BEACON FEN

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Shadow Habitat Regulations Assessment Report

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The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(g)

Quality information

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1. INTRODUCTION

1.1 Background

1.1.1 This Shadow Habitat Regulations Assessment has been prepared by Wardell Armstrong LLP (part of SLR) ('WA') on behalf of Beacon Fen Energy Park Ltd (the 'Applicant') in support of an application for a Development Consent Order (DCO) for Beacon Fen Energy Park (the 'Proposed Development').

1.2 Objectives of HRA

1.2.1 The objectives of an HRA screening process are to consider whether or not the Proposed Development would cause 'likely significant effects' on the qualifying features of Natura 2000 (European) sites (and their overlapping designations where appropriate), specifically the:

- The Wash (Ramsar & SPA & SSSI)
- The Wash & North Norfolk Coast (SAC)

1.2.2 Both of the 'The Wash' designations overlap, but the SAC designation covers a larger area and includes the entirety of the Ramsar & SPA. These are shown in the drawings (ST19595-501 Internationally Designated Sites). Both designations are approximately 21.4 km from Solar Array Area and 14.2 km from the Cable Route Corridor. The parcel of land previously referred to as 'Beacon Fen South' has been removed from the Proposed Development and therefore has not been considered within this report.

1.2.3 This document has been produced in accordance with the Planning Inspectorate's advice on HRA (2024).

1.2.4 In order to fully assess any likely significant effects upon these two international designated sites, this Proposed Development has been assessed in isolation and combination with other known plans and projects.

1.2.5 The Central Lincolnshire Local Plan (Adopted April 2023) and supporting document Sustainability Appraisal Report and Habitat Regulations Assessment: Non-Technical Summary (April 2023) are the principal sources of information for in-combination assessments.

1.2.6 A Preliminary Ecological Appraisal Report (PEA) of the Solar Array Area was undertaken by AECOM in 2022 which was followed by a suite of Phase 2 surveys for badger, reptile, riparian mammal, eDNA for great crested newts (GCN), wintering birds and breeding birds in 2023. A PEA of the Cable Route Corridor and Bespoke Access Corridor was undertaken in 2024, along with Phase 2 surveys for wintering and breeding birds, eDNA for GCN, riparian mammal and bats (WA 2025).

1.2.7 This assessment is informed by the proposed Order Limits for the Solar Array Area, Cable Route Corridor and Bespoke Access Corridor, provided by the client as well as the PEA Reports (AECOM, 2022, WA 2025a application Document Refs: 6.3 ES Vol.2, 6.3.24 and 6.3.42), Wintering Bird Reports (AECOM, 2023a, WA 2025b application Document Refs: 6.3 ES Vol.2, 6.3.24

and 6.3.36) and riparian mammal reports (AECOM, 2023b, WA 2025c application Document Refs: 6.3 ES Vol.2, 6.3.28 and 6.3.38).

1.3 Summary of the Project

1.3.1 The proposed development is formed of the Solar Array Area, a Bespoke Access Corridor from the A17, and a Cable Route Corridor connecting the Solar Array Area to the Bicker Fen National Grid Substation. The entire DCO application area is approximately 757 ha (hereafter known as the Project Area). The Proposed Development would have a generation capacity of approximately 400 megawatts (MW) of electricity per year, with a 600MW BESS.

1.4 Ecological Context of the Site

1.4.1 The Solar Array Area comprises of mainly arable fields with small areas of game crop strips, hedgerows, woodland blocks, numerous mature trees, and small wooded copses. Subsequent surveys of the Bespoke Access Corridor and Cable Route Corridor show that these have similar habitats. The Project Area is surrounded by mainly arable and improved grassland livestock fields with several villages and hamlets.

1.4.2 In terms of immediate surroundings, the Project Area is bordered by Midfodder Dike and Car Dyke to the east and the roads of Howell Fen Drove to the south, unnamed road to the west and Black Drove to the north. The hamlets of Ewerby Thorpe and Howell are to the west and southwest. Virtually all the surrounding land is actively farmed arable fields.

1.4.3 Further details of the habitats, protected species and designated sites can be found within the Environmental Statement Ecology Chapter (WA 2025d, application Document Ref: 6.2 ES Vol.1, 6.2.7).

1.5 Current Legislation

1.5.1 The requirement for an assessment of impacts on European sites is set out within The Conservation of Habitats and Species Regulations 2017 (SI 2017/1012), as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579).

1.5.2 The Regulations aim to “maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest” (Habitats Directive, Article 2(2)). This aim relates to habitats and species, not the European sites, themselves, although the sites have a significant role in delivering favourable conservation status.

1.5.3 The Habitats Directive applies the precautionary principle to European sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the 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 Overriding 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.

1.5.4 In order to ascertain whether or not site integrity will be affected, an assessment should be undertaken of the plan or project in question. While the competent authority (e.g. the Local Planning Authority) makes the formal decision as to whether adverse effects will result, they are entitled to request the applicant to produce necessary information to assist them. That is the purpose of this report.

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (The Habitats Directive 1992) Article 6(3) states that: "*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment* of its implications for the site in view of the site's conservation objectives."
The Conservation of Habitats and Species Regulations 2017 (SI 2017/1012), as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579). Section 63 of the Regulations State that: "*(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—* *(a)is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and* *(b)is not directly connected with or necessary to the management of that site,* *must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives.* *(2) A person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable it to determine whether an appropriate assessment is required.* *(3) The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies…*"

Box 1: Legislative basis for Appropriate Assessment

1.5.5 Over the years, the phrase 'Habitats Regulations Assessment' has come to describe the overall process set out in the Conservation of Habitats & Species Regulations from screening through to IROPI. This has arisen in order to distinguish the process from the individual stage described in the law as an 'appropriate assessment'. Throughout this report, the term *Habitat Regulations Assessment* is used for the overall process and the term *Appropriate Assessment* is restricted to the specific stage of that name.

2. METHODOLOGY

2.1 Stages of Assessment

2.1.1 Habitats Regulations Appraisal of projects can be broken down into three discrete stages, each of which effectively culminates in a test. The stages are sequential, and it is only necessary to progress to the following stage if a test is failed. The Habitat Regulations Assessment has been discussed with Natural England with correspondence included in Appendix 1.

2.1.2 The stages are:

2.2 Stage 1 – Likely Significant Effect Test

2.2.1 This is essentially a risk assessment, typically utilising existing data, records and specialist knowledge. The purpose of the test is to decide whether 'full' Appropriate Assessment is required. The essential question is:

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

2.2.2 If it can be demonstrated that significant effects are unlikely, no further assessment is required. As a result of the People over Wind C-323/17 (Court of Justice of European Union, 12 April 2018) the ECJ have clarified that …*it is not appropriate at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.*

2.3 Stage 2 – Appropriate Assessment

2.3.1 If it cannot be satisfactorily demonstrated that significant effects are unlikely, an "Appropriate Assessment" will be required. This is focussed entirely upon the designated interest features of the European sites in question. The essential question here is:

"Will the project, either alone or in combination with other relevant projects and plans, actually result in an adverse effect upon the integrity of any European sites, without mitigation?"

2.3.2 If it is concluded that adverse effects will occur, measures will be required to either avoid the impact in the first place, or to mitigate the ecological effect to such an extent that it is no longer significant. Note that, unlike standard Ecological Impact Assessment, compensation for adverse effects (i.e. creation of alternative habitat) is not permitted at the Appropriate Assessment stage.

2.4 Stage 3 – Imperative Reasons of Overriding Public Interest (IROPI) Test

2.4.1 If a project will have a significant adverse effect upon a European site, and this effect cannot be either avoided or mitigated, the project cannot proceed unless it passes the IROPI test. In order to pass the test, it must be objectively concluded that no alternative solutions exist. The project must be referred to

the Secretary of State on the grounds that there are Imperative Reasons of Overriding Public Interest as to why the project should nonetheless proceed.

2.4.2 This report deals with the first stage of Habitat Regulations Assessment – the Likely Significant Effect Test and the second stage – Appropriate Assessment.

2.4.3 It is a requirement of the Regulations that the impacts of any plans or projects 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. In this case, the Central Lincolnshire Local Plan (2023) is considered to be the main source of information for the in-combination assessment. The Local Plan Sustainability Appraisal and Habitats Regulation Assessment for the Adopted Local Plan (non technical summary) details in-combination effects arising from local projects.

3. DESIGNATED SITES

3.1.1 The qualifying features and conservation objectives of the Internationally designated sites of relevance to this Project are discussed in Table 1, below. Full Natura 2000 citations for each site and the Ramsar Information Sheet are given in Appendix 2 with the conservation objectives in Appendix 3.

Table 1: Qualifying Features and Conservation Objectives of the Designated Sites

SITE NAME AND OBJECTIVES	REASON FOR DESIGNATION
The Wash Ramsar/SPA (UK11072/UK9008021) **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**	**The Wash qualifies as SPA under Article 4(1) because it supports 30 breeding pairs of little terns *Sterna albifrons* (2% of the British population) and 220 pairs of common terns *Sterna hirundo* (2%); and because it supports 130 Bewick's swans *Cygnus cygnus* (3%) in winter.** **The Wash qualifies under Article 4(2) as an internationally important wetland by supporting in winter an average of 163,000 waders and also 51,000 wildfowl; and because it supports on average the following internationally important numbers of individual species: 17,000 dark-bellied brent geese *Branta bernicla bernicla* (12% of the European wintering population), 7,300 pinkfooted geese *Anser brachyrhynchus* (7%), 16,000 shelducks *Tadorna Tadorna* (12%), 1,700 pintails *Anas acuta* (2%), 24,000 oystercatchers *Haematopus ostralegus* (3%), 5,500 grey plovers *Pluvialis squatarola* (7%), 500 sanderlings *Calidris alba* (3%), 7,500 knots *Calidris canutus* (21%) 29,000 dunlins *Calidris alpina* (1%) 8,200 bar-tailed godwits *Limosa lapponica* (1%), 3,700 curlews *Numenius arquata* (1%), 4,331 redshanks *Tringa totanus* (5%) and 980 turnstones *Arenaria interpres* (2%).** **In addition the site qualifies because of its national importance to other migratory birds. Wintering birds include 3,900 wigeon *Anas penelope* (2% of the British wintering population), 220 goldeneye *Bucephala clangula* (1%), 130 gadwall *Anas strepera* (3%), 830 common scoters *Melanitta nigra* (2%), 260 black-tailed godwits *Limosa limosa* (6%) and probably several gull species (Larus). Important populations of wintering passerines are also supported.** **It qualifies as a Ramsar under Criterion 1, 3, 5 and 6:** **1 - a large shallow bay comprising very extensive saltmarshes, major intertidal banks of sand and mud, shallow water and deep channels.**

SITE NAME AND OBJECTIVES	REASON FOR DESIGNATION
	3 - Qualifies because of the inter-relationship between its various components including saltmarshes, intertidal sand and mud flats and the estuarine waters. The saltmarshes and the plankton in the estuarine water provide a primary source of organic material which, together with other organic matter, forms the basis for the high productivity of the estuary. **5 – winter waterfowl (peak counts of 292,541 waterfowl) assemblages of international importance.** **6- species/populations occurring at levels of international importance including a peak count overwinter of 46422 northern lapwing *Vanellus vanellus* representing 1.3 % of the population.**
The Wash & North Norfolk Coast SAC (UK0017075) **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** • **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.**	**Annex I habitats and Annex II species that are a primary reason for selection of this site:** **1110 Sandbanks which are slightly covered by sea water all the time** **1140 Mudflats and sandflats not covered by seawater at low tide** **1160 Large shallow inlets and bays** **1170 Reefs** **1310 Salicornia and other annuals colonizing mud and sand** **1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)** **1420 Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)** **1365 Harbour seal *Phoca vitulina*** **Annex I habitats and Annex II species present as a qualifying feature, but not a primary reason:** **1150 Coastal lagoons** **1355 Otter *Lutra lutra***
The Wash SSSI (1002998)	**The whole area is of exceptional biological interest. The intertidal mudflats and saltmarshes represent one of Britain's most important winter-feeding areas for waders and wildfowl outside of the breeding season. Enormous numbers of migrant birds, of international significance, are dependent on the rich supply of invertebrate food. The saltmarsh and shingle communities are of considerable botanical interest and the mature saltmarsh is a valuable bird breeding zone. In addition, the Wash is also very important as a breeding ground for Common Seals.**

4. LIKELY SIGNIFICANT EFFECT TEST

4.1 Pathways of Impact

4.1.1 In carrying out an HRA, it is important to determine the various ways in which the Proposed Development can impact on European sites by following the pathways along which development can be connected with those sites, in some cases many kilometres distant. Briefly defined, pathways are routes by which a change in activity associated with the Proposed Development can lead to an effect upon a European site.

4.1.2 Table 2 summarises the potential impact pathways between the Proposed Development and the European sites subject to screening.

Table 2: Summary of potential impact pathways

	THE WASH SPA AND RAMSAR	THE WASH AND NORTH NORFOLK COAST SAC
Distance and direction from the Proposed Development c.	14.2 km E	14.2 km E
Land take by development in European sites	None	None
Fragmentation of European site habitats	None	None
Increased mortality of key species	None	None
Disturbance to key species / deterioration of Habitats	None	None
Disturbance to key species/ damage or deterioration of supporting habitats (outside of the network of sites area)	Potential disturbance of qualifying species of the SPA and Ramsar: over wintering gadwall using a reservoir in the Solar Array Area and overwintering lapwing which were seen in significant numbers in a field 140 m east of the Order Limits and in the northwest of the grounds of a residential property outside the Order Limits in the north-eastern corner of the Site.	Potential disturbance of qualifying species of the SAC: Otter using waterbodies crossed by the Proposed Development.
Atmospheric pollution/ air quality pollution	None	None
Changes in soil chemistry	None	None

	THE WASH SPA AND RAMSAR	THE WASH AND NORTH NORFOLK COAST SAC
Hydrological Regime Change and Pollution of surface/ ground water	Potential for pollutants to reach areas within the SPA, SAC and Ramsar via connecting water courses, and/or changes to water flow from the proposed development to the SPA, SAC and Ramsar affecting qualifying habitats.	

4.2 Loss/Impact to Functionally Linked Habitats

4.2.1 'Functionally linked habitat' is a term used to described areas of land or sea occurring outside of a designated site but is considered to be critical to, or necessary for, the ecological or behavioural functions in a relevant season of a qualifying feature the designation has been notified for. These habitats are frequently used by qualifying species and supports the functionality and integrity of the designated sites.

The Wash SPA and Ramsar

4.2.2 The Wash SPA and Ramsar qualifying species likely to use the habitat in and around the proposed development are wading/wildfowl birds. Wading and wildfowl birds travel vast distances, particularly during spring and winter migrations, and regularly use farmland when taking breaks during migration. They can also use them during the breeding season for foraging, and in some cases breeding.

4.2.3 Several species of wading and wildfowl birds are listed as qualifying features of the Ramsar, SPA and SAC designations. These include gadwall of which two individuals were seen on two occasions within the Solar Array Area. The most recent five-year mean for gadwall on the Wash is 176 individuals (2018/19-22/23), meaning the Proposed Development site supports over 1% of the SPA population (British Trust for Ornithology 2025). It should be noted that the most recent population estimates for wintering birds put the UK population of gadwall at 31,000 (Frost *et al*. 2019), therefore the Wash falls below the 1% threshold for the species being a qualifying feature (were the SPA designated now).

4.2.4 The gadwall were only seen using a reservoir within the Solar Array Area. This reservoir will be retained within the Proposed Development. This reservoir is used for fishing therefore subject to human disturbance.

4.2.5 Significant numbers (450 individuals, that is over 1% of the Wash SPA and Ramsar site population) of lapwing were recorded in February 2022 and December 2022 On one occasion, lapwing were recorded approximately 140 m east of the Solar Array Area boundary. It is unlikely that the birds using this area would suffer significant disturbance as the noise generated from the development would have reduced to a level where birds would be unlikey to react (Cutts *et al*. 2013*)*. On another occasion, lapwing were recorded outside the Order Limits, where individuals were seen in the northwest of the grounds of a residential property outside the Order Limits in the north-eastern corner of the Site; they were then seen flying west over the Solar Array Area. These birds were within 20 m of the construction area at the closest. Further details on wintering birds including the locations where lapwing and Gadwall have been recorded can be found in 6.3.36 Appendix 7.17 Wintering Bird Survey Report (Cable route and access road). 6.3.36 Appendix 7.17 Wintering Bird

Survey Report (Cable route and access road). During the construction and decommissioning phases of the Proposed Development there will be an increase in noise from vehicles and the construction techniques used, some of which may exceed the 70 dB threshold above which birds are considered to suffer disturbance (Cutts *et al.* 2013). The loudest plant used on site will reach 116 dB at the source (see Noise and Vibration Chapter 10, document ref: 6.2 ES Vol 1, 6.2.10). Construction workers on site may cause visual disturbance to birds if they are in the vicinity of the reservoir. As gadwall and lapwing are only of importance for their overwintering population, any impact would only occur during the winter (November to February).

The Wash and North Norfolk Coast SAC

4.2.6 The Wash and North Norfolk Coast SAC qualifying species likely to use the habitat in and around the proposed development is the otter. Otter can travel considerable distances and a male territory can extended to over 20km along water courses whilst females may have territories extended 5-10km. Otter are a qualifying feature but not a primary reason for The Wash & North Norfolk Coast SAC.

4.2.7 During the construction and demolition of the development there will be the need for the Cable Route Corridor and Bespoke Access Road to cross ditches that could be used by otters. Excavation for and construction of crossings could directly injure or kill otters or damage or cause the loss of their holts. It is assumed that individuals using breeding sites up to 100 m from the construction activity could be affected.

4.2.8 For any otters to reach the Order Limits for the Wash and North Norfolk Coast SAC, there will be the requirement for them to cross under at least one A-road. Any travelling along the South Forty Foot Drain would need to pass through the town of Boston. These will therefore be tolerant of some level of disturbance, albeit they are likely to prefer quieter locations for their breeding sites.

4.3 Changes in Water Quality and Hydrological Regime Change

The Wash SPA and Ramsar, and the Wash and North Norfolk Coast SAC

4.3.1 The quality of the water that feeds into European sites is a major determinant of the habitats present, the species they support and their quality. Poor water quality can have a range of environmental impacts. Development adjacent or hydrologically connected to European sites has the potential to affect both the water quality and levels within European sites, which may result in significant effects on their features or supporting habitats for features. These impacts could be from pollution or contamination of habitats, for example where surface water or other water-based emissions (e.g. from sewage, or industrial processes in employment areas) are discharged into water courses or ground water. Developments also have the potential to affect water quantity either through localised lowering of the water table through excavations or through interrupting drainage pathways.

4.3.2 Measures to contain pollutants and avoid them entering the water courses have been set out in the OCEMP (Document ref 6.3 ES vol 2, 6.3.7) in particular Section 4.5. A minimum 5 m buffer will be maintained from all water courses. The hydrological regime has been considered in the OCEMP section 6.11, and water levels are maintained by the Internal Drainage Board. Therefore there is expected to be no adverse effect on the Wash SPA and Ramsar, and the Wash and North Norfolk Coast SAC through changes in water quality or to the hydrological regime.

4.4 Summary of Potential Impacts Within the Scope of this HRA

4.4.1 Potential impacts pathways arising from the Proposed Development are described in Table 3, below, and any likely significant effects arising from these potential pathways are discussed in further detail with relevance to the Proposed Development in Table 4.

Table 3: Summary of Potential Impacts Within the Scope of this HRA

POTENTIAL EFFECT ON NATIONAL NETWORK SITE	RATIONALE
Loss of habitat functionally linked to a National Network site (Ramsar/SPA/SAC).	The proposals include construction on land utilised by qualifying species of the SAC, as well as adjacent to habitats used by species listed on the SPA.
Changes to water quality and levels where a National Network site is hydrologically linked to the Project, as a result of construction / operational activities.	A change in water quality and levels are not expected to affect the Ramsar/SPA/SAC

Table 4: LSE Screening Summary Table

POTENTIAL EFFECT ON NATIONAL NETWORK SITE	IMPACT TYPE	
Loss of functionally linked habitat to a National Network site (habitat not included within the Ramsar/SPA/SAC but utilised by qualifying species).	*The Wash SPA and Ramsar* The proposals in the Order Limits show the development will cover mainly arable fields. Arable fields are suitable habitat for foraging and breeding wading and wildfowl species. Wintering bird surveys identified small numbers of wildfowl utilising the site with peak counts of pink-footed geese at 50, gadwall at 2, wigeon at 11, mallard at 10, teal at 32 and Lapwing at 452. Noise and visual disturbance generated during the construction phases of the Proposed Development will exceed the threshold of disturbance (70 dB) with some machinery reaching 116 dB at the source (see Noise and Vibration Chapter 10, document ref: 6.2 ES Vol 1, 6.2.10). However, the low numbers of qualifying species utilising the Proposed Development indicates it is unlikely to be functionally linked habitat. For gadwall; one of the two species where the project area supports over 1% of the SPA population, birds were only found on a reservoir used for fishing, on two of the four winter survey occasions, which will be retained in the Proposed Development. For lapwing, the other species where the project area supports over 1% of the SPA and Ramsar population, individuals were seen in significant numbers in a field 140 m east of the Order Limits and in the northwest of the grounds of a residential property outside the Order Limits in the north-eastern corner of the Site. Both these areas will be retained in the Proposed Development. There are also significant areas of suitable habitat for both these species surrounding the Solar Array Area.	**Screened in for further assessment**
	The Wash and North Norfolk Coast SAC *The construction of the proposed development will require some ditch crossings. Otter surveys found potential evidence along Heckington Eau and an otter was seen swimming along the South Forty Foot Drain. No other evidence (including breeding sites) was found. Both of these water courses will be crossed for the installation of the Cable Route using trenchless techniques such as Horizontal Directional Drilling (HDD), thus avoiding impacts on the water courses themselves and there are expected to be no significant impact on otters. Update pre-construction otter (walkover) surveys will be done on ditch crossings to determine if any impact will occur and if so, what mitigation is required.*	
Changes to water quality where a National Network site is hydrologically linked to	No works involved with installation and construction of the proposed development are anticipated to change the current levels of hydrology. The OCEMP (document ref: 6.3 ES vol 2, 6.3.7) includes measures to avoid pollution and run-off. The OCEMP considers dust, spillages, refuelling and appropriate	Screened out for further assessment

POTENTIAL EFFECT ON NATIONAL NETWORK SITE	IMPACT TYPE	
the Project, because of construction activities.	storage of materials and fuel. This will avoid adverse effects on the habitats of the Ramsar/SPA/SAC designations within The Wash and otters which use the SAC and waterways surrounding the order limits. There are no adverse impacts anticipated upon hydrology and water quality during operation and the proposed development will not result in the loss of any watercourses.	

5. APPROPRIATE ASSESSMENT

5.1.1 Table 4 above summarises the likely significant effects found during Stage 1.

5.1.2 The Proposed Development is described in Chapter 2 of the Environmental Statement (Document Ref 6.2 ES Vol 1, 6.2.2).

5.2 Loss of functionally linked habitat

5.2.1 The construction and decommissioning phases of the Proposed Development will involve works which potentially cause disturbance to species which are qualifying features of the SPA and SAC. This will include noise from plant as well as visual disturbance mainly caused by the presence of construction workers which animals may perceive as a threat. As a result, the species may stop using the land within or close to the Order Limits and there will be an effective loss of functionally linked habitats.

The Wash SPA and Ramsar -Overwintering gadwall and lapwing

5.2.2 The current overwintering population of gadwall is estimated as 31,000 (Frost *et al.* 2019), with the latest 5 year peak mean at the Wash being 176 (BTO 2025). The gadwall is listed on the Amber List of the most recent Birds of Conservation Concern (Stanbury *et al.* 2021).

5.2.3 The current overwintering population of lapwing is estimated as 620,000 with the latest 5 year peak mean at the Wash being 29,548 (BTO 2025). The lapwing is listed on the Red List of the most recent Birds of Conservation Concern (Stanbury *et al.* 2021).

5.2.4 As detailed in Table 2.1 and Section 2.14 of Chapter 2 of the Environmental Statement (Document Ref 6.2 ES Vol 1, 6.2.2) the installation of the solar panels in the Solar Array area will require piling and other works. This piling has been identified as generating up to 116 dB (see table 10.16 of the Noise and Vibration chapter of the Environmental Statement Document Ref 6.2 ES Vol 1, 6.2.10).

5.2.5 The Solar Array Area supports the equivalent of over 1% of the Wash SPA and Ramsar's gadwall and lapwing populations over winter. Operations above 70 dB are considered to cause a significant adverse disturbance response in birds (i.e. they move away from the area of noise) (Cutts *et al.* 2013). The presence of construction workers may also disturb birds, especially considering that they will be wearing high visibility clothing. No significant populations of other qualifying species of the SPA and Ramsar (either wintering or breeding birds) were found within the Order Limits.

5.2.6 To mitigate the impacts on wintering birds including gadwall and lapwing, and therefore the Wash SPA and Ramsar, where works are required in the vicinity of the reservoir and In the north-eastern corner of the Solar Array Area a 60 metre buffer where no construction works can occur will be in place over the winter months (November to February). The loudest plant used on site will reach 116 dB at the source (see Noise and Vibration Chapter 10, document ref: 6.2 ES Vol 1, 6.2.10). At 60m from the loudest plant the noise will fall

below 70 dB, which is quiet enough to avoid causing disturbance and there will therefore be no significant effect on the overwintering gadwall and lapwing.

5.2.7 Section 3.3. of the OCEMP (document ref 6.3 ES Vol 2, 6.3.7) sets out the requirement for an Environmental Induction 'toolbox talk' to include the contractors responsibility with regards to environmental issues. This will include the two 60m buffers where no construction works can occur between November and February.

5.2.8 With the mitigation measures set out above there is expected to be no adverse effect on overwintering gadwall and lapwing, and therefore the Wash SPA and Ramsar as a result of the Proposed Development.

The Wash and North Norfolk Coast SAC- Otter

5.2.9 Otters are rare but widespread in the UK. In the most recent otter survey by the Environment Agency (2010) the catchments covering the site (Witham and Old Bedford) had experienced significant expansion of otters since surveys started 1977-79 with over 40% of the sites surveyed having evidence of otters

5.2.10 As detailed in Table 2.1 and Section 2.11 of Chapter 2 of the Environmental Statement (Document Ref 6.2 ES Vol 1, 6.2.2) where ditch crossings are necessary they will mostly be done using open cut trenching methods.

5.2.11 Otters have been seen swimming along South Forty-Foot Drain, and possible evidence of their presence has been found on Heckington Eau. Open cut trenches in the banks could damage or destroy the breeding or resting places of otters if present, and the works disturb individuals. No resting or breeding place have been found to date.

5.2.12 Horizontal Directional Drilling methods will be adopted under Heckington Eau and the South Forty Foot Drain which will avoid impacts on otters. Section 6.7 of the OCEMP (document ref 6.3 ES Vol 2, 6.3.7) includes requirements for update surveys for protected species once the locations of crossings have been defined. These surveys will outline further mitigation including protected species licences if required.

5.2.13 With the mitigations measures set out above there is expected to be no adverse effect on otters, and therefore the Wash and North Norfolk Coast SAC as a result of the proposed development.

6. IN-COMBINATION EFFECTS

6.1.1 Details of plans and projects identified as likely to result in any in-combination effects to National Network sites are below in Table 5.

Table 5: Summary of plans and projects with the potential for in-combination effects

PLAN OR PROJECT	DESCRIPTION	POTENTIAL EFFECT ON RAMSAR/SPA/SAC AND HRA OUTCOME	POTENTIAL FOR IN-COMBINATION EFFECTS
Heckington Fen Solar Park (500MW) on Land to the east of Sidebar Lane.	Approximately 3.5km east of the Project Area at its closest point.	A HRA has been produced (Ecotricity, 2024). The HRA advises that Likely Significant Effects are possible relating to North Norfolk Coast and Wash SAC / The Wash SPA / The Wash Ramsar. This is due to silt laden run off and pollution entering the ditch network and loss of functionally linked land associated with qualifying winter wetland bird species.	Potential for in combination impacts regarding hydrological connection and loss of functionally linked land associated with qualifying winter wetland bird species. However, Likely Significant Effects (LSEs) associated with Heckington Fen Solar Park were taken forward to a Shadow Appropriate Assessment. Where the design of the Proposed Development, appropriate mitigating factors and other factors were taken into consideration, the potential adverse effects of the Proposed Development on the integrity of the North Norfolk Coast and Wash SAC, the Wash SPA, and the Wash Ramsar were ruled out by the Heckington Fen Solar Park project team. Additionally winter wetland bird species using land associated with Heckington Fen Solar Park differed from that using the Project Area. As such providing the appropriate design and mitigation is followed by both schemes, no in-combination impacts are expected.
Screening Opinion for solar farm on Land at Park Lane, Ewerby.	Approximately 1.7km west of the Project Area at its closest point.	None identified within screening reply. No HRA has been produced.	None as no effects have been identified in the screening opinion and no planning application has been submitted since this screening opinion (decision date August 2014).

PLAN OR PROJECT	DESCRIPTION	POTENTIAL EFFECT ON RAMSAR/SPA/SAC AND HRA OUTCOME	POTENTIAL FOR IN-COMBINATION EFFECTS
Proposed solar farm (32MW) on Land to the north of White Cross Lane.	Approximately 4.1km southwest of the Project Area at its closest point.	None identified as no HRA has been produced.	None have been identified; no wintering bird survey report was available and the Biodiversity Management Plan identifies lapwing as a constraint in the breeding season only. Due to the scale of this project and distance from the site, no significant in combination effects are anticipated.
Proposed solar farm (49.9MW) at Little Hale Fen.	Approximately 5.85km south of the Project Area at its closest point.	None identified as no HRA has been produced.	The wintering bird report identifies lapwing using the site infrequently over the winter months. Due to the scale of the project and distance between Little hale Fen and the Site (large areas of alternative habitat is available between) no significant in combination effects are anticipated.
Proposed solar farm (50MW) at Land West of Walcot.	Approximately 13.5km southwest of the Project Area at its closest point.	None identified as no HRA has been produced.	None identified due to distance from the Project Area and The Wash designations.
Triton Knoll Electrical System:	Adjacent to Project Area as it joins the electricity network at Bicker Fen National Grid Substation	HRA is no longer publicly available as the project has been completed, therefore no potential effects identified.	Excluded from consideration as likely cumulative impacts would only occur during the construction of the two projects. As the onshore component of Triton Knoll has been completed, with the infrastructure (cable) underground, there will be no overlap between the proposed development's construction and Triton Knoll's and therefore no opportunity for cumulative impact.
Outer Dowsing Offshore Wind (Generating Station)	Approximately 9.9 km southeast of the Project Area at its closest point.	A HRA has been produced (Outer Dowsing Offshore Wind 2024). This	No evidence of otters were found during surveys for the Outer Dowsing

PLAN OR PROJECT	DESCRIPTION	POTENTIAL EFFECT ON RAMSAR/SPA/SAC AND HRA OUTCOME	POTENTIAL FOR IN-COMBINATION EFFECTS
		identified impacts to the habitats on the Wash SPA and Ramsar from: Physical habitat loss/disturbance Suspended sediment/deposition; Indirect Pollution; Accidental Pollution; INNS; and Changes to physical processes It also identified impacts to qualifying bird species of the SPA and Ramsar from: Barrier effects for migratory waterbirds; Collisions for migratory waterbirds; Loss of foraging, roosting, and nesting habitat within the site and surrounding area; Disturbance of birds within and outside the SPA; and Pollution from site run-off affecting habitat quality It identified effects to a Wash and North Norfolk Coast SAC qualifying species harbour seal *Phoca vitulina* through: Underwater noise; Vessel disturbance; Changes to prey; and Collision risk	Offshore Wind (Generating Station) project so there is unlikely to be a cumulative impact on this qualifying species of the Wash and North Norfolk Coast SAC. Impacts were identified on non-breeding (wintering) birds as a result of the onshore works of the Outer Dowsing project. Therefore, as construction of Outer Dowsing and the Proposed Development could occur at the same time, there is potential for cumulative impacts through overlapping disturbance. The Outer Dowsing Offshore Wind (Generating Station) project identified mitigation including avoiding work around sensitive areas over winter, use of an Ecological Clerk of Works for local impacts and a pink-footed goose management plan. With this mitigation and the mitigation proposed for the Proposed Development, no cumulative impacts are expected.
Lincolnshire Reservoir:	Approximately 3.5 km southeast of the Project Area at its closest point.	None identified as no HRA has been produced yet.	Excluded from consideration as likely cumulative impacts would only occur during the construction of the two projects. It is anticipated the

PLAN OR PROJECT	DESCRIPTION	POTENTIAL EFFECT ON RAMSAR/SPA/SAC AND HRA OUTCOME	POTENTIAL FOR IN-COMBINATION EFFECTS
			Lincolnshire Reservoir (which is currently due for submission for a Development Consent Order late 2028/29) will be constructed after the Proposed Development is completed (construction due to take place from 2027 for between 2.5 to 5 years) and, therefore, there will be no opportunity for cumulative impacts.
Springwell Solar Farm	Approximately 11.0 km northwest of the Project Area at its closest point.	A HRA has been produced (Springwell Energyfarm Ltd. 2024) this identified no likely significant effects would occur as a result of the project.	No qualifying species of either the Wash and North Norfolk Coast SAC or the Wash SPA and Ramsar were recorded on Springwell Solar Farm. Therefore, no cumulative impacts with the Proposed Development are anticipated
Boston Alternative Energy Source	Approximately 11.3 km east of the Project Area at its closest point.	A HRA has been produced (Alternative Use Boston Projects Ltd. 2023). This identified impacts to the qualifying bird species and habitats on the Wash SPA and Ramsar from: Disturbance; Vessel disturbance and Habitat loss It identified effects to the Wash and North Norfolk Coast SAC qualifying species and habitats though: Disturbance of harbour seal; Increased collision risk to harbour seal; and	The Habitats Regulation Assessment identified disturbance and habitat loss of waterbirds as a result of the Boston Alternative Energy Source project, including Lapwing and Gadwall, which could have a cumulative impact with the Proposed Development. Although the Boston Alternative Energy Source DCO has been granted consent (June 2023, and construction should not occur at the same time as the Proposed Development, there is potential for some overlap and hence cumulative impacts on waterbirds. *However, the birds affected by the Boston Alternative Energy Source (BAES) are wading birds. Given that*

PLAN OR PROJECT	DESCRIPTION	POTENTIAL EFFECT ON RAMSAR/SPA/SAC AND HRA OUTCOME	POTENTIAL FOR IN-COMBINATION EFFECTS
		Changes to air quality during operation resulting in potential deposition of pollutants on habitats.	*mitigation is in place for the wading birds impacted at BAES, no cumulative impacts are expected...*
Temple Oaks Renewable Energy Park	Approximately 14.5 km south-west of the Project Area at its closest point.	None identified as no HRA has been produced.	The Temple Oaks site lies approximately 28 km from the Wash and North Norfolk Coast and the Wash SPA and Ramsar. No information is available yet on the results of the baseline ecological surveys (including for qualifying species of the SAC, SPA and Ramsar). However, owing to the distance between these designated sites and the proposed Temple Oaks Renewable Energy Park, it is unlikely there will be functionally linked land at Temple Oaks. Therefore, there is expected to be no cumulative impacts.

7. CONCLUSION

7.1.1 The Proposed Development has been assessed as having a Likely Significant Effect upon National Network sites (Ramsar/SPA/SAC). This is due to loss of functionally linked habitats. As such and Appropriate Assessment has been undertaken as part of this HRA

7.1.2 Within the Appropriate Assessment mitigation measures outlined in the OCEMP (document ref 6.3 ES Vol 2, 6.3.7) to avoid these adverse effects have been taken into account. It is therefore considered that the Proposed Development will have no adverse effects on the Wash SPA and Rasmar or the Wash and North Norfolk Coast SAC or the qualifying features of these designated sites.

7.1.3 No in-combination effects are anticipated.

8. REFERENCES

- AECOM (2022) Bicker Fen Solar Farm: Preliminary Ecological Appraisal
- AECOM (2023a) Bicker Fen Solar Farm: Wintering Bird Report
- AECOM (2023b) Bicker Fen Solar Farm: Riparian Mammal Survey Report
- British Trust for Ornithology (2025) Wetland Bird Survey Data https://app.bto.org/webs-reporting/numbers.jsp [accessed 21st January 2025].
- Central Lincolnshire Local Plan Adopted April 2023) https://www.n-kesteven.gov.uk/central-lincolnshire/planning-policy-library [accessed 21st January 2025].
- Cutts, N., Hemingway, K., and Spencer, J. (2013) Waterbird Disturbance Mitigation Toolkit Informing Estuarine Planning & Construction Projects Institute of Estuarine & Coastal Studies (IECS) University of Hull https://tide-toolbox.eu/tidetools/waterbird_disturbance_mitigation_toolkit/ [accessed 24th March 2025]
- Environment Agency (2010). Fifth otter Survey of England 2009-2010: Technical Report. Environment Agency. Peterborough.
- Frost, T., Austin, G., Hearn, R., McAvoy, S., Robinson, A., Stroud, D, Woodward, I. & Wotton, S. (2019) Population Estimates of Wintering Waterbirds in Great Britain. British Birds 112: 130-145
- Heckington Fen Energy Park Project Team (Ecotricity) (2024) Shadow HRA to Inform Appropriate Assessment
- Planning Inspectorate (2024) Guidance: Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments. https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-habitats-regulations-assessments [accessed 18th March 2025]
- Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747
- Sustainability Appraisal Report for the Central Lincolnshire Local Plan (as adopted) (April 2023) Non-Technical Summary https://www.n-kesteven.gov.uk/central-lincolnshire/adopted-local-plan-2023 [accessed 21st January 2025].
- Wardell Armstrong (2025a) Beacon Fen Energy Park: Preliminary Ecological Appraisal
- Wardell Armstrong (2025b) Beacon Fen Energy Park: Wintering Bird Report
- Wardell Armstrong (2025c) Beacon Fen Energy Park: Riparian Mammal Survey Report
- Wardell Armstrong (2025d) Beacon Fen Energy Park: Environmental Statement. Chapter 7 – Ecology

BFEP Appendices

Appendix 1 Minutes of meeting with Natural England 29th August 2024

Notes of Meeting

CLIENT: Low carbon	PROJECT: Beacon Fen Energy park	JOB NO.: ST19595	PAGE …1…… OF ……1……
MEETING: With Natural England (NE) to discuss Habitat Regulations Assessment and GCN Licencing, as part of the Discretionary Advice Service (DAS)	PRESENT: Megan Bromiley (NE), Robbie Clairey (NE), Katrina Salmon (WA) Tim Bradford (WA)	NOTES BY: TB	DATE: 29/08/24

ITEM:	NOTES:	ACTION / STATUS:
1	**Confirming inclusion of wintering birds in HRA** Gadwall is a species of bird for which the Wash SPA has been designated. Two individuals were found on one occasion during the wintering bird surveys slightly over 1% of the Wash SPA population. Confirmed that the latest 5 year mean at the SPA is the relevant number to relate the population recorded on site to. NE confirmed that the level of detail required would depend on the likely impact.	Include wintering birds in the HRA
2	**Requirements for GCN licence 'Letter of No impediment' (LONI)** Discussed timing of production of a draft licence: NE would prefer draft licence application at the time of the ES submission, although it can go in later this is likely to lead to more uncertainty and questioning around the written representation stage. Reviewed if using licence policy 1 (i.e. limited translocation in favour of greater habitat creation) was feasible. They agreed this was possible subject to the mitigation proposed. Discussed the level of survey effort and that the GCN had come up last minute. NE would prefer full assessment although eDNA results would suffice for the draft licence.	WA to write proposal for draft licence and full surveys
	AOB NE happy to review HRA when ready as part of the DAS	NE to produce contract and ceiling fee for DAS and provide to Low Carbon

Appendix 2 Citations for designated sites

STANDARD DATA FORM for sites within the ‘UK national site network of European sites’

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the SPA homepage and SAC homepage on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

https://jncc.gov.uk/

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE **UK0017075**

SITENAME **The Wash and North Norfolk Coast**

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1. SITE IDENTIFICATION

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1.1 Type	1.2 Site code
B	UK0017075

1.3 Site name

The Wash and North Norfolk Coast

1.4 First Compilation date	1.5 Update date
1996-10	2015-12

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee

Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY

Email:

Date site proposed as SCI:	1996-10
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2005-04
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

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2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
0.318055556	52.93694444

2.2 Area [ha]:

107718.0

2.3 Marine area [%]

94.3

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKH1	East Anglia
UKF3	Lincolnshire

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

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3.1 Habitat types present on the site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A|B|C|D	A|B|C		
						Representativity	Relative Surface	Conservation	Global
1110			44164.38	0	M	A	B	B	A
1140			18312.06	0	M	A	B	A	A
1150	X		21.54	0	G	C	C	B	C
1160			42010.02	0	M	A	B	B	A
1170				0		A	C	A	A
1310			430.87	0	P	A	A	A	A
1320				0		D			
1330			2800.67	0	P	A	B	A	A

1420			107.72	0	P	A	A	A	A

- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
M	1364	Halichoerus grypus			p				P	DD	D			
M	1355	Lutra lutra			p				V	DD	C	C	C	C
M	1365	Phoca vitulina			p	1001	10000	i		M	B	B	C	A

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover
N01	51.0
N02	46.0
N03	3.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: sandstone,sand,nutrient-rich,alluvium,mud,clay,shingle 2 Terrestrial: Geomorphology and landscape: coastal 3 Marine: Geology: limestone/chalk,gravel,sand,chert/flint,mud,biogenic reef,peat,shingle 4 Marine:

Geomorphology: barrier beach,enclosed coast (including embayment),estuary,subtidal sediments (including sandbank/mudbank),lagoon,intertidal sediments (including sandflat/mudflat),open coast (including bay),shingle bar

4.2 Quality and importance

Sandbanks which are slightly covered by sea water all the time for which this is considered to be one of the best areas in the United Kingdom. Mudflats and sandflats not covered by seawater at low tide for which this is considered to be one of the best areas in the United Kingdom. Coastal lagoons for which the area is considered to support a significant presence. Large shallow inlets and bays for which this is considered to be one of the best areas in the United Kingdom. Reefs for which this is considered to be one of the best areas in the United Kingdom. Salicornia and other annuals colonising mud and sand for which this is considered to be one of the best areas in the United Kingdom. Atlantic salt meadows (Glauco-Puccinellietalia maritimae) for which this is considered to be one of the best areas in the United Kingdom. Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi) for which this is one of only four known outstanding localities in the United Kingdom. which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares. Lutra lutra for which the area is considered to support a significant presence. Phoca vitulina for which this is considered to be one of the best areas in the United Kingdom.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	M01		B
H	F02		I
H	G01		I
H	A02		I
H	J02		B

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	A04		I
H	A02		I
H	D05		I
H	D05		I
H	G03		I

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,
T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): http://publications.naturalengland.org.uk/category/6490068894089216

http://publications.naturalengland.org.uk/category/3212324
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	61.4	UK01	2.8	UK00	38.7

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [ ] Yes
- [ ] No, but in preparation
- [X] No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the official European Union guidelines for the Standard Data Form (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha• rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
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21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
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7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
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7230	Alkaline fens	57
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8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representatively	57
B	Good representatively	57
C	Significant representatively	57
D	Non-significant presence representatively	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

STANDARD DATA FORM for sites within the ‘UK national site network of European sites’

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 (2011/484/EU).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the SPA homepage and SAC homepage on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

https://jncc.gov.uk/

NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE **UK9008021**

SITENAME **The Wash**

TABLE OF CONTENTS

1. SITE IDENTIFICATION

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1.1 Type	1.2 Site code
A	UK9008021

1.3 Site name

The Wash

1.4 First Compilation date	1.5 Update date
1988-03	2015-12

1.6 Respondent:

Name/Organisation:	Joint Nature Conservation Committee
Address:	Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:	

1.7 Site indication and designation / classification dates

Date site classified as SPA:	1988-03
National legal reference of SPA designation	Regulations 12A and 13-15 of the Conservation Habitats and Species Regulations 2010, (http://www.legislation.gov.uk/uksi/2010/490/contents/made) as amended by The Conservation of Habitats and Species (Amendment) Regulations 2011 (http://www.legislation.gov.uk/uksi/2011/625/contents/made).

2. SITE LOCATION

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2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
0.286666667	52.93777778

2.2 Area [ha]:

62044.14

2.3 Marine area [%]

90.9

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKF3	Lincolnshire
UKH1	East Anglia
UKZZ	Extra-Regio

2.6 Biogeographical Region(s)

Atlantic (100.0 %)

3. ECOLOGICAL INFORMATION

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3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment		
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C	
						Min	Max				Pop.	Con.	Iso.
B	A054	Anas acuta			w	923	923	i		G	B		C
B	A050	Anas penelope			w	3241	3241	i		G	C		C
B	A051	Anas strepera			w	71	71	i		G	C		C
B	A040	Anser brachyrhynchus			w	33265	33265	i		G	A		B
B	A169	Arenaria interpres			w	717	717	i		G	C		C
B	A675	Branta bernicla bernicla			w	22248	22248	i		G	A		C
B	A067	Bucephala clangula			w	114	114	i		G	C		C
B	A144	Calidris alba			w	355	355	i		G	C		C
B	A672	Calidris alpina alpina			w	35620	35620	i		G	B		C

B	A143	Calidris canutus			w	186892	186892	i		G	A		C
B	A037	Cygnus columbianus bewickii			w	68	68	i		G	C		C
B	A130	Haematopus ostralegus			w	25651	25651	i		G	B		C
B	A157	Limosa lapponica			w	11250	11250	i		G	A		C
B	A616	Limosa limosa islandica			w	859	859	i		G	B		C
B	A065	Melanitta nigra			w	68	68	i		G	C		C
B	A160	Numenius arquata			w	3835	3835	i		G	B		C
B	A141	Pluvialis squatarola			w	9708	9708	i		G	A		C
B	A195	Sterna albifrons			r	33	33	p		G	C		C
B	A193	Sterna hirundo			r	152	152	p		G	C		C
B	A048	Tadorna tadorna			w	15981	15981	i		G	A		C
B	A162	Tringa totanus			w	2953	2953	i		G	B		C

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

3.3 Other important species of flora and fauna (optional)

Species					Population in the site				Motivation					
Group	CODE	Scientific Name	S	NP	Size		Unit	Cat.	Species Annex		Other categories			
					Min	Max		C|R|V|P	IV	V	A	B	C	D
B	WATR	Waterbird assemblage			400367	400367	i						X	

- **Group:** A = Amphibians, B = Birds, F = Fish, Fu = Fungi, I = Invertebrates, L = Lichens, M = Mammals, P = Plants, R = Reptiles
- **CODE:** for Birds, Annex IV and V species the code as provided in the reference portal should be used in addition to the scientific name
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Unit:** i = individuals, p = pairs or other units according to the standard list of population units and codes in accordance with Article 12 and 17 reporting, (see reference portal)

- **Cat.:** Abundance categories: C = common, R = rare, V = very rare, P = present
- **Motivation categories: IV, V:** Annex Species (Habitats Directive), **A:** National Red List data; **B:** Endemics; **C:** International Conventions; **D:** other reasons

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover
N03	6.0
N01	55.0
N02	39.0
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: sedimentary,sand,shingle,mud,neutral,clay 2 Terrestrial: Geomorphology and landscape: lowland,coastal 3 Marine: Geology: mud,sand,sedimentary 4 Marine: Geomorphology: estuary,subtidal sediments (including sandbank/mudbank),enclosed coast (including embayment),intertidal sediments (including sandflat/mudflat)

4.2 Quality and importance

ARTICLE 4.1 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: Sterna albifrons (Eastern Atlantic - breeding) at least 1.4% of the GB breeding population 5 year mean, 1992-1996 Sterna hirundo (Northern/Eastern Europe - breeding) 1.2% of the GB breeding population Count, as at 1993 Over winter the area regularly supports: Cygnus columbianus bewickii (Western Siberia/North-eastern & North-western Europe) 0.9% of the GB population 5 year peak mean 1991/92-1995/96 Limosa lapponica (Western Palearctic - wintering) 21.4% of the GB population 5 year peak mean 1991/92-1995/96 ARTICLE 4.2 QUALIFICATION (79/409/EEC) Over winter the area regularly supports: Anas acuta (North-western Europe) 1.5% of the population 5 year peak mean 1991/92-1995/96 Anas penelope (Western Siberia/North-western/North-eastern Europe) 1.2% of the population in Great Britain 5 year peak mean 1991/92-1995/96 Anas strepera (North-western Europe) 0.9% of the population in Great Britain 5 year peak mean 1991/92-1995/96 Anser brachyrhynchus (Eastern Greenland/Iceland/UK) 14.8% of the population 5 year peak mean 1991/92-1995/96 Arenaria interpres (Western Palearctic - wintering) 1.1% of the population 5 year peak mean 1991/92-1995/96 Branta bernicla bernicla (Western Siberia/Western Europe) 7.4% of the population 5 year peak mean 1991/92-1995/96 Bucephala clangula (North-western/Central Europe) 0.7% of the population in Great Britain 5 year peak mean 1991/92-1995/96 Calidris alba (Eastern Atlantic/Western & Southern Africa - wintering) 0.3% of the population 5 year peak mean 1991/92-1995/96 Calidris alpina alpina (Northern Siberia/Europe/Western Africa) 2.6% of the population 5 year peak mean 1991/92-1995/96 Calidris canutus (North-eastern Canada/Greenland/Iceland/North-western Europe) 54.2% of the population 5 year peak mean 1991/92-1995/96 Haematopus ostralegus (Europe & Northern/Western Africa) 2.9% of the population 5 year peak mean 1991/92-1995/96 Limosa limosa islandica (Iceland - breeding) 11.6% of the population in Great Britain 5 year peak mean 1991/92-1995/96 Melanitta nigra (Western Siberia/Western & Northern Europe/North-western Africa) 0.2% of the population in Great Britain 5 year peak mean 1991/92-1995/96 Numenius arquata (Europe - breeding) 1.1% of the population 5 year peak mean 1991/92-1995/96 Pluvialis squatarola (Eastern Atlantic - wintering) 5.8% of the population 5 year peak mean 1991/92-1995/96 Tadorna tadorna (North-western Europe) 5.3% of the population 5 year peak mean 1991/92-1995/96 Tringa totanus (Eastern Atlantic - wintering) 1.7% of the population 5 year peak mean 1991/92-1995/96 ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS Over winter the area regularly supports: 400367 waterfowl (5 year peak mean 1991/92-1995/96) Including: Cygnus columbianus bewickii , Anser brachyrhynchus , Branta bernicla bernicla , Tadorna tadorna , Anas penelope , Anas strepera , Anas acuta , Melanitta nigra , Bucephala clangula , Haematopus ostralegus , Pluvialis squatarola , Calidris canutus , Calidris alba , Calidris alpina alpina , Limosa limosa islandica , Limosa lapponica , Numenius arquata , Tringa totanus , Arenaria interpres

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts	Positive Impacts

Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	J02		B
H	I01		B
H	A02		I
H	G01		I

Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	A02		I
H	A04		I
H	D05		I
H	D05		I
H	G03		I

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification, T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): http://publications.naturalengland.org.uk/category/6490068894089216

http://publications.naturalengland.org.uk/category/3212324
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0	UK01	13.5		

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [ ] Yes
- [ ] No, but in preparation
- [X] No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the official European Union guidelines for the Standard Data Form (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippopha• rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representatively	57
B	Good representatively	57
C	Significant representatively	57
D	Non-significant presence representatively	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic ressources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67

Information Sheet on Ramsar Wetlands (RIS)

1. Name and address of the compiler of this form:

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

Joint Nature Conservation Committee
Monkstone House
City Road
Peterborough
Cambridgeshire PE1 1JY
UK
Telephone/Fax: [redacted]8
Email:

2. Date this sheet was completed/updated:
Designated: 30 March 1988 / Updated: May 2005

3. Country:
UK (England)

4. Name of the Ramsar site:
The Wash

5. Map of site included:

a) hard copy (required for inclusion of site in the Ramsar List): *yes* -or- *no*

b) digital (electronic) format (optional): Yes

6. Geographical coordinates (latitude/longitude)**:**
52º 56’ 16’’ N 00º 17’ 12’’ E

7. General location:
Nearest town/city: King's Lynn

The Wash is located on the east coast of England between the coastal towns of Hunstanton in north Norfolk and Skegness in Lincolnshire.

Administrative region: Lincolnshire; Norfolk

8. Elevation (average and/or max. & min.) (metres)**:** **9. Area** (hectares)**:** 62,212
Min. No information available
Max. No information available
Mean No information available

10. Overview:
The Wash is the largest estuarine system in Britain. It is fed by the rivers Witham, Welland, Nene and Great Ouse. There are extensive saltmarshes, intertidal banks of sand and mud, shallow waters and deep channels. It is the most important staging post and over-wintering site for migrant wildfowl and wading birds in eastern England. It supports a valuable commercial fishery for shellfish and also an important nursery area for flatfish. It holds one of the North Sea's largest breeding populations of common seal *Phoca vitulina* and some grey seals *Halichoerus grypus*. The sublittoral area supports a number of different marine communities including colonies of the reef-building polychaete worm *Sabellaria spinulosa*.

11. Ramsar Criteria:

1, 3, 5, 6

Secretariat Comment: The RIS provides information requiring the application of Criterion 4. This need to be included in the next update.

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12. Justification for the application of each Criterion listed in 11. above:

Ramsar criterion 1

The Wash is a large shallow bay comprising very extensive saltmarshes, major intertidal banks of sand and mud, shallow water and deep channels. It is the largest estuarine system in Britain.

Ramsar criterion 3

Qualifies because of the inter-relationship between its various components including saltmarshes, intertidal sand and mud flats and the estuarine waters. The saltmarshes and the plankton in the estuarine water provide a primary source of organic material which, together with other organic matter, forms the basis for the high productivity of the estuary.

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

292,541 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6

Species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species with peak counts in spring/autumn:

Common redshank , *Tringa totanus totanus*,	6,373 individuals, representing an average of 2.5% of the population (5 year peak mean 1998/9-2002/3)
Eurasian curlew , *Numenius arquata arquata*, N. a. arquata Europe (breeding)	9,438 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
Eurasian oystercatcher , *Haematopus ostralegus ostralegus*, Europe & NW Africa -wintering	15,616 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/9-2002/3)
Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa -wintering	13,129 individuals, representing an average of 5.2% of the population (5 year peak mean 1998/9-2002/3 - spring peak)
Red knot , *Calidris canutus islandica*, W & Southern Africa (wintering)	68,987 individuals, representing an average of 15.3% of the population (5 year peak mean 1998/9-2002/3)
Sanderling , *Calidris alba*, Eastern Atlantic	3,505 individuals, representing an average of 2.9% of the population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Black-headed gull , *Larus ridibundus*, N & C Europe	31,403 individuals, representing an average of 1.57% of the population (5 year peak mean 1998/9-2002/3)
Common eider , *Somateria mollissima mollissima*, NW Europe	1109 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/9-2002/3)
Bar-tailed godwit , *Limosa lapponica lapponica*, W Palearctic	16,546 individuals, representing an average of 13.7% of the population (5 year peak mean 1998/9-2002/3)
Common shelduck , *Tadorna tadorna*, NW Europe	9,746 individuals, representing an average of 3.2% of the population (5 year peak mean 1998/9-2002/3)
Dark-bellied brent goose, *Branta bernicla bernicla*,	20,861 individuals, representing an average of 10.4% of the population (5 year peak mean 1998/9-2002/3)
Dunlin , *Calidris alpina alpina*, W Siberia/W Europe	36,600 individuals, representing an average of 2.7% of the population (5 year peak mean 1998/9-2002/3)
Pink-footed goose , *Anser brachyrhynchus*, Greenland, Iceland/UK	29,099 individuals, representing an average of 10.7% of the population (5 year peak mean 1998/9-2002/3)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in spring/autumn:

Black-tailed godwit , *Limosa limosa islandica*, Iceland/W Europe	6,849 individuals, representing an average of 14.5% of the population (5 year peak mean 1998/9-2002/3)
Ringed plover , *Charadrius hiaticula*, Europe/Northwest Africa	1,500 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

European golden plover , *Pluvialis apricaria altifrons* Iceland & Faroes/E Atlantic	22,033 individuals, representing an average of 2.3% of the population (5 year peak mean 1998/9-2002/3)
Northern lapwing , *Vanellus vanellus*, Europe - breeding	46,422 individuals, representing an average of 2.3% of the population (5 year peak mean 1998/9-2002/3)

More contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey Alerts report, which is updated annually. See http://www.bto.org/survey/webs/webs-alerts-index.htm.

13. Biogeography:

a) biogeographic region:
Atlantic

b) biogeographic regionalisation scheme (include reference citation):
Council Directive 92/43/EEC

14. Physical features of the site:

Soil & geology	cobble, gravel, biogenic reef, neutral, shingle, sand, mud, clay, nutrient-rich, sedimentary, limestone

Geomorphology and landscape	lowland, coastal, shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), enclosed coast (including embayment), estuary, lagoon
Nutrient status	eutrophic
pH	circumneutral
Salinity	saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Marham, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/marham.html) Max. daily temperature: 13.8° C Min. daily temperature: 5.7° C Days of air frost: 51.9 Rainfall: 621.3 mm Hrs. of sunshine: 1536.6

General description of the Physical Features:

No information available

15. Physical features of the catchment area:

No information available

16. Hydrological values:

No special values known

17. Wetland types

Marine/coastal wetland

Code	Name	% Area
J	Coastal brackish / saline lagoons	0.03
A	Shallow marine waters	51.7
E	Sand / shingle shores (including dune systems)	0.03
G	Tidal flats	41
H	Salt marshes	7.2

18. General ecological features:

The intertidal flats of the Wash form one of the largest intertidal areas in Britain and these are predominantly sandy. The flats support high concentrations of marine worms and shellfish. There is an abundant growth of algae and high concentrations of marine invertebrates which provides a food source up to 300,000 wintering wildfowl and supports an important fishery and seal colony. Extensive saltmarshes fringe the bay but much of the older and botanically more diverse saltmarsh has been lost due to a long history of land-claim. Higher level marshes are characterised by *Elytrigia atherica, Atriplex portulacoides, Suaeda maritima* and *Limonium vulgare*. Where the saltmarsh has been grazed by cattle and wildfowl, there may be extensive lawns of *Puccinellia* spp. Abundant *Aster tripolium* occurs at lower levels whilst *Salicornia* spp. and *Spartina anglica* are the principal colonising species.

19. Noteworthy flora:

Nationally important species occurring on the site.

Higher plants.

Salicornia spp.

20. Noteworthy fauna:

Birds

Species currently occurring at levels of national importance:

Species regularly supported during the breeding season:

Common tern , *Sterna hirundo hirundo*, N & E Europe	152 pairs, representing an average of 1.4% of the GB population (Count as at 1993)
Lesser black-backed gull , *Larus fuscus graellsii*, W Europe/Mediterranean/W Africa	1378 apparently occupied nests, representing an average of 1.2% of the GB population (Seabird 2000 Census)
Little tern , *Sterna albifrons albifrons*, W Europe	33 pairs, representing an average of 1.6% of the GB population (5 year mean 1992-1996)

Species with peak counts in spring/autumn:

Common greenshank , *Tringa nebularia*, Europe/W Africa	376 individuals, representing an average of 62.9% of the GB population (5 year peak mean 1998/9-2002/3)
Great cormorant , *Phalacrocorax carbo carbo*, NW Europe	367 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)
Lesser black-backed gull , *Larus fuscus graellsii*,	1993 individuals, representing an average of 3.2% of the GB population (5 year peak mean 1998/9-2002/3)
Pied avocet , *Recurvirostra avosetta*, Europe/Northwest Africa	422 individuals, representing an average of 12.4% of the GB population (5 year peak mean 1998/9-2002/3)
Ruff , *Philomachus pugnax*, Europe/W Africa	25 individuals, representing an average of 3.5% of the GB population (5 year peak mean 1998/9-2002/3)
Whimbrel , *Numenius phaeopus*, Europe/Western Africa	191 individuals, representing an average of 6.3% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Bean goose , *Anser fabalis fabalis*, NW Europe - wintering	7 individuals, representing an average of 1.7% of the GB population (Source period not collated)
Black (common) scoter , *Melanitta nigra nigra*,	1190 individuals, representing an average of 2.3% of the GB population (5 year peak mean 1998/9-2002/3)
Black-headed gull , *Larus ridibundus*, N & C Europe	31,403 individuals, representing an average of 1.57% of the population (5 year peak mean 1998/9-2002/3)
Common eider , *Somateria mollissima mollissima*, NW Europe	1109 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/9-2002/3)
Greater white-fronted goose , *Anser albifrons albifrons*, NW Europe	100 individuals, representing an average of 1.7% of the GB population (Source period not collated)
Red-throated diver , *Gavia stellata*, NW Europe	55 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , *Tringa erythropus*, Europe/W Africa	54 individuals, representing an average of 39.7% of the GB population (5 year peak mean 1998/9-2002/3)

Species Information

Species occurring at levels of international importance.

Mammals.
Phoca vitulina

21. Social and cultural values:

Current scientific research
Fisheries production
Livestock grazing
Non-consumptive recreation
Sport hunting
Transportation/navigation

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Non-governmental organisation	+	+
Local authority, municipality etc.	+	+
National/Crown estate	+	+
Private	+	+
Public/communal	+	+
Other	+	+

23. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	
Recreation	+	
Research	+	
Fishing: (unspecified)	+	
Fishing: commercial	+	+
Marine/saltwater aquaculture	+	
Gathering of shellfish	+	
Bait collection	+	
Arable agriculture (unspecified)		+
Permanent arable agriculture		+
Grazing (unspecified)	+	
Rough or shifting grazing	+	
Hunting: recreational/sport	+	+
Harbour/port	+	+
Flood control	+	+
Irrigation (inc agricultural water supply)		+
Transport route	+	
Domestic water supply		+
Urban development		+
Non-urbanised settlements		+
Military activities	+	

24. Factors adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. *Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.*
2. *Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.*

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
No factors reported	NA	(Potential: grazing, port, transport route, military activities)			

For category 2 factors only. What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?
Is the site subject to adverse ecological change? NO

25. Conservation measures taken:

Conservation measure	On-site	Off-site
SSSI / ASSI	+	
NNR	+	
SPA	+	
Land owned by a NGO for nature conservation	+	
Management agreement	+	
Site management statement/plan implemented	+	
Other	+	+
SAC	+	

26. Conservation measures proposed but not yet implemented:

No information available

27. Current scientific research and facilities:

Fauna.

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.
Bird Studies by the Wash Wader Ringing Group.
Waterfowl and invertebrate ecology studies by the Centre for Ecology and Hydrology.
Seal population studies by the Sea Mammal Research Unit.

Annual monitoring of shellfish stocks by Eastern Sea Fisheries Joint Committee.

Environment.
Sediment types and distribution, processes, erosion, tides and currents have been studied by a variety of institutions and are expected to continue.
The shoreline and water quality is routinely monitored by the Environment Agency.
Land-Ocean Interaction Study by the Natural Environment Research Council (1992-98).

28. Current conservation education:
There are two field centres. Lincolnshire County Council run the Freiston field centre and Lincolnshire Wildlife Trust run the Gibraltar Point Field Station.

29. Current recreation and tourism:

Activities, Facilities provided and Seasonality.
Land based recreation is chiefly limited to wildfowling, bird watching and walking along the sea banks around two-thirds of the site. The Peter Scott Walk between the outlets of the Rivers Nene and Great Ouse, has been promoted by the local authorities. Some access points to the shore have also been improved by local authorities. Snettisham Bird Reserve provides facilities for bird watching. Traditional beach recreational activities occur between Hunstanton and Snettisham.

Facilities for pleasure craft are limited to some mud berths and stage moorings on the tidal rivers and at the ports of Kings Lynn and Boston. The principal locations for sailing boats are found at the Skegness Yacht Club at Wainfleet and Snettisham Beach Sailing Club and Hunstanton.

Other water sports including windsurfing, water-skiing and power boats occur mainly at Hunstanton and Heacham on the Norfolk shore. Zoning of watercraft is managed by the local authority. Recreational activities are subject to the Wash Estuary Management Plan but are not generally seen as detrimental to the site.

30. Jurisdiction:
Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

31. Management authority:
Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

32. Bibliographical references:

Site-relevant references

Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP & Davidson, NC (eds.) (1995) *Coasts and seas of the United Kingdom. Region 6 Eastern England: Flamborough Head to Great Yarmouth*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)

Brown, AF, Grice, PV, Radley, GP, Leafe, RN & Lambley, P (1994) Towards a strategy for the conservation of coastal habitats in north Norfolk. A discussion paper. *English Nature Research Reports*, No. **74**

Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 5. Eastern England*. Joint Nature Conservation Committee, Peterborough

Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes*. Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)

Covey, R (1998) Chapter 6. Eastern England (Bridlington to Folkestone) (MNCR Sector 6). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 179-198. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)

Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995–96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge

Davidson, NC, Laffoley, D d'A, Doody, JP, Way, LS, Gordon, J, Key, R, Pienkowski, MW, Mitchell, R & Duff, KL (1991) *Nature conservation and estuaries in Great Britain*. Nature Conservancy Council, Peterborough

Dipper, F (2003) The Lincolnshire and North Norfolk maritime area: a review of the past and present status of its species and habitats. *English Nature Research Reports*, No. **542**. www.english-nature.org.uk/pubs/publication/PDF/542.pdf

Doody, P & Barnett, B (eds.) (1987) *The Wash and its environment. Report of a conference held on 8–10 April 1987*. Nature Conservancy Council, Peterborough (Research and survey in nature conservation, No. 7)

Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough

Foster-Smith, RL & Sotheran, I (1999) Broad scale remote survey and mapping of sublittoral habitats and biota of the Wash and the Lincolnshire and the north Norfolk coasts. *English Nature Research Reports*, No. **336**

Foster-Smith, RL, Sotheran, I & Walton, R (1997) Broadscale mapping of habitats and biota of the sublittoral seabed of the Wash: final report of the 1996 Broadscale Mapping Project (BMP) survey. *English Nature Research Reports*, No. **238**

Foster-Smith, RL & White, WH (2004); Foster-Smith, RL (2004); Foster-Smith, RL & Hendrick, VJ (2004) *Sabellaria spinulosa* in the Wash and North Norfolk Coast cSAC and its approaches: Parts I–III. *English Nature Research Reports*, Nos. **543**, **544**, **545**

Gibbons, B (1996) Reserve focus. Gibraltar Point NNR, Lincolnshire. *British Wildlife*, **7**(3), 177-179

Goss-Custard, JD, Jones, RE & Newbury, PE (1977) The ecology of the Wash I. Distribution and diet of wading birds (Charadii). *Journal of Applied Ecology*. **14**, 681-687

Hill, M (1988) *Saltmarsh vegetation of the Wash. An assessment of change from 1971 to 1985*. Nature Conservancy Council, Peterborough (Research and survey in nature conservation, No. 13)

May, VJ & Hansom, JD (eds.) (2003) *Coastal geomorphology of Great Britain*. Joint Nature Conservation Committee, Peterborough (Geological Conservation Review Series, No. 28)

McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough. www.jncc.gov.uk/SACselection

Mortimer, D (n.d. [2002]) *Wash and North Norfolk Coast European Marine Site management scheme*. [English Nature, Peterborough]

Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. www.wwt.org.uk/publications/default.asp?PubID=14

Palmer, DW (2004) Growth of the razor clam *Ensis directus*, an alien species in the Wash on the east coast of England. *Journal of the Marine Biological Association*, **84**(5), 1075-1076

Pye, K (1995) Controls on long-term saltmarsh accretion and erosion in the Wash, eastern England. *Journal of Coastal Research*, **11**, 337-356

Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)

Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.) www.jncc.gov.uk/UKSPA/default.htm

Yates, M, Garbutt, A, Rispin, E & Brown, N (2004) Low tide survey of The Wash Special Protection Area. Final report of the winter 2002–2003 shorebird survey. *English Nature Research Reports*, No. **589**. www.english-nature.org.uk/pubs/publication/PDF/589.pdf

Yates, MG, Garbutt, RA, Barratt, DR, Turk, A, Brown, NJ, Rispin, WE, McGrorty, S, Vdit Durell, SEA le, Goss-Custard, JD, Murray, E & Russell, D (2002) Littoral sediments of the Wash and North Norfolk Coast SAC: the 1998 and 1999 surveys of intertidal sediment and invertebrates. *English Nature Research Reports*, No. **470**

Yates, MG & Goss-Custard, JD (1991) A comparison between high and low water ****

Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**

Appendix 3 Conservation objectives for designated sites

European Site Conservation Objectives for The Wash and North Norfolk Coast Special Area of Conservation Site Code: UK0017075

With regard to the SAC and the natural habitats and/or species for which the site has been designated (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 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**
- **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.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

H1110. Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks

H1140. Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats

H1150. Coastal lagoons*

H1160. Large shallow inlets and bays

H1170. Reefs

H1310. *Salicornia* and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand

H1330. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

H1420. Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*); Mediterranean saltmarsh scrub

S1355. *Lutra lutra*; Otter

S1365. *Phoca vitulina*; Common seal

* denotes a priority natural habitat or species (supporting explanatory text on following page)

This is a European Marine Site

This site is a part of the The Wash and North Norfolk Coast European Marine Site. These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via GOV.UK.

*** Priority natural habitats or species**

Some of the natural habitats and species for which UK SACs have been selected are considered to be particular priorities for conservation at a European scale and are subject to special provisions in the Habitats Regulations. These priority natural habitats and species are denoted by an asterisk (*) in Annex I and II of the Habitats Directive. The term 'priority' is also used in other contexts, for example with reference to particular habitats or species that are prioritised in UK Biodiversity Action Plans. It is important to note however that these are not necessarily the priority natural habitats or species within the meaning of the Habitats Regulations.

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 as amended from time to time (the "Habitats Regulations"). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment', including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where available) will also provide a framework to inform the measures needed to conserve or restore the European Site and the prevention of deterioration or significant disturbance of its qualifying features.

These Conservation Objectives are set for each habitat or species of a Special Area of Conservation (SAC). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving Favourable Conservation Status for that species or habitat type at a UK level. The term 'favourable conservation status' is defined in regulation 3 of the Habitats Regulations.

Publication date: 27 November 2018 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

European Site Conservation Objectives for The Wash Special Protection Area Site Code: UK9008021

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.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

A037 *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding)
A040 *Anser brachyrhynchus*; Pink-footed goose (Non-breeding)
A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)
A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
A050 *Anas penelope*; Eurasian wigeon (Non-breeding)
A051 *Anas strepera*; Gadwall (Non-breeding)
A054 *Anas acuta*; Northern pintail (Non-breeding)
A065 *Melanitta nigra*; Black (common) scoter (Non-breeding)
A067 *Bucephala clangula*; Common goldeneye (Non-breeding)
A130 *Haematopus ostralegus*; Eurasian oystercatcher (Non-breeding)
A141 *Pluvialis squatarola*; Grey plover (Non-breeding)
A143 *Calidris canutus*; Red knot (Non-breeding)
A144 *Calidris alba*; Sanderling (Non-breeding)
A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding)
A160 *Numenius arquata*; Eurasian curlew (Non-breeding)
A162 *Tringa totanus*; Common redshank (Non-breeding)
A169 *Arenaria interpres*; Ruddy turnstone (Non-breeding)
A193 *Sterna hirundo*; Common tern (Breeding)
A195 *Sterna albifrons*; Little tern (Breeding)
Waterbird assemblage

This is a European Marine Site

This SPA is a part of the The Wash and North Norfolk Coast European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via GOV.UK.

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

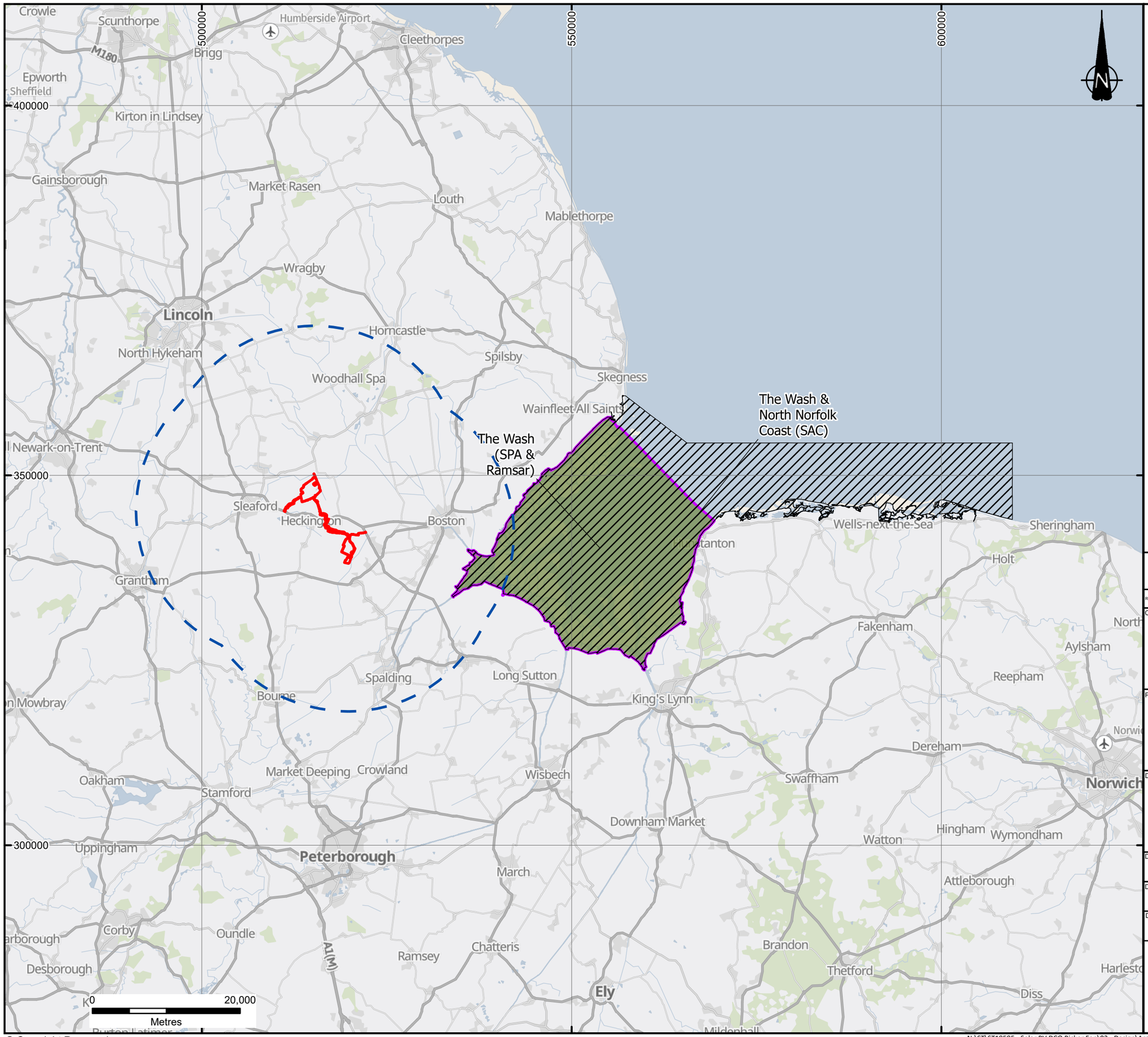
These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a Special Protection Area (SPA).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

Publication date: 21 February 2019 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

Drawings



KEY

- DCO Order Limits
- 20km Search Area
- Special Areas of Conservation
- Special Protection Areas
- Ramsar

Notes:

Excluding the DCO Order Limits, boundaries shown are indicative.

DCO Order Limits provided by Ardent Management on 04/02/2025.

REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D
1	FIRST ISSUE	19/03/25	CP	TB	TB

CLIENT

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PROJECT

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DRAWING TITLE

INTERNATIONALLY DESIGNATED SITES

DRG No.	REV	SUIT. CODE
ST19595-501	1	--

DRG SIZE	SCALE	DATE
A3	1:500,000	19/03/2025

DRAWN BY	CHECKED BY	APPROVED BY
CP	TB	TB

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