
						landowner, the settlement boundary could be redrawn in the Neighbourhood Plan to include this land.
H0699 Land Adjacent Holkham Road	HELAA (2017)	5.3	Residential (affordable homes)	Approximately an additional 50-60 dwellings on the land not already included as an emerging allocation.	480m west of The Wash & North Norfolk Coast SAC 530 west of North Norfolk Coast SPA/ Ramsar 579m west of North Norfolk Coast SAC	Already partially allocated in the emerging Local Plan (the area in the LP is shaded green on Figure 4), therefore the conclusions of this assessment relate only to the part of the site that can potentially be allocated in the Neighbourhood Plan, which is the land outside the proposed allocation. If the proposed site was supported by North Norfolk District Council and the landowner, the settlement boundary could be redrawn in the Neighbourhood Plan to include this land.
H1594 Land Adj The Old Rectory, Church Street	HELAA (2017)	0.35	Residential (affordable homes)	1-2 dwellings	710m south of The Wash & North Norfolk Coast SAC	The site is potentially suitable for allocation in the Neighbourhood Plan for very small-scale development as it is within the settlement

Allocated site (including site reference)	Site source	Size (ha)	Proposed land use	Indicative number of homes	Distance from European site(s)	Additional comments
					760m south of North Norfolk Coast SPA/ Ramsar 780m south of North Norfolk Coast SAC	boundary. However, the site is designated woodland and part of the site is a priority habitat (traditional orchard) which would need to be explored to understand the potential for development and possible off-site mitigation. Any development would need to be designed to limit impact on the conservation area and AONB. If the site were allocated for affordable housing, this would need to be with the landowner's agreement.
H1015 Land North of Field View Adjacent Stiffkey Road	HELAA (2017)	0.4	Residential (affordable homes)	Up to 5 dwellings	636m to the south-west of The Wash & North Norfolk Coast SAC and North Norfolk Coast SPA/ Ramsar. 718m south of North Norfolk Coast SAC/ SPA/Ramsar	The site is potentially suitable for up to 5 dwellings or less subject to consultation with North Norfolk on policy conformity and agreement with the landowner to deliver affordable housing on the site.
H1016 Land At East Quay	HELAA (2017)	0.8	Residential (affordable homes)	-	Adjacent to The Wash & North Norfolk Coast SAC and North Norfolk Coast SAC/ SPA/Ramsar	The site is not suitable as it is primarily within Flood Zone 2 and 3, and while it is brownfield land it is identified as undeveloped coast, the current

Allocated site (including site reference)	Site source	Size (ha)	Proposed land use	Indicative number of homes	Distance from European site(s)	Additional comments
						use of the site requires a coastal location. In addition, it is unlikely housing development would be acceptable in this location due to potential risk from erosion.
H0285 The Old Coal Yard, East Quay	HELAA (2017)		Residential (affordable homes)	-	Adjacent to The Wash & North Norfolk Coast SAC and North Norfolk Coast SAC/ SPA/Ramsar	The site is not suitable as it is primarily within Flood Zone 2 and 3, and while it is brownfield land it is identified as undeveloped coast, the current use of the site requires a coastal location. In addition, it is unlikely housing development would be acceptable in this location due to potential risk from erosion.

Source: AECOM (2021) Wells next the Sea Site Options Appraisal Report

Figure 4: Sites identified in Wells-next-the-Sea Site Options Appraisal Report (AECOM, 2021).

5.11 Consideration was given to the qualifying features of identified European sites, including their ecology, vulnerabilities, the site Conservation Objectives, and the way in which development may prevent a site from meeting its Conservation Objectives. On this basis, European sites which could be subject to LSEs from each proposed site were identified.

5.12 Where a clear or potential pathway was identified by which impacts could give rise to LSEs on the qualifying features of a European site, in the absence of any mitigation, a site proposed for potential allocation was screened in for AA. Furthermore, since the purpose of HRA screening is to constitute an initial sift without undertaking detailed technical analyses, the assessment erred on the side of caution and screened in LSEs unless there was a high degree of confidence that they could be dismissed.

Results of Screening of Potential Sites

The results of the LSEs screening of sites proposed for potential allocation in the WntSNP are also presented in

5.13 Table 7. Where an option is shaded green, there are no linking impact pathways to European sites and LSEs can be excluded. Where the screening outcome is shaded orange, LSEs cannot be excluded, and the proposed site is screened in for AA.

5.14 Of the 8 WntSNP sites proposed for potential allocation, all were considered to have the potential to result in LSEs, either alone or in combination with other plans and projects due to their proximity to European sites.

Recreational Pressure

North Norfolk Coast SPA / Ramsar

5.15 As highlighted in the previous chapter, the breeding and overwintering birds in the North Norfolk Coast SPA / Ramsar are sensitive to a wide range of disturbance impacts, particularly from dog walkers. The SIP for the SPA[70] specifies that recreational access, both from local residents and visitors, is a key threat to the Conservation Objectives of the site. The North Norfolk coast is a very popular destination for recreational activities, including those carried out on the open water, in the intertidal zone and the foreshore. Recreational demand is likely to increase due to the in-combination housing growth in the wider area and improvements to the English Coastal Path.

5.16 The SPA / Ramsar lies within the WntS Parish boundary, meaning that future residents only have to walk short distances to reach the site. While the anticipated housing growth due to the WntSNP alone is relatively small, LSEs of the NP in combination cannot be excluded. Therefore, the North Norfolk Coast SPA / Ramsar is screened in for AA in relation to this impact pathway.

North Norfolk Coast SAC

5.17 The North Norfolk Coast SAC is designated for a range of habitats (particularly different types of dune systems) with varying degrees of sensitivity to recreational disturbance. For example, coastal dunes and their associated vegetation are well known to be vulnerable to trampling effects. Furthermore, Natural England's Advice on Operations for the SAC[71] indicates that the qualifying lagoons are sensitive to disturbance of the substrate on the seabed, particularly from horse riders (which will typically impact the intertidal zone and shallow water depths of up to 1m).

5.18 Given the proximity of the SAC to WntS Parish (which is similarly close than the overlapping SPA / Ramsar), it is probable that future residents of the parish will regularly visit the site for recreational activities. Therefore, LSEs of the WntSNP on the North Norfolk Coast SAC regarding recreational pressure in combination cannot be excluded. The site is screened in for AA in relation to this impact pathway.

[70] Available at: http://publications.naturalengland.org.uk/publication/5327498292232192 [Accessed on the 22/12/2022]
[71] Available at: https://designatedsites.naturalengland.org.uk/Marine/FAPMatrix.aspx?SiteCode=UK0019838&SiteName=&SiteNameDisplay=North+Norfolk+Coast+SAC&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=1 [Accessed on the 22/12/2022]

The Wash & North Norfolk Coast SAC

5.19 The coastal intertidal habitats present in The Wash & North Norfolk Coast SAC are also sensitive to recreational pressure. For example, intertidal sand- and mudflats and Atlantic salt meadows are sensitive to recreational trampling, which may lead to substrate compaction, loss of characteristic plant species and associated fauna. Various recreational activities may lead to substrate and seabed abrasion, resulting in direct damage to qualifying habitats. The SACO for the SAC also summarise that harbour seal are sensitive to human activities, which may affect factors such as alert response, threat displays, energy expenditure, resting / digestion time and stress levels. During the breeding season and moulting, this species is more prone to disturbance impacts due to extended haul-out periods.

5.20 Given the proximity of the SAC to WntS Parish (which is similarly close than the overlapping North Norfolk Coast SPA / Ramsar / SAC), it is probable that future residents of the parish will regularly visit the site for recreational activities. Therefore, LSEs of the WntSNP on The Wash & North Norfolk Coast SAC regarding recreational pressure in combination cannot be excluded. The site is screened in for AA in relation to this impact pathway.

Urban Effects – Cat Predation

North Norfolk Coast SPA / Ramsar

5.21 The qualifying breeding bird species in the North Norfolk Coast SPA / Ramsar are potentially vulnerable to predators when chicks have hatched in the nests. Research indicates that cats roam up to 200m from their homes at night-time. There are two proposed potential sites that lie within 200m of the North Norfolk Coast SPA/ Ramsar, including H1016 (Land at East Quay) and H0285 (The Old Coal Yard, East Quay). If both sites were developed, this would result in a maximum of ten additional dwellings within the cat predation buffer.

5.22 According to the pet ownership survey in the UK (2011/12-2021/22)[72], 62% of UK households own a pet, with 27% owning a cat in 2010/21[73]. Based on these figures, this would equate to 6 of those 10 dwellings having a pet and of those 6 dwellings, 1.62 dwellings to own a cat. This is an exceedingly small increase in the number of free-roaming cats, which is unlikely to materially increase the predation pressure on qualifying bird species. Therefore, it is concluded that the WntSNP will not result in LSEs on the North Norfolk Coast SPA / Ramsar regarding cat predation, both alone or in combination with other plans or projects. This site is screened out from AA in relation to this impact pathway.

Loss of Functionally Linked Habitat

North Norfolk Coast SPA / Ramsar

5.23 All qualifying bird species in the North Norfolk Coast SPA / Ramsar are mobile and routinely travel beyond the designated site boundary. The concept of functionally linked habitats has been developed to identify habitats beyond the designation that are critical for the foraging, resting, roosting and loafing

[72] https://www.statista.com/statistics/308235/estimated-pet-ownership-in-the-united-kingdom-uk/
[73] https://www.statista.com/statistics/516237/households-owning-cats-dogs-united-kingdom-uk/

behaviours of SPA / Ramsar birds. The dependence on functionally linked habitats is more important for some of the species, including pink-footed goose, dark-bellied brent goose and the various tern species (noting that tern forage in open coastal waters, which will not be affected by the WntSNP).

5.24 Some of the proposed potential sites considered in the WntSNP comprise habitats that are of sufficient size and encompass suitable habitats to support assemblages of qualifying birds. Therefore, it is concluded that LSEs of the WntSNP on the North Norfolk Coast SPA / Ramsar regarding loss of functionally linked habitat cannot be excluded, both alone and in combination with other plans or projects. This site is screened in for AA in relation to this impact pathway.

Noise and Visual Disturbance

North Norfolk Coast SPA / Ramsar

5.25 Construction activities within 300m of the site boundary have the potential to result in visual and noise disturbance to qualifying waders and waterfowl of the North Norfolk Coast SPA / Ramsar. Natural England's Advice on Operations highlights that most qualifying species in the SPA / Ramsar are sensitive to above water noise and visual stimuli. The magnitude of pressure depends on the scale, intensity, and duration of construction activities, and relative increase in noise above the ambient background noise levels.

5.26 The WntSNP includes two sites potentially proposed for allocation within a 300m precautionary visual and noise disturbance buffer zone surrounding the SPA / Ramsar. Therefore, LSEs of the WntSNP on the North Norfolk Coast SPA / Ramsar cannot be excluded and the site is screened in for AA in relation to this impact pathway.

Atmospheric Pollution

North Norfolk Coast SPA / Ramsar / SAC

5.27 The WntSNP may allocate a maximum of 192 new dwellings (although it is highly likely that not all sites will be allocated) and an unspecified amount of employment (re)development. This will increase the number of commuter journeys associated with the parish. Therefore, a high-level assessment of the road network was undertaken to establish whether the additional traffic volume generated is likely to pass within 200m of relevant European sites, the standard screening distance applied to road traffic emissions.

5.28 The A149 is the major traffic artery within the parish, running on a west-east trajectory and connecting to the adjoining parishes of Holkham and Warham. Within Wells-next-the-Sea, this road lies well over 200m from the closest section of the North Norfolk Coast SPA / Ramsar. However, in Holkham Parish (immediately west of Wells-next-the-Sea), the A149 directly adjoins the SPA / Ramsar site boundary at various stretches. The Air Pollution Information System (APIS) indicates that several of the qualifying species of the North Norfolk SPA / Ramsar are sensitive to N deposition. Sensitivity to atmospheric pollution is relevant for a range of species, including sandwich tern, common tern, little tern (all breeding and nesting in scrapes on bare ground), pink-footed goose, wigeon,

avocet, knot and dark-bellied Brent goose (all wintering and foraging in saltmarsh).

5.29 However, a review of habitat mapping on MAGIC indicates that there is no potential tern nesting habitat and saltmarsh within this section of the SPA / Ramsar. Much of this part of the SPA / Ramsar encompasses arable fields and wet pasture, the suitability of which would not be impacted by additional atmospheric nitrogen deposition.

5.30 There is a section of saltmarsh approx. 60m from the A149 in Burnham Overy Staithe (part of both the North Norfolk Coast SPA / Ramsar and North Norfolk Coast SAC), roughly 6km in driving distance from WntS Parish. This is well within the average commuting distance for UK residents (10.1km) and, therefore, future residents of the parish may be commuting along this sensitive section of the SAC. The APIS indicates that current background nitrogen deposition rates (22.1 kg N/ha/yr) exceed the minimum CL for the SAC of 20 kg N/ha/yr, highlighting that this habitat may already be subject to impacts from atmospheric pollution.

5.31 However, the potential development sites included in the WntSNP are relatively small and this portion of the A149 experiences relatively low traffic volumes due to the small settlements it connects. Very small changes in 24hr Annual Average Daily Traffic (AADT) flows (e.g. 10 AADT or below) will not materially alter the Local Plan air quality modelling results (and thus ecological effects), and would thus be essentially nugatory, for two reasons:

- Firstly, daily traffic flows are not fixed numerals but fluctuate from day to day. The AADT for a given road is an annual average (specifically, the total volume of traffic for a year, divided by 365 days). It is this average number that is used in air quality modelling, but the 'true' flows on a given day will vary around this average figure. Small changes in average flow will lie well within the normal variation (known as the standard deviation or variance) and would not make a statistically significant difference in the total AADT.

- Secondly, when converted into NOx concentrations, NH_3 concentrations or N deposition rates, AECOM's experience is that very small changes in AADT (tens of AADT) would only affect the third decimal place. The third decimal place is never reported in air quality modelling to avoid false precision. For this reason, pollution is generally not reported to more than 2 decimal places (0.01). Anything smaller is simply reported as less than 0.01 (< 0.01) i.e. probably more than zero but too small to model with precision.

5.32 Furthermore, the imperceptible contribution of the WntSNP to these deposition rates (too small to reliably model) likely means that LSEs of the NP can be excluded even in combination. Based on in combination assessments in other areas of the UK, an individual plan or project with such a very small contribution can be dismissed on the following basis:

- In Advocate-General Sharpston's Opinion in European Court of Justice Case C-258/11, she specified in Paragraph 48 that '*the requirement for an effect to be 'significant' exists in order to lay down a de minimis threshold. Plans and projects that have no appreciable effect on the site can therefore be excluded. If all plans and projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities*

on or near the site would risk being impossible by reason of legislative overkill.'; and

- In Wealden v SSCLG [2017] EWHC 351 (Admin) (2017), which specifically concerned the need for in combination assessment in air quality modelling for European sites, Mr. Justice Jay accepted that if the contribution of an individual plan or project to traffic growth or resulting air quality effects was '*very small indeed*' (quoting a notional 20 AADT), it could be legitimately and legally excluded from in combination assessment. This is in agreement with the opinion of Advocate-General Sharpston.'

5.33 Given this, it is concluded that the WntSNP will not result in LSEs on the North Norfolk Coast SPA / Ramsar / SAC regarding atmospheric pollution. This impact pathway is screened out from Appropriate Assessment in relation to this site.

Water Resources

North Norfolk Coast SPA / Ramsar

5.34 The qualifying species in the North Norfolk Coast SPA / Ramsar are sensitive to changes in the volume of water supplied to freshwater and coastal habitats. Natural England's SACO for the SPA / Ramsar highlight water area and water depth as key parameters for the integrity of bird populations. For example, pink-footed geese depend on the presence and continuity of open water habitat for successful foraging and roosting (the target is set to maintain the number of waterbodies of optimal size of over 20ha). Wigeon detect their foraging resources visually and require an optimal water depth of under 0.3m for successful locating and consuming of aquatic plants, their main food source.

5.35 The WntSNP may allocate a maximum of 192 new dwellings (although not all sites will be taken forward as formal allocations) and an unspecified amount of employment floorspace, which will increase the demand for potable water and extent of impermeable surfaces across the parish.

5.36 Anglian Water is responsible for the public water supply in Wells-next-the-Sea Parish. The company adopted their latest Water Resource Management Plan (WRMP) in 2019. To demonstrate soundness and to enable adoption, an HRA of the WRMP was undertaken. This concluded that the plan would not result in adverse effects on the integrity of any European site, including the North Norfolk Coast SPA / Ramsar[74]. Importantly, none of the forecast increase in water demand will be met by increased abstraction of freshwater sources in hydrological continuity with the North Norfolk Coast SPA / Ramsar.

5.37 To meet the projected increase in water demand, the WRMP stipulates that Anglian Water will prioritise the continuation of demand management and water efficiency measures. This will be supported through emerging North Norfolk Local Plan policies, such as by requiring new homes to meet or exceed the tighter water efficiency standard of 110 litres per person per day. For non-residential development and in line with local and national drive for sustainable and progressive water management, sustainable water use and operation of

[74] https://www.anglianwater.co.uk/siteassets/household/about-us/wrmp-2019-hra-task-ii.pdf

buildings is required through compliance with BREEAM “Very Good” water efficiency standards.

5.38 Overall, given that Anglian Water’s WRMP does not propose increased abstraction from freshwater sources in connectivity with the North Norfolk Coast SPA / Ramsar, LSEs of the WntSNP on the site regarding water resources can be excluded. The SPA / Ramsar is screened out from AA in relation to this impact pathway.

North Norfolk Coast SAC

5.39 The North Norfolk Coast SAC is designated for several habitats and species that depend on adequate hydrological regimes. For example, some of its habitats, particularly humid dune slacks, are sensitive to changes in the source, depth, duration, frequency, magnitude and timing of freshwater supply. All dune wetland vegetation is influenced by the water table and hydrological changes may lead to shifts in characteristic floral and faunal communities. Furthermore, as summarised in the SACO for the SAC[75], otter depend on the maintenance of natural flow regimes for predation on preferred food sources (e.g. fish and aquatic crustaceans). Reductions in river flows may reduce the availability of optimal prey, resulting in their displacement and a switch to sub-optimal prey. The WntSNP will increase the potable water demand in the parish, with the potential to affect hydrological parameters within the SAC.

5.40 However, as highlighted in the previous section, Anglian Water has confirmed that sufficient headroom exists at the WntS WwTW to meet the future additional demand due to in combination growth. The water company does not propose increased abstraction from any watercourses in hydrological continuity with the SAC. Overall, LSEs of the WntSNP on the North Norfolk Coast SAC regarding water resources can be excluded. The site is screened out from AA in relation to this impact pathway.

The Wash & North Norfolk Coast SAC

5.41 The Wash & North Norfolk Coast SAC is designated for a range of coastal intertidal habitats and two animal species (otter and harbour seal). As discussed in the section on the North Norfolk Coast SAC, otter are reliant on water flows that are sufficient to preserve their inventory of foraging resources. Furthermore, many of the intertidal habitats require the dual input of both seawater and freshwater, the adequate balance of which is critical in supporting their characteristic communities. For example, saltmarsh communities are characterised by a range of zonations, which partly depend on the salinity gradient within habitats. A reduced freshwater input, particularly to upper saltmarsh and transitional zones, may promote a shift towards halophiles.

5.42 In line with the previous sections on water resources, there is no mechanism for the WntSNP to affect water supply to habitats in The Wash & North Norfolk Coast SAC. This is because no additional water abstraction will be needed to supply potable water to Wells-next-the-Sea residents, as there is sufficient headroom at the WntS WwTW. Therefore, LSEs of the WntSNP on The Wash & North Norfolk

[75] Available at: https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK0019838&SiteName=&SiteNameDisplay=North+Norfolk+Coast+SAC&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=1 [Accessed on the 21/12/2022]

Coast SAC regarding water resources can be excluded. The site is screened out from AA in relation to this impact pathway.

Water Quality

North Norfolk Coast SPA / Ramsar

5.43 The North Norfolk Coast SPA / Ramsar is designated for a range of breeding and overwintering bird species that are sensitive to a deterioration in water quality. For example, high nutrient concentrations may cause phytoplankton and macroalgae blooms, leading to reduced dissolved oxygen (DO) concentrations and increased turbidity. Negative changes in these parameters have a direct impact on supporting habitat quality, potentially causing changes in the composition and distribution of infauna, epifauna and fish communities. Natural England's Supplementary Advice on Conservation Objectives (SACO)[76] identifies water quality parameters as key properties of the SPA / Ramsar. For DO levels the target is set to maintain DO concentration at levels equating to High Ecological Status and avoiding a deterioration from existing levels. The discharge of nutrients in treated sewage effluent due to implementation of the WntSNP has the potential to increase the nutrient input (both of nitrogen and phosphorus) to critical supporting habitat. Since the site boundary covers both freshwater and coastal habitats, both nutrients have the potential to contribute to eutrophication.

5.44 Importantly, the risk of eutrophication in the SPA / Ramsar has been assessed as low using the Environment Agency's macroalgae and phytoplankton water quality parameters. According to the SACO, there is currently no evidence that the qualifying bird species are being impacted by water quality-related anthropogenic activities.

5.45 Wastewater treatment in the parish is delivered by Anglian Water through their Waste Water Management Plan 2019. It has been confirmed that the Wells-next-the-Sea Wastewater Treatment Works (WntS WwTW) has the capacity to accommodate the employment sites and dwellings proposed within the WntSNP. Furthermore, the company is set to invest in wastewater treatment and sustainability infrastructure to further ensure that the available headroom is sufficient to accommodate any future growth.

5.46 Overall, due to the low risk of eutrophication in the North Norfolk Coast SPA / Ramsar and the sufficient headroom available at the WntS WwTW, LSEs of the WntSNP from the discharge of treated sewage effluent on the SPA / Ramsar regarding water quality can be excluded. The site is screened out from AA in relation to potential eutrophication impacts. However, given the proximity of several sites to the designated site boundary, LSEs on water quality from surface runoff (e.g. from septic tank overflows and impermeable surfaces) cannot be excluded. This aspect of the impact pathway is screened in for AA.

[76] The SACO for the North Norfolk Coast SPA / Ramsar are available at: https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9009031&SiteName=&SiteNameDisplay=North+Norfolk+Coast+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=11 [Accessed on the 20/12/2022]

North Norfolk Coast SAC

5.47 The qualifying features of the North Norfolk Coast SAC are sensitive to negative changes in water quality in the form of increased nutrient input and turbidity, as well as reduced dissolved oxygen concentrations. For example, many of the biotic communities in dune habitats can be impacted by a deviation in water quality from Water Framework Directive (WFD) standards. In coastal lagoons, typically characterised by low turbidity levels, prolonged increases in turbidity may lead to shifts in ecosystem composition. Excessive nutrient accumulation may also indirectly affect otter by reducing their food supply.

5.48 However, considering the available evidence base, the WntSNP is unlikely to be associated with negative impacts on water quality in the North Norfolk SAC. The SACO for the site[77] indicates that the risk of eutrophication across the site is low, based on phytoplankton and macroalgae parameters. Furthermore, Anglian Water have confirmed that the WntS WwTW has sufficient headroom to accommodate the forecast growth across Norfolk, including that in Wells-next-the-Sea Parish. In conclusion, LSEs of the WntSNP on the North Norfolk Coast SAC regarding potential eutrophication impacts will not occur. However, given the proximity of several sites proposed for potential allocation to the designated site boundary, LSEs on water quality from surface runoff (e.g. from septic tank overflows and impermeable surfaces) cannot be excluded. This aspect of the impact pathway is screened in for AA.

The Wash & North Norfolk Coast SAC

5.49 The Wash & North Norfolk Coast SAC is designated for coastal habitats and two animal species (otter and harbour seal) that are all sensitive to negative changes in water quality. In intertidal and shallow coastal habitats (e.g. lagoons and intertidal mud- and sandflats), an excessive input of nutrients can lead to increased turbidity, decreased DO concentrations and the smothering of aquatic plants. If sufficiently severe, such water quality changes can lead to community shifts in fish, epifauna and infauna assemblages. A decline in water quality can also reduce the foraging resources available to otter and harbour seal.

5.50 Water quality impacts on the Wash & North Norfolk Coast SAC are excluded for the reasons identified in the previous sections, specifically the low risk of eutrophication in the bay and a sufficient headroom being available at the WntS WwTW. Furthermore, the qualifying features of the SAC are generally more open coastal habitats. It is considered that this will allow for sufficient dilution and attenuation of any contaminants in direct surface runoff. Overall, the WntSNP will not result in LSEs on the SAC and the site is screened out from AA in relation to this impact pathway.

Summary of Policies and Allocated Sites Screened in for Appropriate Assessment (AA)

5.51 Having completed the LSEs screening process, the following policies and allocated sites will be taken to the AA stage in the HRA process.

[77] Available at: https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK0019838&SiteName=&SiteNameDisplay=North+Norfolk+Coast+SAC&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=1 [Accessed on the 21/12/2022]

Policies:

- WNS1: Community led housing
- WNS2: The scale and location of new housing
- WNS5: Infill development and extensions
- WNS7: Redevelopment opportunities
- WNS9: Visitor parking
- WNS17: Wells Beach
- WNS18: The Harbour

Sites proposed for potential allocation:

- CFS1 Mill Road (by Holkham Estates)
- CFS2 Mill Road (by Wells Town)
- CFS3 (HELAA H0288) Land at Warham Road
- H0699 Land adjacent Holkham Road
- H1594 Land adjacent The Old Rectory, Church Street
- H1015 Land North of Field View adjacent Stiffkey Road
- H1016 Land at East Quay
- H0285 The Old Coal Yard, East Quay

6. Appropriate Assessment (AA)

6.1 The law does not prescribe how an AA should be undertaken or presented, but it must consider all impact pathways that have been screened in, whether they arise alone or in combination with other projects and plans. That analysis is the purpose of this section. The law does not require the different effects to be examined separately provided all effects are discussed.

6.2 The HRA screening exercise undertaken in Table 6 indicates that four policies and all sites proposed for potential allocation were considered to pose LSEs to European sites, either alone or in combination with other projects and plans, due to contributing to one or more of the following impact pathways: recreational pressure, urban effects, visual and noise disturbance and loss of functionally linked habitat.

Recreational Pressure

North Norfolk Coast SPA / Ramsar / SAC and The Wash & North Norfolk Coast SAC

Policies WNS2 and WNS7 both specify locations for residential development and policies WNS9, WNS17 and WNS18 aim to encourage increased tourism by providing additional seasonal parking, improved access to the beach area and potential enhancements to boat-related onshore facilities in the harbour. Policy WNS1 (Community Led Housing) permits small-scale affordable housing outside the settlement boundary on an exceptional basis, provided there is a proven local housing need. While this policy provides no quantum of housing development, it clearly facilitates small windfall sites to come forward with the potential to increase the local population further. Furthermore, all eight sites considered for allocation have the potential to result in an increase in recreational pressure on The Wash & North Norfolk Coast SAC and North Norfolk Coast SPA / Ramsar / SAC, which may result in an adverse effect on the integrity of these European sites.

6.3 Given the proximity of Wells-next-the-Sea to the North Norfolk Coast SPA / Ramsar / SAC, any housing or tourism-related growth in the parish has the potential to result in adverse effects on site integrity alone. However, housing development will also be delivered in other authorities adjoining the site, with the potential to further increase the recreational burden along the coastline. The visitor survey carried out in Norfolk's European sites (and any strategic mitigation solution derived from the visitor data) inherently represents an in-combination assessment / strategy that addresses the cumulative housing growth in the wider region.

6.4 The results of the Norfolk visitor survey provided local authorities in Norfolk with information to underpin reviews of their Local Plans and accompanying HRAs. This work has identified a common theme regarding the potential for recreational activities to disrupt the Conservation Objectives of European sites in and around Norfolk. This is due to the level of growth allocated in each Local Plan (the in combination growth), specifically an increase in the number of residential dwellings that lie within the ZoI (or core recreational catchments) of relevant

European sites. ZoIs represent the extent of land around European sites from which the majority of their visitors (i.e. 75% of the overall recreational burden) originate, as evidenced by postcode data.

6.5 In response to this, Broadland District Council, Breckland District Council, Great Yarmouth Borough Council, The Borough Council of King's Lynn & West Norfolk, North Norfolk District Council, Norwich City Council, South Norfolk Council and the Broads Authority have prepared a Green Infrastructure and Recreational Impact Avoidance and Mitigation Strategy (GIRAMS)[78]. This strategy sets out a two-fold approach to prevent adverse effects of planned in-combination housing growth in the county (which includes sites that may be allocated in the WntSNP) on Norfolk's European sites regarding recreational pressure. One pillar of the GIRAMS is that all new residential developments are required to provide Green Infrastructure (GI) opportunities, providing year-round connections to the local countryside. Provision of off-site greenspaces is a widely accepted tool to reduce the number of recreational visits in more sensitive European sites. The obligation for enhanced GI provision will be secured through policy wording in the emerging NNLP, which guides all future development in Wells-next-the-Sea Parish.

6.6 The second pillar of the GIRAMS is the provision of a package of on-site mitigation measures to reduce negative impacts of recreational pressure within the European sites themselves. This flexible mitigation approach is designed to address in combination effects of residential growth and will be funded by individual developer contributions on a per-dwelling basis. Some of the measures included in the GIRAMS are as follows:

- Recording the implementation of mitigation for recreational impacts and tracking their locations and costs;
- Collating and mapping key roosts and feeding areas outside the European sites i.e., functionally linked habitat;
- Sharing a new website dedicated to the Norfolk RAMS, providing information on the European sites, the need for mitigation and measures to alleviate recreational disturbance;
- Working with landowners and partners to support existing or identify new fencing to protect breeding sites for SPA bird populations;
- Working with landowners and partners to collate bird monitoring surveys to identify land outside SPAs which support qualifying features;
- Monitoring of sensitive vegetation and species to inform mitigation needs; and
- Working with the Public Rights of Way team on projects regarding route diversions and site buffering.

6.7 The Footprint Ecology visitor survey highlighted that dog walking was a popular activity across the European sites surveyed and there is an overlap between recreational disturbance and nutrient enrichment with regard to dog walking,

[78] Place Services. (March 2021). Norfolk Green Infrastructure and Recreational Impact Avoidance and Mitigation Strategy. 219pp. Available at: https://www.north-norfolk.gov.uk/media/7417/girams_strategy_march-_2021.pdf [Accessed on the 20/12/2022]

although nutrient enrichment is not specified by Natural England in the SIP as a current threat to the European sites relevant to this NP.

6.8 The Norfolk Wildlife Trust (NWT) manages parts of 11 European sites across Norfolk with a 'no dogs' policy on most of the reserves, except for Public Rights of Ways (PRoW), including the North Norfolk Coast SPA / Ramsar / SAC (Holme Dunes National Nature Reserve; Cley and Salthouse Marshes reserve). A measure in the GIRAMS has been to set up a county-wide dog project to engage with dog walkers, promoting sites for dog walking, providing information on other areas available for this activity and highlighting issues at European sites. This builds on the existing use of dog bans, dog-on-lead areas and promotion of dog-friendly beaches on the North Norfolk Coast.

6.9 A single per-dwelling tariff for the Norfolk-wide RAMS package has been calculated by dividing the total cost of the GIRAMS mitigation package by the total number of houses to be delivered over Local Plan periods[79]. It applies to all new residential developments within the established ZoIs for Norfolk's European sites, including the North Norfolk Coast SPA / Ramsar / SAC and The Wash and North Norfolk Coast SAC. The tariff is an exact monetary value to ensure that the full costs of the mitigation package to address impacts from Local Plan growth can be collected and render future development HRA-compliant. The GIRAMS recommends that each authority secures developer contributions from all new residential development in the relevant authority boundaries in line with the evidence-based approach.

6.10 In Policy WNS5 (Infill development and extensions), the WntSNP also provides support for infill development and extensions to existing dwellings (including holiday lets) in Wells-next-the-Sea. Policy WNS9 (Visitor parking) supports proposals for suitably located seasonal car parking in Wells-next-the-Sea, for example at the Pitch and Putt site off Beach Road. The group have confirmed this is intended to deal with an existing formal parking shortage rather than attract new visitors. Nonetheless, providing additional holiday lets and increased parking capacity in walking distance to the coastline may act in tandem to increase the volume of visitors to the North Norfolk Coast SPA / Ramsar, potentially exacerbating existing disturbance issues to qualifying bird species and seals.

6.11 These policies do not provide quanta of infill development and parking spaces to be delivered, making it impossible to quantify their impact on visitor numbers at this level; that must therefore be done as individual proposals come forward. The Wash & North Norfolk Marine Partnership (WNNMP), Norfolk Coast Partnership (NCP) and PROWAD LINK commissioned Footprint Ecology to undertake a study on how the nature conservation interest along the Wash and North Norfolk Coast can be safeguarded, while enabling sustainable levels of recreational use[80]. The study utilised a Limits of Acceptable Change (LAC) process for managing recreation impacts to define zones (or opportunity classes) along the coastline. It then defined acceptable and measurable standards for each of the zones relating to issues of concern, such as the number of people and dogs on intertidal habitats, occupied parking spaces, and boats. The rationale for the LAC

[79] The tariff currently stands at £185.93 per net new residential and tourism accommodation dwelling. This tariff is reviewed annually in line with inflation and changes to the mitigation package. Tariff information is available at: https://www.north-norfolk.gov.uk/tasks/development-management/habitat-mitigation-recreational-impacts/ [Accessed on the 20/12/2022].
[80] Liley D, Panter C, Saunders P, Caals Z, Lake S & Bishop E. (2022). The Wash and North Norfolk Coast Limits of Acceptable Change Study. Report by Footprint Ecology. 151pp.

process is then to compare the 'actual' to the zone type standards to determine where changes in access management are needed.

6.12 The wider area surrounding the existing Wells-next-the-Sea Beach car park, including the likely location for additional seasonal car parking, is defined as a Destination Site. Such sites are defined as 'attractive sites with expansive open beaches and other habitats'. Resource impacts in this zone are apparent (i.e. negative effects on qualifying species), with the potential for widespread disturbance making sections of coastline entirely unsuitable for birds and / or seals. Two of the parking-related indicators are 'average occupancy of car park' and the 'total numbers of vehicles per km of shoreline'. For Destination Sites the acceptable standard is a low-medium (15-45%) occupancy of car parks and a high number of vehicles (75-100) per kilometre of shoreline. According to the findings presented in the study, the Wells Beach Car Park is presently exceeding the low-medium occupancy criterion with an average occupancy of 50.4%.

6.13

6.14 While it is noted that the explicit intention of Policy WNS9 is to relieve parking issues in other parts of the settlement, the provision of additional seasonal car parking clearly has the potential to attract further visitors to the Wells Beach Car Park area. This in turn poses the risk that adjacent zones along the coastline (Wildlife Tourism and Wildlife Only zones) would be subject to increased recreational usage. Given the high levels of recreational use along the Wells-next-the-Sea coastline, it is recommended that individual planning applications to be delivered under Policy WNS9 are subject to project-level HRAs to ensure that additional car parking can be delivered without adverse effects on the integrity of the North Norfolk Coast SPA / Ramsar / SAC. A range of management interventions are available to mitigate potential impacts of additional car parking. For example, parking charges may be introduced to limit the duration and extent of use of seasonal parking. Paid parking also helps instil the perception that a site is important and well looked after. Alternatively, an advance booking system may help limit usage and prevent overcrowding of the parking area. Parking-related mitigation measures can also be augmented by measures relating to access infrastructure. For example, fencing and cordons could be introduced to restrict recreational access to highly sensitive bird roost / foraging and seal pupping areas. Furthermore, dedicated viewpoints in areas of interest can be established to provide a focal point for visitors, while containing access within desired limits. It is to be noted that the maximum effectiveness is likely to be attained where management interventions are delivered as a package and not in isolation.

6.15 Policy WNS18 (The Harbour) addresses the importance of Wells-next-the-Sea Harbour for the community, including its role as a functioning port and recreational resource. The policy specifies that '*improvements to onshore facilities that benefit both visiting boats and resident boats will be supported.*' While no specific deliverables are discussed, this may encompass a wide range of facilities including boat moorings, storage yards, repair outlets and food / drink establishments. Wells Harbour is already regularly used for water-based activities and supports sailing and water ski clubs. Any businesses delivered under Policy WNS18 would have the potential to increase the attractiveness of the harbour for boat users and number of people engaging in water-based recreation.

6.16 Footprint Ecology's LAC study also investigated standards in relation to water-based activities. For Wells Beach Car Park, a Destination Site, a high total number of boats per km of shoreline (0.2 – 0.25) was identified as an acceptable standard. However, the currently observed number of boats is 0.32, already exceeding the level of boat usage that is deemed to be sustainable by this zone. If additional onshore boating-related infrastructure were provided, this would have the potential to further increase boat usage.

6.17 Based on the evidence discussed in this HRA, several additions to policy wording in the WntSNP are needed to ensure that the nature conservation interest in the North Norfolk Coast SPA / Ramsar / SAC is protected. It is recommended that wording is included in the WntSNP to clearly reference the requirements of the GIRAMS. The following wording could be included in an appropriate policy of the NP: '***To avoid adverse effects on the North Norfolk Coast SPA / Ramsar / SAC all residential development will need to satisfy the requirements of the Norfolk Green Infrastructure and Recreational Impact Avoidance & Mitigation Strategy (GIRAMS). This will include adequate provision of adequate and proportionate Green Infrastructure and adequate financial contributions towards the mitigation measures identified in the GIRAMS.***' This policy wording would also apply to any small-scale windfall development being delivered under **Policies WNS1 (Community Led Housing)** and **WNS5 (Infill development and extensions)**, especially because the former already states that '*the development of such housing should be consistent with polices in this plan governing design, appearance, layout, amenity, highway safety, impacts on historic and natural environment and flood risk*', which would include the policy addressing the GIRAMS. For completeness, this wording should also be added to Policy WNS5 (page 74 of the draft WntSNP).

6.18 Additional wording should also be added to **Policy WNS9 (Visitor Parking)** and **Policy WNS18 (The Harbour)** to ensure that any additional parking or onshore facilities in the vicinity of Wells Beach Car Park and the harbour do not lead to significant impacts regarding recreational pressure. Additional wording should encompass the following:

- Policy WNS9 – '***Any planning applications for additional car parking in the Wells Beach area will need to be supported by a project-level Habitats Regulations Assessment, demonstrating that the impacts of any potential increase in recreational footprint are adequately mitigated.***'
- Policy WNS18 – '***Any planning applications for onshore facilities in Wells Harbour will need to be supported by a project-level Habitats Regulations Assessment, demonstrating that the impacts of any potential increase in boat-related recreation are adequately mitigated.***'

6.19 Note that this suggested wording in 6.17 and 6.18 above would be subject to Examination and amendment along with all other elements of the plan. Provided that the above policy recommendations are included in the next iteration of the WntSNP, there will be no adverse effects of the Plan on the North Norfolk Coast SPA / Ramsar / SAC and the Wash & North Norfolk Coast SAC.

Visual and Noise Disturbance

6.20 As highlighted in an earlier section of this HRA, research on visual and noise disturbance in waders and waterfowl indicates that construction works within 300m of a SPA / Ramsar (or identified functionally linked habitat parcels) have the potential to be disturbing for birds. Beyond this precautionary distance, visual and noise disturbance effects are unlikely to occur. The following policy has a spatial element located within 300m of the North Norfolk Coast SPA / Ramsar and has the potential to result in visual and noise disturbance during construction:

- Policy WNS7 (Redevelopment opportunities)

6.21 Furthermore, the following sites proposed for potential allocation lie within 300m of the North Norfolk Coast SPA / Ramsar and have the potential to result in construction-period visual and noise disturbance to qualifying birds:

- H1016 (Land at East Quay)
- H0285 (The Old Coal Yard, East Quay)

6.22 The following paragraphs provide an assessment of these NP elements regarding visual and noise disturbance impacts and, where required, provide recommendations.

Policy WNS7 (Redevelopment Opportunities)

6.23 The policy identifies land on south side of Freeman Street for mixed-use development. This is the site of the Former Ark Royal pub that has already been demolished. The site lies c.119m from the North Norfolk Coast SPA / Ramsar and, from review of online imagery, within an already built-up area (it is currently used as a car park). While no demolition works will take place, other potentially noisy construction techniques could be utilised (e.g. piling). Due to the nature of the surrounding area, i.e., being situated amidst other buildings, there is no clear sightline between the site and the SPA / Ramsar. The existing structures provide a visual buffer to the SPA / Ramsar, while noise from future construction activities could be an issue for birds that are nesting, roosting or foraging nearby.

H1016 Land at East Quay and H0285 The Old Coal Yard, East Quay

6.24 These sites are located adjacent to The Wash & North Norfolk Coast SAC and North Norfolk Coast SPA / Ramsar. From review of online imagery, both sites are currently being used as a boat storage yards (with an element of disturbance likely to be present already. While no demolition works are anticipated, some noisy construction techniques (e.g. piling) may be employed. Furthermore, there are clear sightlines between the sites and the SPA / Ramsar, with the potential for future construction works to result in visual disturbance.

6.25 As highlighted in the ‘Background to Impact Pathways’ chapter, current evidence indicates that noise levels of below 70dB at sensitive bird receptors are widely regarded as non-disturbing. However, depending on the existing baseline noise level in a location, the relative change in noise at bird receptors is a preferred method of impact assessment (particularly in settings that presently experience low noise disturbance). While there are no formal guidelines that define significant thresholds in noise level changes, an increase of 10dB at birds represents a doubling in perceived loudness and can reasonably be assumed to result in a high risk of causing changes in bird behaviour (e.g. flushing or cessation of foraging) for the duration of exposure. It is advised that any

developments taken forward within 200m of the North Norfolk Coast SPA / Ramsar will need to be supported by application-level HRAs, including noise impact assessments. Modelling will need to demonstrate that noise levels at birds do not result in disturbance or can be brought within acceptable thresholds through mitigation measures.

6.26 It is recommended that the policy wording in the WntSNP is strengthened to ensure that no adverse effects from visual and noise disturbance in the construction period will arise in the North Norfolk Coast SPA / Ramsar. The following policy wording should be inserted into an adequate policy of the WntSNP: '***Where development is to occur within 300m of the North Norfolk Coast SPA / Ramsar, an assessment of potential noise and visual disturbance must be undertaken. Modelling will need to show that noise levels will remain acceptable at qualifying bird assemblages. This may encompass the comparison of modelled construction noise levels to pre-construction baseline noise measurements (to be agreed upon with Natural England). Mitigation of noise impacts may be required, including the provision of screens, selection of less noisy equipment or techniques and damping / noise shielding of equipment may be required. Any construction sites within 300m of known bird roosts in the SPA / Ramsar or functionally linked habitats should also have appropriate screening in place to minimise visual disturbance.***'

6.27 Note that this suggested wording would be subject to Examination and amendment along with all other elements of the plan. Provided this policy wording is inserted to the next iteration of the WntSNP, adverse effects of the Plan on the North Norfolk Coast SPA / Ramsar regarding noise and visual disturbance can be excluded.

6.28 It is to be noted that without mitigation the policy and potential site allocations discussed above have the potential to result in adverse effects alone. Growth in other parishes adjoining the North Norfolk Coast SPA / Ramsar also has the potential to result in visual and noise disturbance of qualifying birds, which may render longer stretches of coastline temporarily unsuitable for foraging, roosting or loafing. However, any relevant Neighbourhood Plans are required to undertake their own impact assessment and ensure that adequate policy mitigation is in place to protect the nature conservation interest of the site. This means that there will be no adverse effects of the WntSNP regarding visual and noise disturbance in-combination.

Loss of Functionally Linked Habitat

6.29 The following sites proposed for potential allocation encompass land parcels with potentially suitable habitat for supporting significant populations of designated bird species (i.e. over 1% of the qualifying populations of the SPA / Ramsar). The following sites may constitute functionally linked habitat:

- CFS2 Mill Road (by Wells Town)
- CFS3 (HELAA H0288) Land at Warham Road
- H0699 Land adjacent Holkham Road

6.30 In determining whether a site has the potential to be functionally linked to the SPA / Ramsar, the following criteria have been considered in sequential order:

- Distance from the SPA / Ramsar – any development sites beyond 10km from the site were not included in the assessment
- Site size – development sites below 2ha in size are unlikely to provide sufficient resources to support 1% of the qualifying population of a species (although exceptions are made for sites close to the 2ha area, if other criteria were fulfilled)
- Habitat type – sites without arable land or wet grassland were considered unsuitable for golden plovers and Bewick's swans
- Surrounding development – SPA / Ramsar waterfowl generally prefer rural habitats and sites in a highly urbanised context are less likely to be frequented
- Nature of flightlines – SPA / Ramsar birds are likely to navigate more easily to foraging sites that support uninterrupted flightlines (due to the use of visual cues)

6.31 The following paragraphs provide a detailed assessment of these sites proposed for potential allocation in relation to loss of functionally linked habitat and, where required, provide recommendations.

CFS2 Mill Road (by Wells Town)

6.32 From review of online imagery, this 7.7ha semi-rural site comprises allotments and pasture (c.4ha). The site lies approx. 530m south-west of the North Norfolk Coast SPA / Ramsar, which is within the maximum foraging distance of several qualifying bird species. Some of the qualifying species, while generally foraging far beyond designated site boundaries, will not occur within the site. For example, tern are offshore feeders and bittern rely on wetland areas / reedbeds. Whilst pasture may offer some foraging opportunities for designated geese, these are likely to preferentially forage in agricultural land. With extensive areas of arable land available in all directions from the site, it is unlikely that this site serves as functionally linked habitat to the SPA / Ramsar.

CFS3 (HELAA H0288) Land at Warham Road

6.33 This 13ha site comprises arable land and lies 760m south of the North Norfolk Coast SPA / Ramsar. This land parcel is sufficiently large and has a very short, uninterrupted flightline to the SPA / Ramsar. Accounting for the fact that birds are likely to select foraging habitats close to their roost sites to minimise energy expenditure, this site has a high potential for being functionally linked to the SPA / Ramsar.

H0699 Land adjacent Holkham Road

6.34 The proposed additional 2ha of this site comprise pasture and lie 530m west of the North Norfolk Coast SPA / Ramsar. Therefore, it is unlikely that this site serves as functionally linked habitat to the SPA / Ramsar for the reasons given for excluding CFS2 Mill Road.

6.35 To avoid the loss of important supporting habitats, it is recommended that the following text (or similar) is inserted to an appropriate policy of the WntSNP: ***'Developers will need to provide evidence that their proposals will not***

result in adverse effects on the integrity of the North Norfolk Coast SPA / Ramsar regarding the loss of functionally linked habitat. Where surveys of overwintering SPA / Ramsar bird species are indicated due to suitable habitat being present, these should be undertaken at the planning application stage to assess if the land parcel supports a significant population (typically defined as 1% of the qualifying population) of a designated bird species. These non-breeding bird surveys will need to be undertaken during autumn, winter and spring. If site allocations or directly adjacent land are identified to be functionally linked to the SPA / Ramsar, avoidance measures and mitigation will be required, and the planning application will need to be assessed through a project-specific Habitats Regulations Assessment to ensure that functionally linked habitat parcels are safeguarded.'

6.36 Note that this suggested wording would be subject to Examination and amendment along with all other elements of the plan. Provided that this wording (or an appropriate alternative) is inserted to the next iteration of the WntSNP, adverse effects on the integrity of the North Norfolk Coast SPA / Ramsar can be excluded.

6.37 Growth delivered in other parishes adjoining the North Norfolk Coast SPA / Ramsar also has the potential to result in the loss of habitats that are functionally linked to the North Norfolk Coast SPA / Ramsar. Therefore, in-combination growth is likely to lead to a cumulative loss of greenfield sites outside the designated site boundary, particularly in rural parishes. However, any relevant Neighbourhood Plans are required to assess the potential suitability for and usage of allocations by SPA / Ramsar birds. Adequate policy mitigation will need to be included in all Plan documents to safeguard the extent of functionally linked sites. This means that there will be no adverse effects of the WntSNP regarding functionally linked habitat loss in-combination.

Water Quality

North Norfolk Coast SPA / Ramsar / SAC

6.38 While impacts of treated sewage effluent on the water quality in the North Norfolk Coast SPA / Ramsar / SAC were excluded at the LSEs stage, other pathways for water quality impacts were screened in for AA. The WntSNP proposes two sites for potential allocation (H1016 Land at East Quay and H0285 The Old Coal Yard, East Quay) that lie in close proximity to the North Norfolk Coast SPA / Ramsar / SAC and The Wash & North Norfolk Coast SAC. There are two pathways through which development in these sites could affect the water quality in these European sites:

- Residential development without connection to the main sewerage system are typically served by septic tanks – where these tanks are faulty or inadequately maintained, overflows of untreated sewage into designated habitats may occur; and
- Toxic and non-toxic contaminants are likely to accumulate on new impermeable surfaces and can be carried into sensitive sites along hydrological pathways (particularly during intense rainfall events).

6.39 Potential negative impacts from surface runoff are dependent on a range of parameters, including source-receptor distance and pre-existing issues with water quality. For example, the potential for water quality implications reduces with distance from receptors, because prolonged residence times, increased dilution and attenuation. Furthermore, contaminants are likely to be more impactful where there are existing loadings of contaminants in sediments and / or water columns (e.g. due to synergistic toxicity effects).

6.40 According to the Environment Agency Catchment Data Explorer, the Stiffkey and Glaven Waterbody (immediately to the north of the aforementioned sites), has most recently been assigned 'Bad Ecological Status'[81]. This is due to Bad classification for phytoplankton (although other parameters related to water quality, such as DO and macroalgae, are in good condition), as well as a Fail for some toxic contaminants (e.g. mercury and Polybrominated Diphenyl Ethers, PBDE). Therefore, there appear to be good reasons for minimising any further input of toxic and non-toxic contaminants to the system. Furthermore, given the very short distance between the potential development sites and the designated site boundaries (in the order of tens of metres), there is very little scope for attenuation processes (e.g. dilution and absorption by vegetation) to occur.

6.41 The primary measures to mitigate potential water quality impacts from surface runoff encompass Sustainable Drainage Systems (SuDS), which will need to be deployed in all developments, particularly the sites in close proximity to the North Norfolk Coast SPA / Ramsar / SAC. SuDS require careful design and expert input from landscape architects and ecologists. Key design principles for SuDS include controlled outflow of treated water, flood management and water quality enhancement. They should facilitate gradual seepage of water into the ground (where ground conditions allow) or, where this is not possible, temporary detention, slowing of flows (attenuation) or permanent retention. Typically, this is achieved by employing SuDS techniques on different scales of developments, such as at source (individual buildings), sites (small residential or commercial developments) and the regional level (large housing developments or multiple sites). Approved guidance on SuDS is readily available (e.g. [82] and should be followed closely.

6.42 To ensure that there will be no negative impacts on the water quality in the North Norfolk Coast SPA / Ramsar / SAC from surface runoff, it is recommended that additional policy wording is included in the WntSNP. The following (or similar) wording could be included: '***To prevent adverse effects on water quality in the North Norfolk Coast SPA / Ramsar / SAC from surface runoff, developments with the potential for direct flow linkages with the SPA / Ramsar / SAC will need to incorporate adequate Sustainable Drainage Systems (SuDS) that reduce runoff rates, discharge to ground (where possible) or enable the detention / retention of runoff to allow for sufficient attenuation. SuDS should be designed in collaboration with suitably qualified landscape architects and ecologists. Sites within areas of elevated flood risk should also be accompanied by a Surface Water Drainage Strategy that sets out how the risk of runoff flooding events will be minimised.***'

[81] Available at: https://environment.data.gov.uk/catchment-planning/WaterBody/GB520503403600?cycle=3 [Accessed on the 21/12/2022]
[82] Graham A., Day J. Bray B. & Mackenzie S. (2019). Sustainable Drainage Systems – Maximising the potential for people and wildlife. A guide for local authorities and developers. 64pp. Available at: https://www.wwt.org.uk/uploads/documents/2019-07-22/1563785657-wwt-rspb-sustainable-drainage-systems-guide.pdf [Accessed on the 22/12/2022]

6.43 Note that this suggested wording would be subject to Examination and amendment along with all other elements of the plan. Provided that this additional protective policy wording is included in the next iteration of the WntSNP, it is concluded that the Plan will not result in adverse effects on the North Norfolk Coast SPA / Ramsar / SAC regarding surface runoff water quality impacts.

6.44 Due to the limited growth allocated, it is considered unlikely that the WntSNP would lead to adverse water quality impacts alone. However, negative changes in water quality due to surface runoff may occur in-combination with growth in other parishes adjoining the North Norfolk Coast SPA / Ramsar (especially where proposed development lies within a few hundred metres of the site). In line with the Conservation of Habitats and Species Regulations 2017 (as amended), all development plans will have to assess potential flow linkages and provide other hydrological assessments as required. Policy wording in relevant plans to mitigate adverse water quality impacts will ensure that no in-combination effects with the WntSNP would occur.

7. Conclusions and Recommendations

7.1 This HRA undertook LSEs screening and, where required, AA of the WntSNP (Pre-submission Draft July 2022). All NP policies and sites proposed for potential allocation were assessed in relation to the following European sites:

- North Norfolk Coast SAC
- The Wash & North Norfolk Coast SAC
- North Norfolk Coast SPA / Ramsar

7.2 Following AA it was recommended that additional protective policy wording is included in the WntSNP to adequately safeguard the qualifying features of the aforementioned European sites. This will ensure that no adverse effects on site integrity will occur in relation to recreational pressure, visual and noise disturbance (during construction), loss of functionally linked habitat and water quality. Note that the recommended wording below 6 would be subject to Examination and amendment along with all other elements of the plan.

Recommendations

Recreational Pressure

7.3 It is recommended that additional wording is included in several policies of the WntSNP to adequately address recreational pressure impacts. For example, a clear reference to the requirements of the GIRAMS should be made. The following wording could be included in an appropriate policy of the NP: '***To avoid adverse effects on the North Norfolk Coast SPA / Ramsar / SAC all residential development will need to satisfy the requirements of the Norfolk Green Infrastructure and Recreational Impact Avoidance & Mitigation Strategy (GIRAMS). This will include adequate provision of adequate and proportionate Green Infrastructure and adequate financial contributions towards the mitigation measures identified in the GIRAMS.***' Alternatively, this wording could be included in its own stand-alone policy.

7.4 The above mitigation would also apply to any small-scale windfall development being delivered under **Policies WNS1 (Community Led Housing)** and **WNS5 (Infill development and extensions)**, especially because Policy WNS1 already states that '*the development of such housing should be consistent with polices in this plan governing design, appearance, layout, amenity, highway safety, impacts on historic and* ***natural environment*** *and flood risk*', which would include the new policy addressing the GIRAMS. For completeness, this wording should also be added to Policy WNS5 (page 74 of the draft WntSNP).

7.5 Additional wording should also be added to **Policy WNS9 (Visitor Parking)** and **Policy WNS18 (The Harbour)** to ensure that any additional parking or onshore facilities in the vicinity of Wells Beach Car Park and the harbour do not lead to adverse effects regarding recreational pressure. Additional wording should encompass the following:

- Policy WNS9 – '***Any planning applications for additional car parking in the Wells Beach area will need to be supported by a project-level Habitats Regulations Assessment, demonstrating that the impacts of any potential increase in recreational footprint are adequately mitigated.***'

- Policy WNS18 – '***Any planning applications for onshore facilities in Wells Harbour will need to be supported by a project-level Habitats Regulations Assessment, demonstrating that the impacts of any potential increase in boat-related recreation are adequately mitigated.***'

Visual and Noise Disturbance

7.6 It is recommended that the policy wording in the WntSNP is strengthened to ensure that no adverse effects from visual and noise disturbance in the construction period will arise in the North Norfolk Coast SPA / Ramsar. The following policy wording should be inserted into an adequate policy of the WntSNP: '***Where development is to occur within 300m of the North Norfolk Coast SPA / Ramsar, an assessment of potential noise and visual disturbance must be undertaken. Modelling will need to show that noise levels will remain acceptable at qualifying bird assemblages. This may encompass the comparison of modelled construction noise levels to pre-construction baseline noise measurements (to be agreed upon with Natural England). Mitigation of noise impacts may be required, including the provision of screens, selection of less noisy equipment or techniques and damping / noise shielding of equipment may be required. Any construction sites within 300m of known bird roosts in the SPA / Ramsar or functionally linked habitats should also have appropriate screening in place to minimise visual disturbance.***'

Loss of Functionally Linked Habitat

7.7 To avoid the loss of important supporting habitats, it is recommended that the following text (or similar) is inserted to an appropriate policy of the WntSNP: '***Developers will need to provide evidence that their proposals will not result in adverse effects on the integrity of the North Norfolk Coast SPA / Ramsar regarding the loss of functionally linked habitat. Where surveys of overwintering SPA / Ramsar bird species are indicated due to suitable habitat being present, these should be undertaken at the planning application stage to assess if the land parcel supports a significant population (typically defined as 1% of the qualifying population) of a designated bird species. These non-breeding bird surveys will need to be undertaken during autumn, winter and spring. If site allocations or directly adjacent land are identified to be functionally linked to the SPA / Ramsar, avoidance measures and mitigation will be required, and the planning application will need to be assessed through a project-specific Habitats Regulations Assessment to ensure that functionally linked habitat parcels are safeguarded.***'

Water Quality

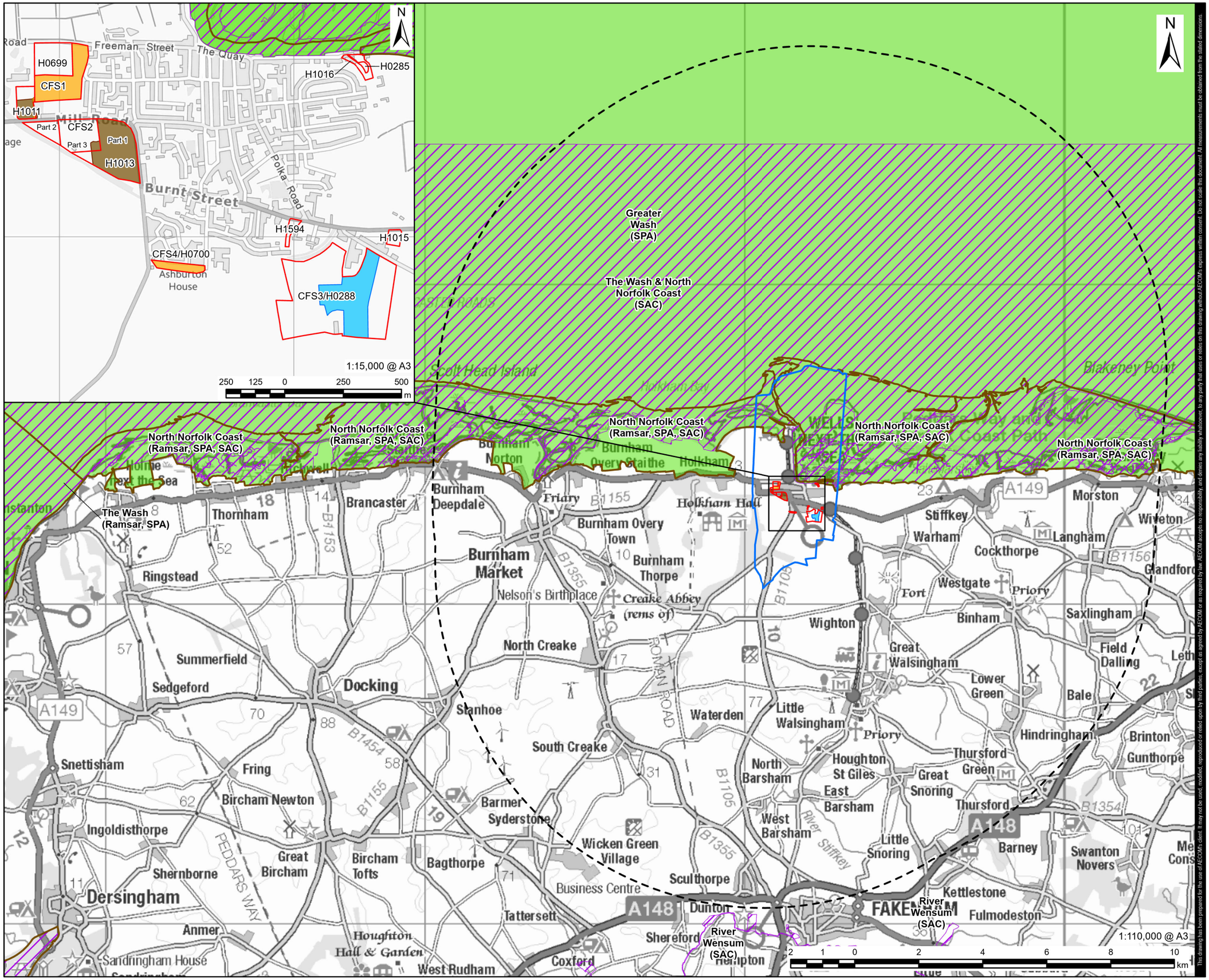
7.8 To ensure that there will be no negative impacts on the water quality in the North Norfolk Coast SPA / Ramsar / SAC from surface runoff, it is recommended that

additional policy wording is included in the WntSNP. The following (or similar) wording could be included: '***To prevent adverse effects on water quality in the North Norfolk Coast SPA / Ramsar / SAC from surface runoff, developments with the potential for direct flow linkages with the SPA / Ramsar / SAC will need to incorporate adequate Sustainable Drainage Systems (SuDS) that reduce runoff rates, discharge to ground (where possible) or enable the detention / retention of runoff to allow for sufficient attenuation. SuDS should be designed in collaboration with suitably qualified landscape architects and ecologists. Sites within areas of elevated flood risk should also be accompanied by a Surface Water Drainage Strategy that sets out how the risk of runoff flooding events will be minimised.***'

7.9 With the addition of the above wording, it is concluded that the WntSNP would provide sufficient protective policy mechanisms to ensure no adverse effects on the integrity of any European sites will occur in association with the impact pathways of recreational pressure, visual and noise disturbance, loss of functionally linked habitat and water quality, either alone or in-combination.

Appendix A

A.1 Map of European sites in Relation to Wells-next-the-Sea Parish



AECOM

PROJECT

Wells-next-the-sea Neighbourhood Plan Habitats Regulations Assessment

CLIENT

Wells-next-the-sea Neighbourhood Plan Group

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LEGEND

- Wells-next-the-Sea Parish Boundary
- 10km Study Area
- Proposed Allocated Site
- Emerging Local Plan Allocation
- Sites From Different Methods
- Proposed Development by NP CFS
- Ramsar
- Special Area of Conservation
- Special Protection Area

NOTES

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60571087

FIGURE TITLE

Location of European Designated Sites

FIGURE NUMBER

Figure A1

aecom.com

Date: 11 April 2023
Our ref: 427025
Your ref: Wells-next-the-Sea Neighbourhood Plan

Ms R Leggett
Wells-next-the-Sea Town Council

BY EMAIL ONLY
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Dear Ms Leggett

Wells-next-the-Sea Neighbourhood Plan - HRA Report

Thank you for your consultation on the above dated and received by Natural England on 17 March 2023.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

SUMMARY OF NATURAL ENGLAND'S ADVICE

NO OBJECTION

AA concludes 'No Adverse Effect On Integrity' and Natural England concurs with this conclusion

Natural England notes that your authority, as competent authority, has undertaken an appropriate assessment of the proposal in accordance with regulation 63 of the Conservation of Species and Habitats Regulations 2017 (as amended). Natural England is a statutory consultee on the appropriate assessment stage of the Habitats Regulations Assessment process.

Your appropriate assessment concludes that your authority is able to ascertain that the proposal will not result in adverse effects on the integrity of any of the sites in question. Having considered the assessment, and the measures proposed to mitigate for all identified adverse effects that could potentially occur as a result of the proposal, Natural England advises that we concur with the assessment conclusions, providing that all mitigation measures are appropriately secured in any planning permission given.

Sites of Special Scientific Interest Impact Risk Zones
The Town and Country Planning (Development Management Procedure) (England) Order 2015 requires local planning authorities to consult Natural England on "Development in or likely to affect a Site of Special Scientific Interest" (Schedule 4, w). Our SSSI Impact Risk Zones are a GIS dataset designed to be used during the planning application validation process to help local planning authorities decide when to consult Natural England on developments likely to affect a SSSI.
The dataset and user guidance can be accessed from the data.gov.uk website.

Further general advice on the consideration of protected species and other natural environment issues is provided at Annex A.

We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us.

For any queries regarding this letter, for new consultations, or to provide further information on this consultation please send your correspondences to consultations@naturalengland.org.uk.

Yours sincerely

Sally Wintle
Consultations Team

Annex A – Additional advice

Natural England offers the following additional advice:

Landscape
Paragraph 174 of the National Planning Policy Framework (NPPF) highlights the need to protect and enhance valued landscapes through the planning system. This application may present opportunities to protect and enhance locally valued landscapes, including any local landscape designations. You may want to consider whether any local landscape features or characteristics (such as ponds, woodland, or dry-stone walls) could be incorporated into the development to respond to and enhance local landscape character and distinctiveness, in line with any local landscape character assessments. Where the impacts of development are likely to be significant, a Landscape & Visual Impact Assessment should be provided with the proposal to inform decision making. We refer you to the Landscape Institute Guidelines for Landscape and Visual Impact Assessment for further guidance.

Best and most versatile agricultural land and soils
Local planning authorities are responsible for ensuring that they have sufficient detailed agricultural land classification (ALC) information to apply NPPF policies (Paragraphs 174 and 175). This is the case regardless of whether the proposed development is sufficiently large to consult Natural England. Further information is contained in GOV.UK guidance Agricultural Land Classification information is available on the Magic website on the Data.Gov.uk website. If you consider the proposal has significant implications for further loss of 'best and most versatile' agricultural land, we would be pleased to discuss the matter further.

Guidance on soil protection is available in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, and we recommend its use in the design and construction of development, including any planning conditions. For mineral working and landfilling separate guidance on soil protection for site restoration and aftercare is available on Gov.uk website. Detailed guidance on soil handling for mineral sites is contained in the Institute of Quarrying *Good Practice Guide for Handling Soils in Mineral Workings*.

Should the development proceed, we advise that the developer uses an appropriately experienced soil specialist to advise on, and supervise soil handling, including identifying when soils are dry enough to be handled and how to make the best use of soils on site.

Protected Species
Natural England has produced standing advice[1] to help planning authorities understand the impact of particular developments on protected species. We advise you to refer to this advice. Natural England will only provide bespoke advice on protected species where they form part of a Site of Special Scientific Interest or in exceptional circumstances.

Local sites and priority habitats and species
You should consider the impacts of the proposed development on any local wildlife or geodiversity sites, in line with paragraphs 175 and179 of the NPPF and any relevant development plan policy. There may also be opportunities to enhance local sites and improve their connectivity. Natural England does not hold locally specific information on local sites and recommends further information is obtained from appropriate bodies such as the local records centre, wildlife trust, geoconservation groups or recording societies.

Priority habitats and Species are of particular importance for nature conservation and are included in the England Biodiversity List published under section 41 of the Natural Environment and Rural Communities Act 2006. Most priority habitats will be mapped either as Sites of Special Scientific Interest, on the Magic website or as Local Wildlife Sites. List of priority habitats and species can be found on Gov.uk.
Natural England does not routinely hold species data, such data should be collected when impacts on priority habitats or species are considered likely. Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land, further information including links to the open mosaic habitats inventory can be found here.

[1] https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals

Annex A – Additional advice

Ancient woodland, ancient and veteran trees
You should consider any impacts on ancient woodland and ancient and veteran trees in line with paragraph 180 of the NPPF. Natural England maintains the Ancient Woodland Inventory which can help identify ancient woodland. Natural England and the Forestry Commission have produced standing advice for planning authorities in relation to ancient woodland and ancient and veteran trees. It should be taken into account by planning authorities when determining relevant planning applications. Natural England will only provide bespoke advice on ancient woodland, ancient and veteran trees where they form part of a Site of Special Scientific Interest or in exceptional circumstances.

Environmental gains
Development should provide net gains for biodiversity in line with the NPPF paragraphs 174(d), 179 and 180. Development also provides opportunities to secure wider environmental gains, as outlined in the NPPF (paragraphs 8, 73, 104, 120,174, 175 and 180). We advise you to follow the mitigation hierarchy as set out in paragraph 180 of the NPPF and firstly consider what existing environmental features on and around the site can be retained or enhanced or what new features could be incorporated into the development proposal. Where onsite measures are not possible, you should consider off site measures. Opportunities for enhancement might include:

- Restoring a neglected hedgerow.
- Creating a new pond as an attractive feature on the site.
- Planting trees characteristic to the local area to make a positive contribution to the local landscape.
- Using native plants in landscaping schemes for better nectar and seed sources for bees and birds.
- Incorporating swift boxes or bat boxes into the design of new buildings.
- Designing lighting to encourage wildlife.
- Adding a green roof to new buildings.

Natural England's Biodiversity Metric 3.1 may be used to calculate biodiversity losses and gains for terrestrial and intertidal habitats and can be used to inform any development project. For small development sites the Small Sites Metric may be used. This is a simplified version of Biodiversity Metric 3.1 and is designed for use where certain criteria are met. It is available as a beta test version.

Natural England's Environmental Benefits from Nature tool may be used to identify opportunities to enhance wider benefits from nature and to avoid and minimise any negative impacts. It is designed to work alongside Biodiversity Metric 3.1 and is available as a beta test version.

Green Infrastructure
Natural England's Green Infrastructure Framework provides evidence-based advice and tools on how to design, deliver and manage green infrastructure (GI) . GI should create and maintain green liveable places that enable people to experience and connect with nature, and that offer everyone, wherever they live, access to good quality parks, greenspaces, recreational, walking and cycling routes that are inclusive, safe, welcoming, well-managed and accessible for all. GI provision should enhance ecological networks, support ecosystems services and connect as a living network at local, regional and national scales.

Development should be designed to meet the 15 Green Infrastructure Principles. The Green Infrastructure Standards can be used to inform the quality, quantity and type of green infrastructure to be provided. Major development should have a GI plan including a long-term delivery and management plan. Relevant aspects of local authority green infrastructure strategies should be delivered where appropriate.

GI mapping resources are available here and here. These can be used to help assess deficiencies in greenspace provision and identify priority locations for new GI provision.

Access and Recreation
Natural England encourages any proposal to incorporate measures to help improve people's access to the natural environment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways should be considered. Links to urban fringe areas should also be explored to strengthen access networks, reduce fragmentation, and promote wider green infrastructure.

Annex A – Additional advice

Rights of Way, Access land, Coastal access and National Trails
Paragraphs 100 and 174 of the NPPF highlight the important of public rights of way and access. Development should consider potential impacts on access land, common land, rights of way and coastal access routes in the vicinity of the development. Consideration should also be given to the potential impacts on the any nearby National Trails. The National Trails website www.nationaltrail.co.uk provides information including contact details for the National Trail Officer. Appropriate mitigation measures should be incorporated for any adverse impacts.

Biodiversity duty
Your authority has a duty to have regard to conserving biodiversity as part of your decision making. Conserving biodiversity can also include restoration or enhancement to a population or habitat. Further information is available here.