

# **Habitats Regulations Assessment**

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**Stage 1 Significance Test and Stage 2  
Appropriate Assessment, August 2025**

**Planning permission to erect one wind turbine, measuring up to 149.9m to blade tip height. Associated and ancillary infrastructure include access tracks, hardstanding areas for the turbine location, electrical infrastructure, drainage works, an onsite substation, temporary laydown areas and temporary construction compound.**

**Port of Immingham**

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Port of Immingham

Significance Test

## **Title of Plan**

Planning permission to erect one wind turbine, measuring up to 149.9m to blade tip height. Associated and ancillary infrastructure include access tracks, hardstanding areas for the turbine location, electrical infrastructure, drainage works, an onsite substation, temporary laydown areas and temporary construction compound.

## **Location of Plan or Project /Application**

Port of Immingham

Ordnance Survey Grid Reference: TA178169

## **International Nature Conservation Sites**

Humber Estuary Special Protection Area (SPA)

Humber Estuary Special Conservation Area (SAC) and Ramsar site

## **Description of Project**

The applicant's shadow Habitats Regulations Assessment gives the following description of the project:

“The proposed development will comprise of two turbines being installed with the Port of Immingham [...] the turbines will have a maximum elevation of 150 m relative to the installation sites and will have a rotor diameter of 138 m. The exact model of wind turbine to be installed will be selected through a competitive procurement process, however, for the purposes of the assessments, currently available wind turbine models are being considered which fit the height and rotor diameter parameters. There are a number of potential wind turbine models which fit within the height parameter, but which differ in properties, such as noise emissions. In each instance a 'worst case' potential wind turbine has been used in the assessment as appropriate. Further detail on the proposed development including the construction activities can be found in Chapter 2 of the Environmental Statement.

Although a range of turbine models are under consideration, this assessment has been made considering a worst-case scenario. For birds this is defined as the model with the greatest strike range, as this would result in the greatest impact on birds using industry standard collision modelling techniques. In this case the assessment is based on using a turbine with a height of 150 m, a rotor

diameter of 138 m, and a potential strike range of 12-150 m. The turbine locations are subject to a micrositing allowance of up to 50m deviation from the proposed design [...].”

The planning application in North Lincolnshire relates to one of the wind turbines only. This is located at TA1803517255, according to the submitted application form.

### **The Habitats Regulations Assessment Process**

The process is described in detail in Circular 06/2005. The Council has followed the Circular as closely as possible. The main stages in the process are as follows. Note that if there are no harmful effects on the features of the International Nature Conservation Sites, or if these effects can be prevented, not all of the stages will be required.

- Determination of Likely Significant Effect
- Appropriate Assessment with regard to site Conservation Objectives.
  - Determine whether there will be an Adverse Effect on the Integrity (AEOI) of the International Nature Conservation Sites with reference to all the relevant interest features.
  - Consider possible restrictions and conditions.
  - Consider alternative approaches.
  - Consider any Imperative Reasons of Over-riding Public Interest (IROPI).

Put simply, the Local Planning Authority can only grant planning permission if, at a given stage above, it can be ascertained that the proposal would not adversely affect the integrity of the International Nature Conservation Sites. Even if, at a late stage in considerations, IROPI were found to apply, compensatory measures would need to be provided.

Circular 06/2005 describes the key decision to be made as follows:

“In the light of the conclusions of the assessment of the project’s effects on the site’s conservation objectives, the decision-taker must determine whether it can ascertain that the proposal will not adversely affect the integrity of the site(s). The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified. It is not for the decision-taker to show that the proposal would harm the site, in order to refuse the application or appeal. It is for the decision-taker to consider the likely and reasonably foreseeable effects and to ascertain that the proposal will not have an adverse effect on the integrity of the site before it may grant permission. If the proposal would adversely affect integrity, or the effects on integrity are uncertain but could be significant, the decision-taker should not grant permission, subject to the provisions of regulations 49 and 53 as described below.”

“..In the Waddenzee judgment, the European Court of Justice ruled that a plan or project may be authorised only if a competent authority has made certain that the plan or project will not adversely affect the integrity of the site. “That is the case where no reasonable scientific doubt remains as to the absence of such effects”. Competent national authorities must be “convinced” that there will not be an adverse affect and where doubt remains as to the absence of adverse affects, the plan or project must not be authorised, subject to the procedure outlined in Article 6(4) of the EC Habitats Directive regarding imperative reasons of overriding public interest.” – ODPM 2005.

**Box 1- Government Guidance on the Determination of Likely Significant Effect (LSE)** ([www.gov.uk](http://www.gov.uk) accessed 20 April 2022)

**Screening**

This step is a simple assessment to check or screen if a proposal:

- is directly connected with or necessary for the conservation management of a European site
- risks having a significant effect on a European site on its own or in combination with other proposals

You should consider the proposal's integral design features or characteristics, such as its layout, timing and location to inform your screening decision. These may mean that any risk to a European site is avoided and you do not need to do an appropriate assessment.

At this stage, you should not consider any mitigation measures included by the proposer for the purpose of avoiding or minimising risk to a European site. These mitigation measures need to be considered at the appropriate assessment stage.

**Conservation management proposals**

You must first check if the whole proposal is for the conservation management of the habitats or species for which the European site has been designated. If it is, you do not need to carry out an appropriate assessment.

You must continue screening the proposal if it contains:

- conservation management that could negatively affect a different feature or a different European site
- non-conservation management activities, such as development, commercial operations or recreational events

**Assess the likely significant effect**

You must check if the proposal could have a significant effect on a European site that could affect its conservation objectives.

You should check if there's a risk or possibility of a significant effect based on the evidence. You should only consider real, not hypothetical risk.

[...]

You should consider:

- the area over which the proposed activity would take place
- any overlaps or interaction with the protected features of a site in a direct or indirect way
- the effect of any essential parts of the proposal, such as its location, timing or design

If you cannot rule out the risk of the proposal having a significant effect, you will need to do an appropriate assessment.

#### **Check for combined effects**

Your proposal alone may have an effect on a European site that's not significant. You must check if this effect could combine with any other proposal planned or underway and affects the same site, that on its own also does not have a significant effect. If, in combination, your proposal could have a significant effect on the European site, you will need to do an appropriate assessment.

Check for proposals being dealt with by other competent authorities, such as:

- applications for a new permission
- applications to change an existing permission
- granted permissions that have not begun or been completed
- granted permissions that need renewing
- plans that have been drafted but not yet adopted

A proposal, alone or in combination with other proposals, could cause a significant effect on a European site if there's:

- a reduction in the amount or quality of designated habitats or the habitats that support designated species
- a limit to the potential for restoring designated habitats in the future
- a significant disturbance to the designated species
- disruption to the natural processes that support the site's designated features
- only reduction or offset measures in place

If there's no likely significant effect on the site, either alone or in combination, then you do not need to carry out an appropriate assessment.

You should record your screening decision and your reasons for it.

## Potential Hazards

Potential hazards to the features of the International Nature Conservation Sites that have been considered are as follows:

- Displacement impacts on Humber Estuary SPA/Ramsar birds
- Noise disturbance impacts – construction
- Injury or mortality from collision with operational turbines
- Water quality impacts during construction.
- Air quality impacts during construction.

### Displacement impacts on Humber Estuary SPA/Ramsar birds

Natural England has provided the following advice:

“..bird displacement should be assessed as effective loss of an area of the SPA, as birds would no longer be able to access areas required to fulfil their ecological requirements.

[...]

“Rosper Road Pools is located within 600m of the proposed turbine and is an area known to be used by high numbers of birds [...]. Due to the proximity of the turbine, loss of functionally linked land associated with the Humber Estuary SPA/ Ramsar should be assessed in terms of a worst-case scenario and therefore total avoidance of Rosper Road Pools should be considered.

[...]

“When assessing potential displacement and therefore effective habitat loss at a site which supports a range of individually qualifying species and a multi-species assemblage, it is considered that a suitably precautionary approach should be taken. Based on the available evidence, Natural England advises that a figure of 600m is used as it is the maximum ‘reliably recorded distance.’”

In accordance with this advice, there is a likely significant effect on the Humber Estuary SPA and Ramsar site in relation to displacement impacts on Humber Estuary SPA/Ramsar birds. An appropriate assessment will be required in relation to this impact pathway. when considering the project alone.

Killingholme foreshore lies over 600 metres from the base of the proposed turbine. However, micrositing could vary this by up to 50 metres. The rotor diameter of the turbine is 138 metres. Therefore, applying the precautionary principle, this assessment assumes that birds could be displaced from parts of Killingholme foreshore.

The base of the turbine lies about 500 metres from the open water of Rosper Road Pools and about 300 metres from the grassland parcel within Rosper Road Pools Loyal Wildlife Site. Therefore, this assessment assumes that birds could be displaced from parts of Rosper Road Pools, including the grassland.

### **Noise disturbance impacts – construction**

The proposed wind turbine is located 613 m from the foreshore and 509 m from Rosper Road Pools (Skeate 2024). Noise for percussive piling, construction and wind turbine assembly has the potential to disturb breeding, wintering and passage waterbirds associated with the Humber Estuary SPA and Ramsar site. Noise disturbance could potentially cause birds to take flight, affect feeding behaviour, decrease available habitat area and increase the energy requirements of the disturbed birds.

There is a likely significant effect on the Humber Estuary SPA and Ramsar site in relation to construction noise disturbance impacts on Humber Estuary SPA/Ramsar birds. An appropriate assessment will be required in relation to this impact pathway when considering the project alone.

### **Injury or mortality from collision with operational turbines**

Death or injury has the potential to occur where birds are struck with rotating turbine blades whilst flying in proximity to a wind turbine or farm. This has a direct effect on the population of species that use the Humber Estuary. This population-level effect is a concern where the number of birds affected by collision with turbines represents a significant proportion of the Estuary population. Natural England advise that, “the maps in the Ornithological monitoring report appear to show flightlines for a number of species across the area, including Shelduck, Bar and Black Tailed Godwit and Curlew, where the turbine is proposed, throughout the period surveys were undertaken.”

Therefore, the potential for Likely Significant Effects due to injury or mortality from collision with operational turbines cannot be screened out and this pathway is taken forward to Stage 2: Appropriate Assessment.

### **Water quality impacts during construction.**

Standard measures to control surface water runoff during construction are embedded within the project design to ensure legislative compliance (Skeate 2024). As these measures are integral to the project, rather than being designed to prevent harm to a European Site, they can be considered at the screening stage of the Habitats Regulations Assessment. Given the standard measures, it is very unlikely that contaminated run-off would enter the Humber Estuary (ibid.).

There will be no likely significant effect on the conservation objectives of the Humber Estuary SPA as a result of water quality impacts during construction.

### **Air quality impacts**

Natural England Commissioned Report NECR200 states that, “..the literature provided evidence that vegetation was being impacted by exposure to motor vehicle pollution at distances of up to 200m from roads and that there was potential for this distance to be greater.” Therefore, significant increases in traffic volumes could, in theory, have a likely significant effect on interest features within 200m of roads, where those interest features rely on plant communities being in favourable condition.

Similarly Natural England Report NEA001 says, “Usually, only those European sites present within 200m of the edge of a road on which a plan or project will generate traffic will need to be considered when checking for the likelihood of significant effects from road traffic emissions”. It also says, “The use of the AADT [Annual Average Daily Traffic] screening threshold is advocated by Highways England in their Design Manual for Roads and Bridges (DMRB) to check whether more detailed assessment of the impact of emissions from road traffic is required. This non-statutory or guideline threshold is based on a predicted change of daily traffic flows of 1,000 AADT or more (or heavy duty vehicle flows on motorways (HDV) change by 200 AADT or more).”

Additional vehicle movements due to turbine installation and maintenance are projected to be negligible: service visits are typically carried out quarterly and involve a single van only (Skeate 2024). This is a negligible increase in traffic compared to the threshold set out above.

There will be no likely significant effect on the conservation objectives of the Humber Estuary SPA as a result of air quality impacts.

### **In-combination Plans and Projects.**

The proposed project would have the following effects alone. Therefore, it is not necessary at this stage to consider whether this project would act in combination with other plans or projects in relation to these effects (DTA Publications):

- Displacement impacts on Humber Estuary SPA/Ramsar birds
- Noise disturbance impacts – construction
- Injury or mortality from collision with operational turbines

The following pressures, attributable to the project, are so minor that effects in-combination with other plans or projects are not likely:

- Water quality impacts during construction.
- Air quality impacts during construction.

The following effect requires further consideration in-combination with the proposed project:

- Development around Rosper Road Pools, affecting flight patterns and other behaviour of waterbirds associated with the Humber Estuary SPA and Ramsar site.

**Determination of Likely Significant Effect under the Conservation of Habitats and Species Regulations 2017 (as amended)**

1. North Lincolnshire Council does not consider that the plan or project is directly connected with, or necessary to, the management of the Humber Estuary Special Protection Area (SPA) and Ramsar site or Humber Estuary Special Conservation Area (SAC) for nature conservation.
2. North Lincolnshire Council is of the opinion that the plan or project is likely to have a significant effect alone or in combination with other plans and projects on the Humber Estuary Special Protection Area (SPA) and Ramsar site.

North Lincolnshire Council is of the opinion that the plan or project is not likely to have a significant effect alone or in combination with other plans and projects on the Humber Estuary Special Conservation Area (SAC).

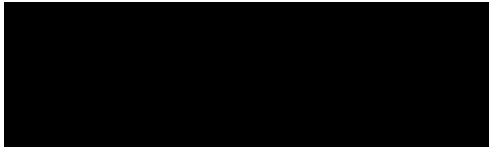
## Overall Conclusion

North Lincolnshire Council is of the opinion that an appropriate assessment is required to determine the implications of the project on the Humber Estuary SPA and Ramsar site only in view of the sites' conservation objectives for the European interest. The appropriate assessment will initially consider the effects of the project alone. The potential impacts requiring appropriate assessment are as follows:

- Displacement impacts on Humber Estuary SPA/Ramsar birds
- Noise disturbance impacts – construction
- Injury or mortality from collision with operational turbines

In addition, the appropriate assessment must consider development around Rosper Road Pools, affecting flight patterns and other behaviour of waterbirds associated with the Humber Estuary SPA and Ramsar site. Such development may act in combination with the proposed wind turbine.

Signed



Date 08 June 2025

Designation Natural Environment Policy Specialist

- Note that additional nocturnal bird survey information was submitted by the applicant in July 2025, after the determination of likely significant effect had been made. This information has been considered in the appropriate assessment.

## Summary of Determination of Likely Significant Effect (LSE) on International Nature Conservation Site Interest Features

### Humber Estuary Special Area of Conservation (SAC) Interest Features

| Interest Feature  | Likely Significant Effect | Reason   |
|---|---------------------------|--|
| 1. Coastal lagoons  | No LSE                    | Feature not found in or near application site  |
| 2. Fixed dunes with herbaceous vegetation ("grey dunes")                              | No LSE                    | Feature not found in or near application site  |
| 3. Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritima</i> )                  | No LSE                    | The application site lies over 600 metres from SAC habitats. Water quality and air quality impacts will be negligible. |
| 4. Dunes with <i>Hippophae rhamnoides</i> sea-buckthorn.                              | No LSE                    | Feature not found in or near application site  |
| 5. Embryonic shifting dunes   | No LSE                    | Feature not found in or near application site  |
| 6. Estuaries  | No LSE                    | The application site lies over 600 metres from SAC habitats. Water quality and air quality impacts will be negligible. |
| 7. <i>Halichoerus grypus</i> Grey seal  | No LSE                    | Feature not found in or near application site  |
| 8. <i>Lampetra fluviatilis</i> River lamprey.   | No LSE                    | Feature not found in or near application site  |
| 9. Mudflats and sandflats not covered by seawater at low tide                         | No LSE                    | The application site lies over 600 metres from SAC habitats. Water quality and air quality impacts will be negligible. |
| 10. <i>Petromyzon marinus</i> Sea lamprey   | No LSE                    | Feature not found in or near application site  |
| 11. <i>Salicornia</i> and other annuals colonising mud and sand                       | No LSE                    | Feature not found in or near application site  |
| 12. Sandbanks which are slightly covered by sea water all the time                    | No LSE                    | Feature not found in or near application site  |
| 13. Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") | No LSE                    | Feature not found in or near application site  |

## Humber Estuary Special Protection Area (SPA) Interest Features

### Qualifying species

The site qualifies under **article 4.1** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season:

| Annex 1 species                                  | Count and season                     | Likely Significant Effect | Reason   |
|--|--------------------------------------|---------------------------|--|
| <b>Avocet <i>Recurvirostra avoetia</i></b>       | <b>59 individuals – wintering</b>    | <b>LSE</b>                | <b>Peak count of 270 on Killingholme foreshore Area A (Skeate 2024) is &gt;1% of the Humber Estuary 5-year mean peak.</b><br>Not recorded in 2021/22 wintering surveys of Rosper Road Pools (Riley 2022)<br>Peak count of 21 in 2021-2023 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Skeate 2024a)<br><b>Potential impact pathways include collision with the turbine, displacement and construction noise disturbance.</b> |
| Bittern <i>Botaurus stellaris</i>                | 4 individuals – wintering            | No LSE                    | Species not recorded on or near the application site.  |
| Hen harrier <i>Circus cyaneus</i>                | 8 individuals – wintering            | No LSE                    | Species not recorded on or near the application site.  |
| Golden plover <i>Pluvialis apricaria</i>         | 30,709 individuals – wintering       | No LSE                    | Species not recorded in significant numbers at Rosper Road Pools, Killingholme foreshore or in flight movements (Skeate 2024, Riley 2022).   |
| <b>Bar-tailed godwit <i>Limosa lapponica</i></b> | <b>2,752 individuals – wintering</b> | <b>LSE</b>                | Peak count of 16 on Killingholme foreshore areas A & B (Skeate 2024) is <1% of the Humber Estuary 5-year mean peak<br>Peak count of 6 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Riley 2022). <b>Recorded in flights near Rosper Road Pools.</b><br><b>Potential impact pathways include collision with the turbine.</b>  |
| Ruff <i>Philomachus pugnax</i>                   | 128 individuals – passage            | No LSE                    | Only one ruff recorded on one occasion on Killingholme foreshore (Skeate 2024).<br>Not recorded in 2021/22 wintering surveys of Rosper Road (Riley 2022) or in flight movements.   |
| Bittern <i>Botaurus stellaris</i>                | 2 booming males – breeding           | No LSE                    | Species not recorded on or near the application site.  |
| <b>Marsh harrier <i>Circus aeruginosus</i></b>   | <b>10 females – breeding</b>         | <b>LSE</b>                | <b>Observed in flight near proposed turbine (Skeate 2024). Potential impact pathways include collision with the turbine.</b>   |
| <b>Avocet <i>Recurvirostra avoetia</i></b>       | <b>64 pairs – breeding</b>           | <b>No LSE</b>             | <b>Proportion of the SPA/Ramsar population recorded using Rosper Road Pools regularly exceeding 1% (Riley 2022). Potential impact pathways include collision with the turbine, displacement and construction noise disturbance.</b>  |
| Little tern <i>Sterna albifrons</i>              | 51 pairs – breeding                  | No LSE                    | Species not recorded on or near the application site.  |

The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed in Annex I) in any season:

| <b>Migratory species</b>                           | <b>Count and season</b>               | <b>Likely Significant Effect</b> | <b>Reason</b>  |
|--|---------------------------------------|----------------------------------|--|
| <b>Shelduck</b><br><i>Tadorna tadorna</i>          | <b>4,464 individuals – wintering</b>  | <b>LSE</b>                       | Peak counts of 65 and 67 on Killingholme foreshore sectors A & B (Skeate 2024) are <1% of the Humber Estuary 5-year mean peak. Peak count of 12 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Riley 2022). Peak count of 44 in 2021-2023 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Skeate 2024a)<br><b>Recorded in flights near Rosper Road Pools.</b><br><b>Potential impact pathways include collision with the turbine, displacement and construction noise disturbance.</b>                                  |
| Knot <i>Calidris canutus</i>                       | 28,165 individuals – wintering        | No LSE                           | Peak count of 39 on Killingholme foreshore (Skeate 2024) is <1% of the Humber Estuary 5-year mean peak. Not recorded in 2021/22 wintering surveys of Rosper Road (Riley 2022) or in flight movements.  |
| <b>Dunlin <i>Calidris alpina</i></b>               | <b>22,222 individuals – wintering</b> | <b>LSE</b>                       | <b>Peak counts of 557 and 474 on Killingholme foreshore sectors A &amp; B (Skeate 2024) are &gt;1% of the Humber Estuary 5-year mean peak.</b> Not recorded in 2021/22 or 2021-2023 wintering surveys of Rosper Road (Riley 2022, Skeate 2024a) or in flight movements. <b>Potential impact pathways include displacement and construction noise disturbance.</b>  |
| <b>Black-tailed godwit</b><br><i>Limosa limosa</i> | <b>1,113 individuals – wintering</b>  | <b>LSE</b>                       | <b>Peak counts of 5,500 and 1,300 on Killingholme foreshore sectors A &amp; B (Skeate 2024) are &gt;1% of the Humber Estuary 5-year mean peak.</b> Peak of 480 birds recorded at Rosper Road Pools (Riley 2022) is >1% of the Humber Estuary 5-year mean peak<br><b>Peak count of 695 in 2021-2023 at Rosper Road Pools is &gt;1% of the Humber Estuary 5-year mean peak (Skeate 2024a)</b><br><b>Recorded in flights near Rosper Road Pools. Potential impact pathways include collision with the turbine, displacement and construction noise disturbance.</b> |
| <b>Redshank <i>Tringa totanus</i></b>              | <b>4,632 individuals – wintering</b>  | <b>LSE</b>                       | <b>Peak counts of 260 and 209 on Killingholme foreshore sectors A &amp; B (Skeate 2024) are &gt;1% of the Humber Estuary 5-year mean peak.</b> Peak count of 8 at Rosper Road Pools (Riley 2022) is <1% of the Humber Estuary 5-year mean peak. Not recorded in flights near Rosper Road Pools.<br><b>Peak count of 66 in 2021-2023 at Rosper Road Pools is &gt;1% of the Humber Estuary 5-year mean peak (Skeate 2024a).</b><br><b>Potential impact pathways include displacement and construction noise disturbance.</b>                                       |
| Knot <i>Calidris canutus</i>                       | 18,500 individuals – passage          | No LSE                           | Peak count of 39 on Killingholme foreshore (Skeate 2024) is <1% of the Humber Estuary 5-year mean peak. Not recorded in 2021/22 wintering surveys of Rosper Road (Riley 2022) or in flight movements.  |

|   |                              |        |   |
|---|------------------------------|--------|---|
| Dunlin <i>Calidris alpina</i>               | 20,269 individuals – passage | No LSE | Peak counts of 82 and 108 on Killingholme foreshore sectors A & B (Skeate 2024) are <1% of the Humber Estuary 5-year mean peak. Not recorded in 2021/22 wintering surveys of Rosper Road (Riley 2022) or in flight movements. Peak count of 2 in 2021-2023 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Skeate 2024a)  |
| Black-tailed godwit<br><i>Limosa limosa</i> | 915 individuals – passage    | LSE    | <b>Peak counts of 3,620 and 109 on Killingholme foreshore sectors A &amp; B (Skeate 2024) are &gt;1% of the Humber Estuary 5-year mean peak.</b><br><b>Significant numbers of birds recorded in early and late wintering bird surveys at Rosper Road Pools (Riley 2022). Recorded in flights near Rosper Road Pools. Peak count of 219 in 2021-2023 at Rosper Road Pools is &gt;1% of the Humber Estuary 5-year mean peak (Skeate 2024a)</b><br><b>Potential impact pathways include collision with the turbine, displacement and construction noise disturbance.</b> |
| Redshank <i>Tringa totanus</i>              | 7,462 individuals – passage  | LSE    | <b>Peak counts of 154 and 143 on Killingholme foreshore sectors A &amp; B (Skeate 2024) are &gt;1% of the Humber Estuary 5-year mean peak.</b><br>Peak count of 8 at Rosper Road Pools (Riley 2022) is <1% of the Humber Estuary 5-year mean peak. Peak count of 19 in 2021-2023 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Skeate 2024a). Not recorded in flights near Rosper Road Pools.<br><b>Potential impact pathways include displacement and construction noise disturbance.</b>  |

**Assemblage qualification:**

The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season:

| Interest Feature   | Likely Significant Effect | Reason  |
|--|---------------------------|---|
| Over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season: In the non-breeding season, the area regularly supports 153,934 individual waterbirds | LSE                       | Peak counts of curlew, lapwing, ringed plover, teal, shoveler, little egret on Killingholme foreshore sectors A & B (Skeate 2024) are >1% of the Humber Estuary 5-year mean peak.<br>Peak of 94 gadwall and 126 wigeon wintering on Rosper Road Pools (Riley 2022). Peak of 218 teal, 44 gadwall, 31 shoveler, 412 wigeon and 312 lapwing in wintering and passage at Rosper Road Pools (Skeate 2024a).<br>Greylag goose, mallard, pink-footed goose, shoveler, teal, curlew, lapwing recorded in flight near Rosper Road Pools and the proposed turbine (Skeate 2024).<br>Potential impact pathways include collision with the turbine, displacement and construction noise disturbance. |

**Humber Estuary Ramsar Site Interest Features:**

| Interest Feature  | Likely Significant Effect      | Reason   |  |
|---|--------------------------------|--|--|
| <b>Criterion 1: near-natural estuary with the following component habitats:</b>   |                                |  |  |
| Dune systems and humid dune slacks  | No LSE                         | Feature not found in or near application site  |  |
| Estuarine waters  | No LSE                         | The application site lies over 600 metres from Ramsar designated habitats. Water quality and air quality impacts will be negligible.   |  |
| Intertidal mud and sand flats   | No LSE                         |  |  |
| Saltmarshes   | No LSE                         |  |  |
| Coastal brackish/saline lagoons   | No LSE                         | Feature not found in or near application site  |  |
| <b>Criterion 3: animal species important for maintaining the biological diversity of the biogeographic region:</b>                                |                                |  |  |
| grey seals <i>Halichoerus grypus</i> at Donna Nook  | No LSE                         | Feature not found in or near application site  |  |
| natterjack toad <i>Bufo calamita</i> at Saltfleetby-Theddlethorpe   | No LSE                         | Feature not found in or near application site  |  |
| <b>Criterion 5: regularly supports 20,000 or more waterbirds</b>  | <b>LSE</b>                     | <b>Peak counts of curlew, lapwing, ringed plover, teal, shoveler, little egret on Killingholme foreshore sectors A &amp; B (Skeate 2024) are &gt;1% of the Humber Estuary 5-year mean peak.</b><br><b>Peak of 94 gadwall and 126 wigeon wintering on Rosper Road Pools (Riley 2022). Peak of 218 teal, 44 gadwall, 31 shoveler, 412 wigeon and 312 lapwing in wintering and passage at Rosper Road Pools (Skeate 2024a).</b><br><b>Greylag goose, mallard, pink-footed goose, shoveler, teal, curlew, lapwing recorded in flight near Rosper Road Pools and the proposed turbine (Skeate 2024).</b><br><b>Potential impact pathways include collision with the turbine, displacement and construction noise disturbance.</b> |  |
| <b>Criterion 6: regularly supports 1% of the individuals in the populations of the following species or subspecies of waterbird in any season</b> |                                |  |  |
| <b>Species</b>  | <b>Count and season</b>        | <b>Likely Significant Effect</b>   | <b>Reason</b>  |
| Shelduck<br><i>Tadorna tadorna</i>  | 4,464 individuals – wintering  | <b>LSE</b>   | Peak counts of 65 and 67 on Killingholme foreshore sectors A & B (Skeate 2024) are <1% of the Humber Estuary 5-year mean peak.<br>Peak count of 12 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Riley 2022). Peak count of 44 in 2021-2023 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Skeate 2024a)<br><b>Recorded in flights near Rosper Road Pools.</b><br><b>Potential impact pathways include collision with the turbine, displacement and construction noise disturbance.</b> |
| Golden plover<br><i>Pluvialis apricaria</i>   | 30,709 individuals – wintering | No LSE   | Species not recorded in significant numbers at Rosper Road Pools, Killingholme foreshore or in flight movements (Skeate 2024, Riley 2022).   |
| Knot<br><i>Calidris canutus</i>   | 28,165 individuals – wintering | No LSE   | Peak count of 39 on Killingholme foreshore (Skeate 2024) is <1% of the Humber Estuary 5-year mean peak.<br>Not recorded in 2021/22 wintering surveys of Rosper Road (Riley 2022) or in flight movements.   |

|  |                                   |        |   |
|--|-----------------------------------|--------|---|
| Dunlin<br><i>Calidris alpina</i>             | 22,222 individuals –<br>wintering | LSE    | Peak counts of 557 and 474 on Killingholme foreshore sectors A & B (Skeate 2024) are >1% of the Humber Estuary 5-year mean peak. Not recorded in 2021/22 or 2021-2023 wintering surveys of Rosper Road (Riley 2022, Skeate 2024a) or in flight movements. <b>Potential impact pathways include displacement and construction noise disturbance.</b>   |
| Black-tailed godwit<br><i>Limosa limosa</i>  | 1,113 individuals –<br>wintering  | LSE    | Peak counts of 5,500 and 1,300 on Killingholme foreshore sectors A & B (Skeate 2024) are >1% of the Humber Estuary 5-year mean peak. Peak of 480 birds recorded at Rosper Road Pools (Riley 2022) is >1% of the Humber Estuary 5-year mean peak. Peak count of 695 in 2021-2023 at Rosper Road Pools is >1% of the Humber Estuary 5-year mean peak (Skeate 2024a). Recorded in flights near Rosper Road Pools. Potential impact pathways include collision with the turbine, displacement and construction noise disturbance. |
| Bar-tailed godwit<br><i>Limosa lapponica</i> | 2,752 individuals –<br>wintering  | LSE    | Peak count of 16 on Killingholme foreshore areas A & B (Skeate 2024) is <1% of the Humber Estuary 5-year mean peak. Peak count of 6 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Riley 2022). <b>Recorded in flights near Rosper Road Pools. Potential impact pathways include collision with the turbine.</b>   |
| Redshank<br><i>Tringa totanus</i>            | 4,632 individuals –<br>wintering  | LSE    | Peak counts of 260 and 209 on Killingholme foreshore sectors A & B (Skeate 2024) are >1% of the Humber Estuary 5-year mean peak. Peak count of 8 at Rosper Road Pools (Riley 2022) is <1% of the Humber Estuary 5-year mean peak. Not recorded in flights near Rosper Road Pools. <b>Peak count of 66 in 2021-2023 at Rosper Road Pools is &gt;1% of the Humber Estuary 5-year mean peak (Skeate 2024a). Potential impact pathways include displacement and construction noise disturbance.</b>                               |
| Golden plover<br><i>Pluvialis apricaria</i>  | 17,996 individuals –<br>passage   | No LSE | Species not recorded in significant numbers at Rosper Road Pools, Killingholme foreshore or in flight movements (Skeate 2024, Riley 2022).  |
| Knot<br><i>Calidris canutus</i>              | 18,500 individuals –<br>passage   | No LSE | Peak count of 39 on Killingholme foreshore (Skeate 2024) is <1% of the Humber Estuary 5-year mean peak. Not recorded in 2021/22 wintering surveys of Rosper Road (Riley 2022) or in flight movements.   |
| Dunlin<br><i>Calidris alpina</i>             | 20,269 individuals –<br>passage   | No LSE | Peak counts of 82 and 108 on Killingholme foreshore sectors A & B (Skeate 2024) are <1% of the Humber Estuary 5-year mean peak. Not recorded in 2021/22 wintering surveys of Rosper Road (Riley 2022) or in flight movements. Peak count of 2 in 2021-2023 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Skeate 2024a)  |

|  |                                |   |  |
|--|--------------------------------|---|--|
| Black-tailed godwit<br><i>Limosa limosa</i>  | 915 individuals –<br>passage   | LSE   | Peak counts of 3,620 and 109 on Killingholme foreshore sectors A & B (Skeate 2024) are >1% of the Humber Estuary 5-year mean peak. Significant numbers of birds recorded in early and late wintering bird surveys at Rosper Road Pools (Riley 2022). Recorded in flights near Rosper Road Pools. Peak count of 219 in 2021-2023 at Rosper Road Pools is >1% of the Humber Estuary 5-year mean peak (Skeate 2024a) Potential impact pathways include collision with the turbine, displacement and construction noise disturbance. |
| Redshank<br><i>Tringa totanus</i>  | 7,462 individuals –<br>passage | LSE   | Peak counts of 154 and 143 on Killingholme foreshore sectors A & B (Skeate 2024) are >1% of the Humber Estuary 5-year mean peak. Peak count of 8 at Rosper Road Pools (Riley 2022) is <1% of the Humber Estuary 5-year mean peak. Peak count of 19 in 2021-2023 at Rosper Road Pools is <1% of the Humber Estuary 5-year mean peak (Skeate 2024a). Not recorded in flights near Rosper Road Pools. Potential impact pathways include displacement and construction noise disturbance.  |
| <b>Criterion 8: migration path on which fish stocks, either within the wetland or elsewhere, depend:</b> |                                |   |  |
| River lamprey <i>Lampetra fluviatilis</i>  | No LSE                         | Feature not found in or near application site |  |
| Sea lamprey <i>Petromyzon marinus</i>  | No LSE                         |   |  |

## **Humber Estuary Citations and Conservation Objectives**

# European Site Conservation Objectives for Humber Estuary Special Area of Conservation Site Code: UK0030170



With regard to 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 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

H1130. Estuaries

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

H1150. Coastal lagoons\*

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

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

H2110. Embryonic shifting dunes

H2120. Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram

H2130. Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland\*

H2160. Dunes with *Hippophae rhamnoides*; Dunes with sea-buckthorn

S1095. *Petromyzon marinus*; Sea lamprey

S1099. *Lampetra fluviatilis*; River lamprey

S1364. *Halichoerus grypus*; Grey 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 Humber Estuary 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](https://www.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 31 March 2014 to reflect the consolidation of the Habitats Regulations in 2017.

With regard to the natural habitats and/or species for which the site has been designated (the Qualifying Features listed below);

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

Subject to natural change, to maintain or restore:

- The extent and distribution of qualifying natural habitats and habitats of qualifying species;

# European Site Conservation Objectives for Humber Estuary Special Protection Area Site Code: UK9006111



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:**

- A021 *Botaurus stellaris*; Great bittern (Non-breeding)
- A021 *Botaurus stellaris*; Great bittern (Breeding)
- A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
- A081 *Circus aeruginosus*; Eurasian marsh harrier (Breeding)
- A082 *Circus cyaneus*; Hen harrier (Non-breeding)
- A132 *Recurvirostra avosetta*; Pied avocet (Non-breeding)
- A132 *Recurvirostra avosetta*; Pied avocet (Breeding)
- A140 *Pluvialis apricaria*; European golden plover (Non-breeding)
- A143 *Calidris canutus*; Red knot (Non-breeding)
- A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
- A151 *Philomachus pugnax*; Ruff (Non-breeding)
- A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
- A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding)
- A162 *Tringa totanus*; Common redshank (Non-breeding)
- A195 *Sterna albifrons*; Little tern (Breeding)
- Waterbird assemblage

## **This is a European Marine Site**

This SPA is a part of the Humber Estuary 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](https://www.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 4). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

## The Humber Estuary Ramsar site conservation objectives

### Criterion 2: Conservation objective for the internationally important wetland, hosting an assemblage of threatened coastal and wetland invertebrates

Subject to natural change, maintain\* the wetland hosting an assemblage of threatened coastal and wetland invertebrates in favourable condition, in particular:

- Saltmarsh communities
- Coastal lagoons

### Criterion 3: Conservation objective for the internationally important wetland, supporting a breeding colony of grey seals *Halichoerus grypus*

Subject to natural change, maintain\* the **wetland hosting a breeding colony of grey seals** in favourable condition, in particular:

- Intertidal mudflats and sandflats

### Criterion 5: Conservation objective for the internationally important wetland, regularly supporting 20,000 or more waterfowl

Subject to natural change, maintain\* the **wetland regularly supporting 20,000 or more waterfowl** in favourable condition, in particular:

- Intertidal mudflats and sandflats
- Saltmarsh communities
- Tidal reedbeds
- Coastal lagoons

### Criterion 6: Conservation objective for the internationally important wetland, regularly supporting 1% or more of the individuals in a population of one species or sub-species of waterfowl

Subject to natural change, maintain\* the **wetland regularly supporting 1% or more of the individuals in a population of one species or sub-species of waterfowl** in favourable condition, in particular:

- Intertidal mudflats and sandflats
- Saltmarsh communities
- Tidal reedbeds
- Coastal lagoons

**Note:** The Ramsar site conservation objectives for **critterion 2 & 3** interest focus on the condition of the habitats that support or host species of international importance. Information on the status of the species in terms of national and international population and distribution trends will be used to inform judgements made with regards to the management and protection of the sites.

The Ramsar site conservation objectives for **critterion 5 & 6** interest focus on the condition of the habitats that support the bird populations. This is in recognition of changes in bird populations that

may take place as a consequence of national or international trends or events. Annual counts for qualifying species will be used by Natural England in the context of five-year peak means together with other available information on the national and international population and distribution trends to inform judgements regarding the management and protection of the site.

- Maintain implies restoration if the feature is not currently in favourable condition.

Planning permission to erect one wind turbine, measuring up to 149.9m to blade tip height. Associated and ancillary infrastructure include access tracks, hardstanding areas for the turbine location, electrical infrastructure, drainage works, an onsite substation, temporary laydown areas and temporary construction compound.

Port of Immingham

Appropriate Assessment under the Conservation of Habitats and Species Regulations 2017 (as amended)

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# **1 Summary - Record of Appropriate Assessment in accordance with Habitats Regulations Guidance Note 1**

## **1.1 Title of Plan or Project/Application**

Planning permission to erect one wind turbine, measuring up to 149.9m to blade tip height. Associated and ancillary infrastructure include access tracks, hardstanding areas for the turbine location, electrical infrastructure, drainage works, an onsite substation, temporary laydown areas and temporary construction compound.

## **1.2 Location of Plan or Project /Application**

Port of Immingham  
Ordnance Survey Grid Reference: TA178169

## **1.3 International Nature Conservation Site**

Humber Estuary Special Protection Area (SPA)  
Humber Estuary Ramsar Site.

## **1.3 Nature/Description of Plan or Project/Application**

The applicant's shadow Habitats Regulations Assessment gives the following description of the project:

"The proposed development will comprise of two turbines being installed with the Port of Immingham [...] the turbines will have a maximum elevation of 150 m relative to the installation sites and will have a rotor diameter of 138 m. The exact model of wind turbine to be installed will be selected through a competitive procurement process, however, for the purposes of the assessments, currently available wind turbine models are being considered which fit the height and rotor diameter parameters. There are a number of potential wind turbine models which fit within the height parameter, but which differ in properties, such as noise emissions. In each instance a 'worst case' potential wind turbine has been used in the assessment as appropriate. Further detail on the proposed development including the construction activities can be found in Chapter 2 of the Environmental Statement.

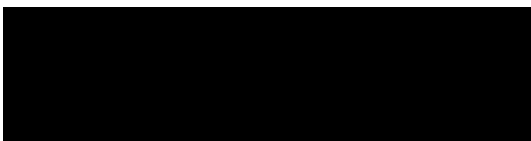
Although a range of turbine models are under consideration, this assessment has been made considering a worst-case scenario. For birds this is defined as the model with the greatest strike range, as this would result in the greatest impact on birds using industry standard collision modelling techniques. In this case the assessment is based on using a turbine with a height of 150 m, a rotor diameter of 138 m, and a potential strike range of 12-150 m. The turbine locations are subject to a micro-siting allowance of up to 50m deviation from the proposed design [...]."

The planning application in North Lincolnshire relates to one of the wind turbines only. This is located at TA1803517255, according to the submitted application form.

**Date Appropriate Assessment recorded: 14 August 2025**

- 1.5 This is a record of the appropriate assessment, required by Regulation 63 of the Habitats Regulations 2017, as amended, undertaken by North Lincolnshire Council in respect of the above plan/project. Having considered that the plan or project would be likely to have a significant effect on the Humber Estuary SPA and Ramsar site and that the plan or project was not directly connected with or necessary to the management of the site, an appropriate assessment has been undertaken of the implications of the proposal in view of the sites conservation objectives.
- 1.6 Natural England was consulted under Reg.63(3) on 22 May 2024 and replied on 11 June 2024 and subsequent occasions; comments expressed by the organisation have helped to formulate this version of the Habitats Regulations Assessment.
- 1.7 The opinion of the general public was not formally taken under Reg.63(4).
- 1.8 The sites' conservation objectives have been taken into account, including consideration of the situation for the site and information supplied by Natural England (See Appendix 3). The likely effects of the proposal on the international nature conservation interests for which the site was designated may be summarised as:
- Displacement impacts on Humber Estuary SPA/Ramsar birds
  - Noise disturbance impacts – construction
  - Injury or mortality from collision with operational turbines
- 1.9 The assessment has concluded that the plan or project as proposed would adversely affect the integrity of the site.
- 1.10 The imposition of restrictions on the way the proposal is to be carried out has been considered and it is ascertained that:
- ~~\*a) conditions or restrictions cannot overcome the adverse effects on the integrity of the site.~~
- Or
- b) the measures listed in section 10 of this document would avoid adverse effects on the integrity of the site.

Signed



Date 14 August 2025

Designation Natural Environment Policy Specialist

## **2 Introduction**

- 2.1 The project assessed here is an application for planning permission. The development proposal is for a single wind turbine northeast of Rosper Road Pools, within the Port of Immingham.
- 2.2 North Lincolnshire Council has determined that:
- 2.2.1 The plan or project is not directly connected with, or necessary to, the management of the Humber Estuary Special Protection Area (SPA) and Ramsar site or Humber Estuary Special Conservation Area (SAC) for nature conservation.
  - 2.2.2 The plan or project is likely to have a significant effect alone or in combination with other plans and projects on the Humber Estuary Special Protection Area (SPA) and Ramsar site.
  - 2.2.3 The plan or project is not likely to have a significant effect alone or in combination with other plans and projects on the Humber Estuary Special Conservation Area (SAC) for nature conservation.
- 2.3 Therefore, as the Competent Authority for the plan or project, North Lincolnshire Council must carry out an appropriate assessment in accordance with Regulation 63 of The Conservation of Habitats and Species Regulations 2017, as amended.
- 2.4 This document is the formal record of that process. North Lincolnshire Council has prepared this Habitats Regulations Assessment (HRA), which draws heavily on the information provided by the applicant.

## **3 The Appropriate Assessment Process**

- 3.1 The process is described in detail in Circular 06/2005. The Council has followed the Circular as closely as possible. The main stages in the process are as follows. Note that if there are no harmful effects on the features of the Humber Estuary, or if these effects can be prevented, not all of the stages will be required.
- 3.1.2.1 Determination of Likely Significant Effect
  - 3.1.2.2 Appropriate Assessment with regard to site Conservation Objectives.
  - 3.1.2.3 Determine whether there will be an Adverse Effect on the Integrity (AEOI) of the International Nature Conservation Sites with reference to all the relevant interest features.
  - 3.1.2.4 Consider possible restrictions and conditions.
  - 3.1.2.5 Consider alternative approaches.
  - 3.1.2.6 Consider any Imperative Reasons of Over-riding Public Interest (IROPI).
- 3.2 Put simply, the Local Planning Authority can only adopt the plan if, at a given stage in 3.1 above, it can be ascertained that the proposal would not adversely affect the integrity of the International Nature Conservation Sites. Even if, at a late stage in considerations, IROPI and no alternatives were found to apply,

compensatory measures would need to be provided.

3.3 Circular 06/2005 describes the key decision to be made as follows:

3.3.1 “In the light of the conclusions of the assessment of the project’s effects on the site’s conservation objectives, the decision-taker must determine whether it can ascertain that the proposal will not adversely affect the integrity of the site(s). The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified. It is not for the decision-taker to show that the proposal would harm the site, in order to refuse the application or appeal. It is for the decision-taker to consider the likely and reasonably foreseeable effects and to ascertain that the proposal will not have an adverse effect on the integrity of the site before it may grant permission. If the proposal would adversely affect integrity, or the effects on integrity are uncertain but could be significant, the decision-taker should not grant permission, subject to the provisions of regulations 49 and 53 as described below.”

3.3.2 “... In the Waddenzee judgment, the European Court of Justice ruled that a plan or project may be authorised only if a competent authority has made **certain** that the plan or project will not adversely affect the integrity of the site. “*That is the case where no reasonable scientific doubt remains as to the absence of such effects*”. Competent national authorities must be “**convinced**” that there will not be an adverse affect and where doubt remains as to the absence of adverse affects, the plan or project must not be authorised, subject to the procedure outlined in Article 6(4) of the EC Habitats Directive regarding imperative reasons of overriding public interest.” – ODPM 2005.

**Box 2- Government Guidance on the Appropriate Assessment** ([www.gov.uk](http://www.gov.uk) accessed 20 May 2021)

You must carry out an appropriate assessment if you:

- decide there’s a risk of a likely significant effect on a European site
- do not have enough evidence to rule out a risk

The assessment should be:

- more detailed and thorough than the screening check
- appropriate for the nature and complexity of the proposal and allow you to carry out the integrity test

Your appropriate assessment should:

- assess the likely significant effects of a proposal on the integrity of the site and its conservation objectives
- consider ways to avoid or reduce (mitigate) any potential for an ‘adverse effect on the integrity of the site’

**Test the integrity of the site**

Your appropriate assessment must show whether an adverse effect on the integrity of the site from the proposal can be ruled out or not.

The integrity of the site will be adversely affected if a proposal could, for example:

- destroy, damage or significantly change all or part of a designated habitat
- significantly disturb the population of a designated species, for example, its breeding birds or hibernating bats

- harm the site's ecological connectivity with the wider landscape, for example, harm a woodland that helps to support the designated species from a nearby European site
- harm the site's ecological function, or its ability to survive damage, and reduce its ability to support a designated species
- change the site's physical environment, for example, by changing the chemical makeup of its soil, increasing the risk of pollution or changing the site's hydrology
- restrict access to resources outside the site that are important to a designated species, for example, food sources or breeding grounds
- prevent or disrupt restoration work, or the potential for future restoration, if it undermines the site's conservation objectives

You must be able to rule out all reasonable scientific doubt that the proposal would not have an adverse effect on the integrity of the site before you can allow the proposal to go ahead.

### **How to assess effects on site integrity**

To carry out the assessment and apply the integrity test, you should consider:

- the ecological requirements, conservation objectives and the current conservation status (if known) of the site's designated features that might be affected by the proposal
- each potential effect on the European site, including the risk of combined effects with other proposals, and how they might impact on the site's conservation objectives
- the scale, extent, timing, duration, reversibility and likelihood of the potential effects
- how certain you are of the effects occurring
- mitigation measures that have been proposed or conditions you can attach to avoid or limit the effects
- how confident you can be that mitigation measures will be effective over the whole lifetime of the proposal - for example, the effects of construction, operation and decommissioning

You must consult the relevant SNCB and you should send them a copy of your draft appropriate assessment. You must consider the advice you get back. You should only disagree with the advice if you have a good reason.

You should keep a record of your final appropriate assessment, particularly if you're not following the SNCB's advice. You may need it as evidence if, for example, there's an appeal or freedom of information request.

If you're a local planning authority in England making a decision on planning applications, you should read the guide about appropriate assessments and legal implications on neighbourhood plans and permissions in principle.

### **Consider mitigation measures**

As part of your appropriate assessment, you should consider any mitigation measures that have been included as part of the proposal to remove or reduce potential adverse effects.

You or the proposer can get advice on mitigation measures from the relevant SNCB or an ecological adviser.

You should assess what difference the mitigation measures would make to the effects of the proposal on the site. You must be sure that the mitigation will be effective. To do this, your assessment will need to show:

- how the measures would be implemented and monitored, and how long for
- how you would enforce the measures if you had to
- how certain you are that the measures would work to avoid or reduce effects on the site
- how long it will take for the measures to take effect
- the level of success you expect, or what changes you'd make if monitoring shows the measures may fail

You must make sure that any necessary mitigation measures are put in place now and not wait for adverse effects to happen first.

**Attach conditions**

If mitigation measures are needed to avoid adverse effects, you should attach conditions or take other necessary steps to make sure the measures are carried out.

You can make conditions flexible. For example, you could remove conditions if it's clear from monitoring that the risk of negative effects is lower than first thought. You should consult the relevant SNCB to make sure the new conditions are still effective.

You should be sure you can enforce the conditions if you need to, and that the proposer is capable of fulfilling them.

**Design or method conditions**

You can attach conditions to the design features or methods of a proposal to avoid damaging sensitive habitats.

For example, for construction work near a watercourse, you could include the condition of creating a bund to stop sediment or pollution getting into the watercourse.

**Timing conditions**

You can attach timing conditions to avoid work taking place during sensitive times of year or day.

For example, to avoid disturbing:

- birds, seals and bats during their breeding season
- birds on land or at sea when they're resting or feeding during the winter months

**Monitoring conditions**

You can attach monitoring conditions to check whether the mitigation measures are working as expected. You can use monitoring as an early warning to identify the risk of any new potential impacts.

Monitoring conditions should clearly state what action the proposer will need to take to make sure adverse effects do not occur if either the:

- impacts are likely to be greater than expected
- mitigation might not be working as expected

[...]

**Decide if the proposal passes or fails the integrity test**

A proposal will pass the integrity test if your appropriate assessment can show that there is no reasonable scientific doubt that the proposal will not have an adverse effect on the integrity of the site.

This means you can carry out, allow or adopt the proposal - after assessing any other factors that you need to consider - such as noise pollution, landscape damage or flood risk.

If the proposal fails the integrity test because you cannot rule out an adverse effect on site integrity, you must reject the proposal in its current form. This means permission is not granted. The work cannot go ahead or the plan cannot be adopted unless it can pass 3 legal tests and be granted an exception, known as a 'derogation'

## **4. Description of Development**

4.1 The applicant's shadow Habitats Regulations Assessment gives the following description of the project:

- 4.1.1 "The proposed development will comprise of two turbines being installed with the Port of Immingham [...] the turbines will have a maximum elevation of 150 m relative to the installation sites and will have a rotor diameter of 138 m. The exact model of wind turbine to be installed will be selected through a competitive procurement process, however, for the purposes of the assessments, currently available wind turbine models are being considered which fit the height and rotor diameter parameters. There are a number of potential wind turbine models which fit within the height parameter, but which differ in properties, such as noise emissions. In each instance a 'worst case' potential wind turbine has been used in the assessment as appropriate. Further detail on the proposed development including the construction activities can be found in Chapter 2 of the Environmental Statement.
- 4.1.2 Although a range of turbine models are under consideration, this assessment has been made considering a worst-case scenario. For birds this is defined as the model with the greatest strike range, as this would result in the greatest impact on birds using industry standard collision modelling techniques. In this case the assessment is based on using a turbine with a height of 150 m, a rotor diameter of 138 m, and a potential strike range of 12-150 m. The turbine locations are subject to a micrositing allowance of up to 50m deviation from the proposed design [...]."

4.2 The planning application in North Lincolnshire relates to one of the wind turbines only. This is located at TA1803517255, according to the submitted application form.

## **5 Summary of Likely Significant Effects on the International Nature Conservation Sites**

- 5.1 Displacement impacts on Humber Estuary SPA/Ramsar birds
- 5.2 Noise disturbance impacts – construction
- 5.3 Injury or mortality from collision with operational turbines

## **6. Displacement impacts on Humber Estuary SPA/Ramsar birds**

### **6.1. Likely Significant Effect**

- 6.1.1. Natural England has advised that displacement impacts on birds should be considered within 600 metres of the proposed wind turbine. Taking into account the potential micrositing range of the turbine and the rotor-swept area, parts of Killingholme foreshore, within the Humber Estuary and Ramsar site, and parts of Rosper Road Pools Local Wildlife Site could be affected by displacement impacts.
- 6.1.2. The sectors of Killingholme foreshore closest to the proposed wind turbine have recently been found to support significant numbers of wintering avocet and dunlin and wintering and passage black-tailed godwit and redshank. The Humber Estuary assemblage species curlew, lapwing, ringed plover, teal, shoveler and little egret have also been recorded in significant numbers (numbers exceeding 1% of the Humber Estuary 5-year mean peak).

- 6.1.3. Rosper Road Pools supports breeding avocets in significant numbers and significant numbers of passage and wintering black-tailed godwit, redshank, lapwing, shoveler, teal, gadwall and wigeon.

## **6.2. Conservation Objectives**

- 6.2.1. Where a likely significant effect has been identified, displacement impacts on Humber Estuary SPA/Ramsar birds could prejudice the following elements of the Humber Estuary SPA conservation objectives in relation to the assemblage of passage waterbirds:
- 6.2.1.1. The population of each of the qualifying features, and,
- 6.2.1.2. The distribution of the qualifying features within the site.

## **6.3 Further Assessment – updated bird survey information**

- 6.3.1 In July 2025, the applicant submitted a report on the results of further diurnal vantage point surveys (December 2024 to March 2025) and nocturnal vantage point surveys (September to December 2024), plus functionally linked land surveys (December 2024 to March 2025). A total of 30 hours of diurnal vantage point work was undertaken over four months, plus a total of 18 hours of nocturnal monitoring (Skeate 2025a). The survey methods and survey effort are considered to be acceptable. The additional results have been incorporated into the text of sections 6 and 8 of this assessment.

## **6.4 Further Assessment- Habitats in Scope.**

- 6.4.1 The shadow HRA provided by the applicant highlights the great variation in avoidance distances from wind turbines recorded for various waterbird species in different windfarm locations (Skeate 2024). The report's author has focused on the median avoidance distance values from different studies based on an assertion that this is a precautionary approach.
- 6.4.2 Natural England's advice is that this approach is not precautionary, given that some of the greater avoidance distances recorded may be more applicable to the situation at the Port of Immingham. They have advised that, "...further assessment (within the Appropriate Assessment) should be carried out within the recommended 600 m buffer zone to determine the predicted level and effects of displacement, informed by site-specific factors such as the habitats available, extent and type of bird usage within the buffer zone, relative importance of the area and existing pressures on the species present."
- 6.4.3 The waterbird habitats available within, or at the edge of, the 600 metre buffer zone are:
- The north-eastern end of the open water and islands within Rosper Road Pools Local Wildlife Site.
  - A roughly 180 metre x 180 metre square grassland field at the north-eastern end of the Rosper Road Pools Local Wildlife Site, closer to the proposed turbine than the open water.
  - Part of Killingholme Foreshore near the Immingham gas jetty, labelled Sector A in the submitted shadow HRA (Skeate 2024).

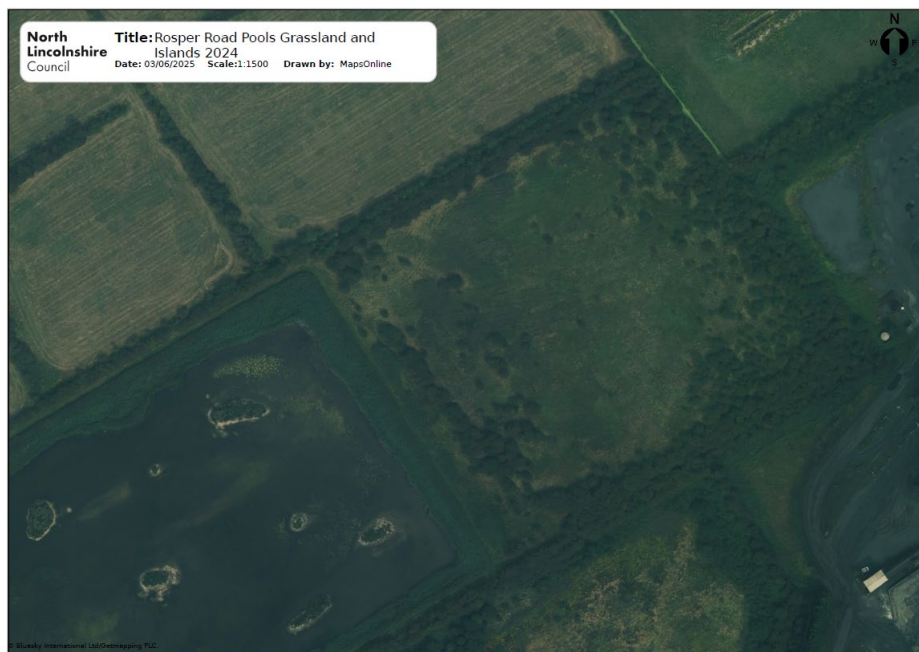
#### 6.4.4 Rosper Road Pools Open Water

- 6.4.4.1 In 2022, the islands in Rosper Road Pools supported 7-10 pairs of avocet with chicks (Riley 2022). The Shadow HRA notes that the area of Rosper Road Pools within 600 metres of the proposed turbine supports “locally significant numbers of [Black-tailed] Godwit, Mallard, Teal, Wigeon, Greenshank and Turnstone.”
- 6.4.4.2 Between December 2024 and March 2025 Rosper Road Pools supported significant numbers (>1% of the Humber Estuary 5-year mean peak) of the assemblage species greylag goose, lapwing, black-tailed godwit, redshank, green sandpiper, mallard, pintail, gadwall, shoveler, teal and wigeon (Skeate 2025a, Calbrade et al. 2025).

#### 6.4.5 Rosper Road Pools Grassland

- 6.4.5.1 This area comprises a grassland field with boundary hedgerows. Recent aerial photos (dated 19 August 2024) indicate that scrub is spreading from the hedgerows into the grassland, with a result that there is about 20% ground cover of scrub (MapsOnline) and the effective area of open habitat is reduced (see Figure 1 below). The presence of scrub tends to discourage species, such as curlew, lawing and golden plover, that require open ground with long views to scan for predators.
- 6.4.5.2 The surveys carried out by the applicant on functionally linked land, including this field numbered C15 in the Environmental Statement (ES), involved twice monthly visits during the non-breeding season between August and March with data collected over two years (August 2021-March 2022 and August 2022-March 2023). The aim of the surveys was to identify the abundance, distribution and species composition of waterbirds feeding, roosting and/or loafing in the survey areas. Each survey included seven hourly counts, starting four hours before high tide (HT-4) and continuing until two hours after high tide (HT+2) (Skeate 2024a).
- 6.4.5.3 Although field C15 was surveyed on every occasion, no SPA waterbirds were recorded at any point, and therefore no records are presented in the table 10-24 of the ES (Tom Jeynes, ABP pers. comm.). Similarly, no SPA waterbirds were recorded in this field between December 2024 and March 2025 (Skeate 2025a).

**Figure 1 Rosper Road Pools and Grassland, August 2024**



#### 6.4.6 Killingholme Foreshore

- 6.4.6.1 The area of Killingholme foreshore nearest to the proposed wind turbine is part of Humber Estuary SSSI unit 93 (HIT to Second Jetty). This unit was assessed by Natural England Field Unit in July/August 2018. The survey report noted that “Majority of unit is pioneer and low mid zone saltmarsh vegetation not previously mapped/ recently colonised. Vegetation lacking characteristic species with *Spartina* cover approx. 10%. No SAC pioneer or Atlantic salt meadow communities at baseline. Now large area of SM6/8 and SM12 not previously mapped.” (Jukes and Pawley 2023). SM6/8 and SM12 are National Vegetation Classification (NVC) saltmarsh communities characterised by species such as common cordgrass *Spartina anglica*, glassworts *Salicornia spp.*, and sea aster *Aster tripolium*.
- 6.4.6.2 The 2018 survey results indicated that much of the mudflat in this unit had rapidly succeeded to pioneer and low mid zone saltmarsh since earlier surveys. Since then, rapid habitat succession in this unit has continued. A site visit carried out on 30 May 2025 revealed that most of the SSSI unit comprised mid-upper zone vegetation including Sea Club-rush *Bolboschoenus maritimus* (S21 community), Common Reed *Phragmites australis* (S4 community), Sea Couch *Elytrigia atherica* (SM24 community) or dominant Common Couch *Elytrigia repens* (SM28) (pers.obs.). Only small patches of sea aster and oraches (*Atriplex spp.*) remained from lower zone communities. The couch grasses could not be checked closely, as the site check was carried out from the floodbank with binoculars for reasons of safety and lone-working.
- 6.4.6.3 The wintering bird records for this area (Sector A in the submitted ES) do not differentiate between records from saltmarsh and records from creeks and intertidal mud (Skeate 2024a). Species recorded in this area in significant numbers (>1% of the Humber Estuary 5-year mean peak) are avocet, dunlin, black-tailed godwit, redshank, curlew,

lapwing, ringed plover, teal, shoveler and little egret. With the possible exception of little egret, these species are all more likely to feed in significant numbers on intertidal mud and open, pioneer saltmarsh rather than upper saltmarsh dominated by dense common reed, sea club-rush or couch grasses (pers. obs.). In similar circumstances, the colonisation of Alkborough Flats by tall saltmarsh vegetation and common reed has resulted in the loss of value of the affected areas for waterfowl and wading birds, as revealed by annual monitoring over 15 years (Catley 2021). Fuller (1982) notes that, “Few waders feed on saltmarshes although many resort to them for roosting” and that deep vegetation with rank tussocks is “disadvantageous to ducks and waders.”

- 6.4.6.4** Killingholme foreshore is therefore not likely to support significant numbers of waterbirds within or close to 600 metres from the proposed wind turbine.

**Figure 2. Killingholme foreshore with tall saltmarsh habitat, May 2025**

(photograph taken from TA 18342 17798)



**6.5 Further Assessment- Rosper Road Pools and Islands**

- 6.5.1 Roughly one third of the wetland area of Rosper Road Pools lies within 459 to 600 metres of the proposed wind turbine (depending on micro-siting). Across the whole of the Pools, species recorded in significant numbers (>1% of the Humber Estuary 5-year mean peak) are breeding avocet; wintering black-tailed godwit and redshank; passage black-tailed godwit and wintering and passage gadwall, wigeon, teal, shoveler and lapwing. Taking into account 2024/25 survey data, this would also include greylag goose, lapwing, green sandpiper, mallard and pintail (Skeate 2025a, Calbrade et al. 2025). Casual observations indicate that only low numbers of birds use the south-western end of Rosper Road Pools near Rosper Road itself, potentially due to high levels of disturbance (pers. obs.). It is therefore likely that a significant percentage of the recorded waterbirds use the north-western end,

within 600 metres of the proposed turbine, where the islands and shallow water provide suitable habitat.

- 6.5.2 The applicant's shadow HRA provides a literature review of recorded displacement distance from wind turbines for different species of raptor and waterbird. Of these, only curlew, golden plover, greenshank, greylag goose, marsh harrier, whooper swan and wigeon have been associated in observations or guidance with displacement distance of over 450 metres. Of these, only greylag goose, wigeon and potentially greenshank (peak count of three birds) have occurred in significant numbers at Rosper Road.
- 6.5.3 Nature Scot advice gives notional disturbance distances of up to 500 metres for wigeon and greenshank. Only a very small section of Rosper Road Pools is likely to lie within 500 metres of the proposed wind turbine, and then only if micro-siting results in the turbine being at its most south-westerly potential position. It is likely that any displacement effects will barely be detectable given the potential for habituation and the availability of suitable habitat, most of which lies more than 500 metres from the proposed turbine.
- 6.5.4 For greylag goose, Nature Scot advice gives notional disturbance distances of 200-600 metres. However, at Goole Fields windfarm, this species has been recorded nesting within 300 metres of wind turbines (Percival et al. 2018 in Skeate 2024). A precautionary displacement distance of 300 metres has been used elsewhere and is considered appropriate for this species (Skeate 2024). As with wigeon and greenshank, it is likely that any displacement effects will barely be detectable given the potential for habituation and the availability of suitable habitat.

## **6.6 In-combination assessment**

- 6.6.1 For simplicity, a single in-combination assessment has been carried out for all impact pathways (see section 9 below).

## **6.7 Measures taken to avoid, minimise or mitigate effects**

- 6.6.1 None required.

## **6.7 Conditions or restrictions required.**

- 6.7.1 None required.

## **6.8 Determination of AEOI.**

- 6.8.1 Considering this project alone, there will be no adverse effect on the Integrity of the Humber Estuary SPA and Ramsar site arising from displacement impacts on Humber Estuary SPA/Ramsar birds.

## **7 Noise disturbance impacts – construction**

### **7.1 Likely Significant Effect**

- 7.1.1 The proposed wind turbine is located 613 m from the foreshore and 509 m from Rosper Road Pools (Skeate 2024). Noise for percussive piling, construction and wind turbine assembly has the potential to disturb breeding, wintering and passage waterbirds associated with the Humber Estuary SPA and Ramsar site. Noise disturbance can potentially cause birds to take flight, affect feeding behaviour, decrease available habitat area and increase the energy requirements of the disturbed birds.

### **7.2 Conservation Objectives**

- 7.2.1 Where a likely significant effect has been identified, displacement impacts on Humber Estuary SPA/Ramsar birds could prejudice the following elements of the Humber Estuary SPA conservation objectives in relation to the assemblage of passage waterbirds:
- 7.2.1.1 The population of each of the qualifying features, and,
  - 7.2.1.2 The distribution of the qualifying features within the site.

### **7.3 Further Assessment.**

- 7.3.1 For planning application PA/2022/1223 (ABP Westgate Development), the applicant carried out detailed noise modelling of likely construction noise from the proposal alone and compared the results with the baseline noise levels recorded at Rosper Road Pools (Riley 2022). The baseline noise monitoring was undertaken at two representative locations at Rosper Road Pools, one on the boundary with the development site, and the other on the side furthest from the development site. These showed baseline LAeq of 51-53 dB and baseline LAm<sub>ax</sub> of 70 dB. Therefore, the pools experience a variable noise environment with fairly low average levels but (over an average short time period of 1hr) frequent loud peaks. Baseline assessments at Rosper Road Pools for the VPI carbon capture development revealed very similar results (Atkinson 2023).
- 7.3.2 All construction works are predicted to result in noise levels at or below baseline levels at Rosper Road Pools, with the exception of access track construction (predicted 62 dB LAeq) and piling of foundations (predicted L<sub>max</sub> of 57dB) (Green Cat Renewables Ltd. 2024). Piling is anticipated to take two weeks (ES chapter 2), whereas construction of access tracks appears likely to take four weeks, though there is no clear description of this activity in the ES.
- 7.3.3 For other recent planning applications near Rosper Road Pools Natural England has suggested that a 3 dBA 'rule of thumb' change in noise level compared to ambient noise represents a suitable threshold above which any changes could disturb birds. A 3 dBA increase is a concept used in acoustics and sound engineering to describe a doubling of sound energy using a logarithmic scale. It is therefore not an absolute threshold above which disturbance to birds would occur, but has been applied in this area as a screening threshold above which disturbance to birds may occur, and therefore requires further assessment. Track construction and piling are predicted to result in noise levels that are >55dBA and more than 3 dBA above the baseline, thus meriting further assessment.

- 7.3.4 Given the brief duration of piling works and access track works, which will take place in a discrete location, it is considered that any potential noise disturbance effects could be minimised or avoided through use of a waterbird and construction method statement (see section 10.1 below).
- 7.3.5 At Killingholme Foreshore (the nearest point of the Humber Estuary SPA and Ramsar site) no construction activities are predicted to result in noise levels above 55 dB (LAeq or Lmax) (Green Cat Renewables Ltd. 2024). Natural England typically considers construction noise levels of 55 dBA or less as being unlikely to cause significant disturbance to interest features of the Humber Estuary SPA and Ramsar site. For example, the applicant has been advised that, “peak levels below 55 dBA can be regarded as not significant, while peak noise levels approaching 70dBA and greater are most likely to cause an adverse effect.”
- 7.3.6 In the absence of mitigation measures, it is not certain that the project would have no adverse effect on the integrity of the Humber Estuary SPA and Ramsar site in relation to construction noise disturbance of birds using Rosper Road Pools. However, it is possible to determine that the project would have no adverse effect on the integrity of the Humber Estuary SPA and Ramsar site in relation to construction noise disturbance of birds using Killingholme foreshore.

#### **7.4 In-combination assessment**

- 7.4.1 For simplicity, a single in-combination assessment has been carried out for all impact pathways (see section 9 below).

#### **7.5 Measures taken to avoid, minimise or mitigate effects**

- 7.5.1 The applicant has proposed a Bird Protection Plan as part of the proposed Construction Environment Management Plan (CEMP). This is primarily intended to avoid harm to nesting birds within the construction footprint. However, it may need to be expanded to include measures to avoid construction noise disturbance of breeding avocets and passage and wintering waterbirds using Rosper Road Pools.

#### **7.6 Conditions or restrictions required.**

- 7.6.1 Waterbird and construction method statement (see section 10.1).

#### **7.7 Determination of AEOI.**

- 7.7.1 Considering this project alone, with a condition in place as described in section 10.1, there will be no adverse effect on the Integrity of the Humber Estuary SPA and Ramsar site arising from construction noise disturbance of Humber Estuary SPA/Ramsar birds.

## **8 Injury or mortality from collision with operational turbines**

### **8.1 Likely Significant Effect**

8.1.1 Death or injury has the potential to occur where birds are struck with rotating turbine blades whilst flying in proximity to a wind turbine or farm. This has a direct effect on the population of species that use the Humber Estuary. This population-level effect is a concern where the number of birds affected by collision with turbines represents a significant proportion of the Estuary population. Natural England advise that, “the maps in the Ornithological monitoring report appear to show flightlines for a number of species across the area, including Shelduck, Bar and Black Tailed Godwit and Curlew, where the turbine is proposed, throughout the period surveys were undertaken.”

### **8.2 Conservation Objectives**

8.2.1 Where a likely significant effect has been identified, displacement impacts on Humber Estuary SPA/Ramsar birds could prejudice the following elements of the Humber Estuary SPA conservation objectives in relation to the assemblage of passage waterbirds:

8.2.1.1 The population of each of the qualifying features, and,

8.2.1.2 The distribution of the qualifying features within the site.

### **8.3 Further Assessment.**

8.3.1 The applicant carried out 96 hours of vantage point (VP) survey per VP location with increased VP watches during the spring and autumn passage periods, following advice given by Natural England (Skeate 2024a). The surveys covered the period from December 2020 to November 2022 i.e. two full years. The survey results have been used to inform a collision risk model (Skeate 2024).

8.3.2 In July 2025, the applicant submitted a report on the results of further diurnal vantage point surveys (December 2024 to March 2025) and nocturnal vantage point surveys (September to December 2024). A total of 30 hours of diurnal vantage point work was undertaken over four months, plus a total of 18 hours of nocturnal monitoring (Skeate 2025a).

8.3.3 The shadow Habitats Regulations Assessment records that, “For all species, predicted collision mortality over the 35-year project lifespan was extremely low, and does not reach even 1 bird for any species. Therefore, predicted impacts for all species are well below 1% threshold values. Therefore, collision impacts are considered of negligible magnitude for all species, and in all cases, collision impacts from the turbine are not considered to cause [an] AEOI on the qualifying interest features.”

8.3.4 It appears likely that, even if a different collision risk model were to be used with lower turbine avoidance rates, the result would still be a negligible predicted number of collision impacts.

8.3.5 The 2024/25 diurnal vantage point surveys generally revealed similar results to the previous survey period in terms of species recorded, the level of activity and the flight lines followed. However, “Teal flights were routinely recorded in the baseline monitoring but were not recorded over the winter of 2024-25 (with the exception of 5 flights recorded during the nocturnal

monitoring). The reasons for the lack of flight activity are unclear, as Teal were still observed using Rosper Road Pools” (Skeate 2024a). If the more recent survey results were fed into a collision risk model it is expected that predicted collision mortality over the 35-year project lifespan would still be extremely low.

8.3.6 In terms of nocturnal activity, the recent survey report notes that, “The nocturnal Vantage Point surveys were successful in recording nocturnal flight activity and showed that the site is (at times) overflowed by species from the Humber Estuary SPA at night. Use of the known flight route between Rosper Road Pools and the foreshore was also observed at night. However, the numbers of flights recorded were low and many species were observed on single occasions only (Skeate 2025a).”

8.3.7 “Since nocturnal activity levels are much lower than diurnal activity levels, and both turbines would be located within industrial areas, which are lit 24-7, the rotating turbine blades would be visible to birds for the vast majority of the time, except in particularly challenging weather conditions (e.g. fog). Therefore, it is anticipated that the high collision avoidance rates typically observed at offshore wind farms (and routinely used within the collision risk model) would also be maintained at night (ibid.).”

#### **8.4 In-combination assessment**

8.4.1 For simplicity, a single in-combination assessment has been carried out for all impact pathways (see section 9 below).

#### **8.5 Measures taken to avoid, minimise or mitigate effects**

8.5.1 None required.

#### **8.6 Conditions or restrictions required.**

8.6.1 None required.

#### **8.7 Determination of AEIOI**

8.7.1 Considering this project alone, there will be no adverse effect on the Integrity of the Humber Estuary SPA and Ramsar site arising from injury or mortality from collision with operational turbines.

### **9 In-combination Assessment**

9.1 At the time of writing, numerous projects are proposed near to Rosper Road Pools. Several of these could result in significant construction and/or operational noise levels. There is also potential for Rosper Road Pools to become more enclosed, potentially affecting birds’ typical flight routes to and from the site and/or discouraging waterbirds from using the site. Responding to planning application PA/2022/1223 for ABP’s Westgate development, Natural England advised that, “..potential impacts of the proposed development on the ‘openness’ of the surrounding areas of functionally linked land should be considered in more detail in the HRA. Humber Estuary SPA bird species preferentially forage/roost in large, open areas providing good visibility of approaching predators. Therefore, potential impacts of the proposed built development on sightlines and ‘openness’ of the surrounding areas, and resulting impacts on the suitability of these areas for SPA birds, should be assessed.”

9.2 Projects to be assessed here are as follows:

- the proposed VPI Carbon Capture Development (PA/2023/421);
- the proposed Phillips 66 Carbon Capture Development (PA/2023/422);
- the proposed ABP Land Adjacent to the Westgate Entrance, Port of Immingham (With Buildings Option) (PA/2022/1223);
- Able UK enabling works (PA/2023/502) north and immediately north-east of Rosper Road Pools;
- the proposed Gigastack project immediately north of Rosper Road Pools (RRP): a 100MW hydrogen electrolyser together with an underground electrical cable connection to the Hornsea Two onshore substation, water discharge and a hydrogen export pipeline to the Humber Refinery (EIA Scoping request received- PA/SCO/2022/13);
- the proposed Viking CCS Carbon Dioxide Pipeline Order (Planning Inspectorate ref EN070008)

9.3 For the ABP Westgate development, the applicant carried out detailed noise modelling (Riley 2022), taking into account potential in-combination construction noise with the above projects. Results are summarised below:

| Proposal  | Will Westgate proposal act in combination with this proposal in terms of construction noise disturbance to RRP? | Notes  |
|---|---|--|
| VPI Development (PA/2023/421)   | No  | Potential in combination effects only arise in a situation where VPI, P66 and Westgate are all under construction simultaneously and all projects undertake their noisiest construction activities at the closest point to Rosper Road Pools simultaneously. This is not considered a likely occurrence. |
| Phillips 66 Development (PA/2023/422)   | No  |  |
| Able UK Enabling Works (PA/2023/502)  | No  | Enabling works noise levels are to up to 12 dB higher than the baseline at the northeast corner of RRP waterbody. Noise levels here do not change if the Westgate proposal is added.   |
| Gigastack project PA/SCO/2022/13  | No  | This proposal site is directly adjacent to RRP more likely to cause disturbance alone than the Westgate project. This project will need to mitigate its noise levels.  |
| Viking CCS Carbon Dioxide Pipeline Order (Planning Inspectorate ref EN070008) | No  | There are no changes exceeding 3 dBA   |

9.4 No other plans or projects have been identified that would act in combination with the Westgate proposal or the wind turbine project in terms of construction noise disturbance to Rosper Road Pools. The wind turbine construction works will be limited in duration (anticipated eight weeks in total) and will only increase noise

levels a little more than 3 dBA above the baseline. Provided that the waterbird and construction method statement is followed (see Section 10.1 below), the wind turbine project is not likely to act in combination with other plans or projects in terms of construction noise disturbance of birds using Rosper Road Pools.

- 9.5 Displacement and construction noise disturbance impacts on Killingholme Foreshore due to the wind turbine project are expected to be so minor that this project is not likely to act in combination with other plans or projects in this respect.
- 9.6 The applicant's diurnal and nocturnal vantage point bird surveys revealed large numbers of bird movements between Killingholme foreshore and Rosper Road Pools, passing near to the proposed location of the wind turbine. In theory, development around Rosper Road Pools, reducing the perceived openness of the habitat could lead to a shift in bird flight patterns when flying to and from the pools, with a resulting increase in risk of collision with the wind turbine. However, given that the modelled collision risk for the wind turbine project alone is negligible, any increased risk due to developments considered in combination is not likely to be significant. A note provided by the applicant advises that, "Our Vantage Point surveys show that the key flight route used by birds at Immingham links [Rosper Road] pools and the foreshore. Due to location of both the warehouses and the turbine to the west of this flight route, neither the turbine nor the warehouses block continued use of this flight route (Skeate 2025b)." This suggests that the observed waterfowl and waders could accommodate the proposed turbine by making only a minor deviation from their current flightlines. This would not be expected to have a negative effect on birds in terms of increased energy demands and would not be expected to discourage ongoing use of Rosper Road Pools by waterbirds that are otherwise associated with the estuary.
- 9.7 Considering the wind turbine project alone in terms of the potential for displacement of waterbirds from Rosper Road Pools, it was concluded that, "It is likely that any displacement effects will barely be detectable given the potential for habituation and the availability of suitable habitat, most of which lies more than 500 metres from the proposed turbine." Although projects such as Gigastack, the ABP Westgate Development and potential future developments by Able UK on Killingholme Marsh could further reduce the openness of Rosper Road Pools, this effect will need to be considered in the Habitats Regulations Assessments for those projects. These projects will need to mitigate for their own impacts. Each project will need to demonstrate that it will not impact on the perceived openness of Rosper Road Pools, ensuring that there are no residual displacement impacts that could act in combination with the wind turbine project. Overall, the additional projects are not likely to act in combination with the wind turbine project to significantly displace waterbirds from Rosper Road Pools.

## 10 Register of conditions or restrictions required

### 10.1 Waterbird and construction method statement

10.1.1 No development shall take place until a waterbird and construction method statement has been submitted to and agreed in writing by the local planning authority. The plan shall include:

- i. details of measures that shall be put in place during construction to avoid impacts upon waterbirds using Rosper Road Pools and neighbouring fields;
- ii. a programme of construction noise and visual disturbance monitoring and bird disturbance studies to be carried out with results to be submitted to the local planning authority quarterly during the construction period;
- iii. details of thresholds for disturbance and/or displacement of waterbirds that shall trigger amendment of working methods in response to monitoring results;
- iv. details of the means by which amended sensitive working methods shall be agreed with the local planning authority;
- v. details of measures to control construction-phase light overspill into Rosper Road Pools and neighbouring fields.
- vi. details of any cold weather restrictions required to further minimise noise or visual disturbance to waterbirds when daytime minimum temperatures are at or below zero degrees Celsius between the months of October and March inclusive.

All site clearance and construction works shall be carried out strictly in accordance with the agreed waterbird and construction method statement unless otherwise agreed in writing by the local planning authority.

Reason

To protect features of the Humber Estuary SPA and Ramsar site in accordance with policies LC1 and LC2 of the North Lincolnshire Local Plan.

## 11 Overall determination of AEOI.

### 11.1 Project without restrictions or conditions.

11.1.1 The proposed project is not necessary for the management of the Humber Estuary SAC, SPA or Ramsar site.

11.1.2 The proposed project would have a likely significant effect on the Humber Estuary SPA and Ramsar site.

11.1.3 **Without mitigation, North Lincolnshire Council cannot ascertain that the proposed project would not have an adverse effect on the integrity of the Humber Estuary SPA.** The sources of the adverse effect on integrity are listed below, along with the International Nature Conservation Site interest features affected:

### 11.1.3.1 Noise disturbance impacts – construction

Rosper Road Pools supports breeding avocets in significant numbers and significant numbers of passage and wintering black-tailed godwit, redshank, lapwing, shoveler, teal, gadwall and wigeon.

## 11.2 Project with mitigation

11.2.1 The planning condition required to remove or minimise adverse effects on International Nature Conservation Site interest features is set out in section 10.1 above.

**11.2.2 Overall, it is possible to ascertain that the proposal will not have an adverse effect on the integrity of the Humber Estuary SPA and Ramsar site alone or in combination with other plans or projects.**

# Appendices

## Appendix 1 - Location of Proposals (Turbine T1) in relation to the International Nature Conservation Site (ABP Mer)



## Appendix 2 References

Calbrade, N.A., Birtles, G.A., Woodward, I.D., Feather, A., Hiza, B., Caulfield, E., Balmer, D.E., Peck, K., Wotton, S.R., Shaw, J.M., and Frost, T.M. 2025. Waterbirds in the UK 2023/24: The Wetland Bird Survey and Goose & Swan Monitoring Programme. BTO/RSPB/JNCC/NatureScot. Thetford.

Catley, G.P. 2011 Humber INCA North and North-east Lincolnshire autumn and winter bird surveys September 2010 - April 2011

Catley, G.P, 2021 Alkborough Flats: A 15-year summary of wildlife monitoring. Unpublished report

Fuller, R. J. 1982 Bird Habitats in Britain. British Trust for Ornithology and Nature Conservancy Council.

Jukes, A. & Pawley, E. 2023 Humber Estuary SSSI. NEFU Saltmarsh Surveys 2018. Natural England Field Unit.

Riley, J. 2022 Land Adjacent to the Westgate Entrance, Port of Immingham: Report to Inform Habitats Regulations Assessment. Revision 1. Unpublished report.

Skeate, E. 2024 Immingham Onshore Wind Turbines. Habitats Regulations Assessment. Unpublished report.

Skeate, E. 2024a ES Chapter 10: Ornithology. Port of Immingham Wind Turbine. Unpublished report.

Skeate, E., 2025a ABP Turbines Immingham: Winter Bird Monitoring 2024-2025. Unpublished report.

Skeate, E., 2025b Commentary on in-combination effects. E-mailed note (See Appendix 4).

Woodward, I.D., Calbrade, N.A., Birtles, A., Feather, G.A., Peck, K., Wotton, S.R., Shaw, J.M., Balmer, D.E. and Frost, T.M. 2024 Waterbirds in the UK 2022/23: The Wetland Bird Survey and Goose & Swan Monitoring Programme. BTO/RSPB/JNCC/NatureScot. Thetford.

## Appendix 3 – Consultee Responses

Date: 11 June 2024

Our ref: 477111

Your ref: PA/2024/397



Development Management  
North Lincolnshire Council  
Business Development  
Church Square House  
30-40 High Street  
Scunthorpe  
DN15 6NL

Customer Services  
Hornbeam House  
Crewe Business Park  
Electra Way  
Crewe  
Cheshire  
CW1 6GJ

T 0300 060 3900

### BY EMAIL ONLY

Dear Tanya Coggon

**Planning consultation:** Erection of 1x wind turbine (T1) 149.9m to blade tip height. Access, hardstanding, electrical infrastructure, drainage works, temporary construction compound **Location:** Land Off Southern Way Immingham Docks Immingham North East Lincolnshire

Thank you for your consultation on the above dated 22 May 2024, which was received by Natural England on the same date.

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

### SUMMARY OF NATURAL ENGLAND'S ADVICE

#### FURTHER INFORMATION REQUIRED TO DETERMINE IMPACTS ON DESIGNATED SITES

As submitted, the application could have potential significant effects on the Humber Estuary Special Protection Area (SPA), Ramsar and Site of Special Scientific Interest (SSSI). Natural England requires further information in order to determine the significance of these impacts and the scope for mitigation.

Further information should be provided in the assessment with regard to the following:

- *Screening for Likely Significant Effects*
- *Displacement impacts on Humber Estuary SPA/Ramsar/SSSI birds*
- *Noise disturbance impacts – construction*
- *In-combination assessment*

Without this information, Natural England may need to object to the proposal. Please re-consult Natural England once this information has been obtained.

Natural England's further advice on designated sites/landscapes and advice on other issues is set out below.

## THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017 (AS AMENDED)

### Internationally designated sites

The application site is within or in close proximity to a European designated site (also commonly referred to as Natura 2000 sites), and therefore has the potential to affect its interest features. European sites are afforded protection under the Conservation of Habitats and Species Regulations 2017, as amended (the 'Habitats Regulations'). The application site is in close proximity to the Humber Estuary Special Protection Area (SPA) and Special Area of Conservation (SAC) which are European sites. The site is also listed as the Humber Estuary Ramsar site<sup>1</sup> and notified at a national level as Humber Estuary Site of Special Scientific Interest (SSSI). Please see the subsequent sections of this letter for our advice relating to SSSI features.

Natural England notes that the Habitats Regulations Assessment (HRA) has not been produced by your authority, but by the applicant. As competent authority, it is your responsibility to produce the HRA and be accountable for its conclusions. We provide the advice enclosed on the assumption that your authority intends to adopt this HRA to fulfil your duty as competent authority.

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

The appropriate assessment concludes that the proposal will not result in adverse effects on the integrity of any of the sites in question. Having considered the assessment, and the measures proposed to mitigate for any adverse effects, it is the advice of Natural England that **it is not possible** to ascertain that the proposal will not result in adverse effects on the integrity of the sites in question. Natural England advises that the assessment does not currently provide enough information and/or certainty to justify the assessment conclusion and that your authority should not grant planning permission at this stage. Further assessment and consideration of mitigation options is required, and Natural England provides the below advice on the additional assessment work required.

Overall, Natural England does not consider that sufficient detail has been provided in the shadow HRA (sHRA) to fully assess the potential impacts on the Humber Estuary internationally designated sites. Additional assessment currently included in the Ornithology Chapter should be included in the sHRA, where relevant. The below advice relates to the information provided at this stage. Natural England may have further comments to make, should further information/assessment be presented.

Natural England notes that the shadow HRA (Immingham Onshore Wind Turbine Habitats Regulations Assessment May 2024) assesses the potential impacts of both Turbine 1 (T1) and Turbine 2 (T2) on the Humber Estuary internationally designated sites. However, we have provided the below advice in relation to T1 only, as we have submitted comments for T2 to North East

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<sup>1</sup> Listed or proposed Wetlands of International Importance under the Ramsar Convention (Ramsar) sites are protected as a matter of Government policy. Paragraph 118 of the National Planning Policy Framework applies the same protection measures as those in place for European sites.

Lincolnshire Local Planning Authority.

## **Additional information required**

### ***Screening for Likely Significant Effects***

Natural England advises that further information should be provided in the screening for likely significant effects stage of the shadow HRA. We advise that information should be provided on the different potential impact pathways for each relevant designated site, including details as to why a conclusion of likely significant effect or no likely significant effect has been reached for each relevant impact, for example in table format.

We note that the screening for likely significant effects states that all qualifying features of the Humber Estuary SAC are considered to be out of the zone of influence of direct and indirect effects associated with the proposed development and is therefore not considered further. However, we advise that further justification is required as to why any relevant impact pathways have been screened out, such as potential water quality impacts during construction.

### ***Displacement impacts on Humber Estuary SPA/Ramsar birds***

Natural England advise that bird displacement should be assessed as effective loss of an area of the SPA, as birds would no longer be able to access areas required to fulfil their ecological requirements. This approach is set out in Natural England's Commissioned Report, titled '[Small-scale effects: How the scale of effects has been considered in respect of plans and projects affecting European sites - a review of authoritative decisions](#)' (NECR205)<sup>2</sup>, where the scale of effect refers to the effective loss caused by displacement of species from habitat that would otherwise be available to them. We note that the sHRA currently considers displacement in a similar way to temporary noise and visual disturbance from construction. **We therefore advise that this assessment is revised (in line with the below advice on displacement distances) in order to determine the area of effective habitat loss, including functionally linked land, and assess the full extent of the potential impacts.**

Natural England considers that the proposed development has the potential to impact on birds using functionally linked land associated with the Humber Estuary SPA/Ramsar. Natural England has generally advised that if  $\geq 1\%$  of a Humber Estuary bird species population could be affected by a proposal, alone or in combination with other plans or projects, then further consideration is required. However, where species are particularly vulnerable due to declines in the Humber population, then it may not be appropriate to rely on the 1% of the estuary population as the critical threshold.

Mitigation measures may be required where lower numbers of vulnerable species are affected by a proposed development. Therefore, we advise that the numbers of birds recorded and patterns of usage by Humber Estuary SPA birds should be assessed in detail to determine potential impacts on the Humber Estuary designated site and the requirement for mitigation (if any) for effective loss of functionally linked land through displacement. For example, mitigation may be required where peak counts of relevant species do not reach 1% but are close to the 1% threshold; and/or usage of the site is consistent across the surveys; and/or multiple SPA species are recorded in relatively high

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<sup>2</sup> Chapman, C. & Tyldesley, D. 2016. Small-scale effects: How the scale of effects has been considered in respect of plans and projects affecting European sites - a review of authoritative decisions. Natural England Commissioned Reports, Number205.

numbers.

### *Rosper Road Pools*

Rosper Road Pools is located within 600m of the proposed turbine and is an area known to be used by high numbers of birds, which is evidenced by the survey work set out in Chapter 10: Ornithology of the Environmental Statement. Due to the proximity of the turbine, loss of functionally linked land associated with the Humber Estuary SPA/ Ramsar should be assessed in terms of a worst-case scenario and therefore total avoidance of Rosper Road Pools should be considered. In the absence of mitigation, Natural England would find it difficult to agree to a conclusion of no adverse effects on the integrity of the Humber Estuary SPA/ Ramsar.

### *Nocturnal Surveys*

Natural England notes that no nocturnal surveys have been undertaken. Natural England advises that nocturnal surveys are important to understanding all the potential impacts on the SPA species in this location. Waders will continue to forage at night and can be distributed differently to the diurnal context. We note that a decision was taken to assume that species such as curlew, lapwing and golden plover are equally active at night as during the day. However, Natural England does not agree that this approach is appropriate, as studies have shown that wader species have different distributions at night<sup>3</sup>. If no nocturnal surveys are completed, we advise that a more precautionary approach should be taken.

### *Displacement distances*

Natural England does not agree with the displacement distances applied in the assessment. We note that median species-specific displacement distance cited in Chapter 7 (Birds: displacement – Hermann Hötker) in Perrow (ed) (2017)<sup>4</sup> have been applied to the shadow HRA. Natural England does not consider that this approach is suitable in the context of the HRA for a number of reasons, which are detailed below.

When assessing potential displacement and therefore effective habitat loss at a site which supports a range of individually qualifying species and a multi-species assemblage, it is considered that a suitably precautionary approach should be taken. Based on the available evidence, Natural England advises that a figure of 600m is used as it is the maximum '*reliably recorded distance*'.<sup>5</sup>

### *Variability of recorded distances*

The variability of recorded displacement distances is acknowledged. Chapter 7 (Birds: displacement – Hermann Hötker) in Perrow (ed) (2017)<sup>4</sup> review paper shows a wide range of recorded distances up to which displacement impacts could be noted for relevant species. However, Natural England considers that a median figure is not necessarily the best measure to use when assessing impacts from individual proposals. It is important to note that distances in table 7.8 in Chapter 7 of Perrow (ed) (2017)<sup>4</sup> are referred to by Hötker as '*minimum distances*' of different bird species from wind turbines, and the median and mean distances from the literature review set out in the table are

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<sup>3</sup> Smit, C.J. & Visser, G.J.M. 1993. Effects of disturbance on shorebirds: a summary of existing knowledge from the Dutch Wadden Sea and Delta area. In: Disturbance to waterfowl on estuaries. Davidson, N. & Rothwell, P. Wader Study Group Bulletin 68, Special Issue

<sup>4</sup> Perrow, M. R. (ed) (2017) Wildlife and Wind Farms, Conflicts and Solutions. Volume 1 Onshore: Potential Effects. Pelagic Publishing, Exeter, UK.

<sup>5</sup> Drewitt, A.L. and Langston, R.H.W. (2006) Assessing the Impacts of Wind Farms on Birds. Ibis, 148, 29-42.

perceived as minima<sup>4</sup>. It is therefore considered implicit that there may be displacement at a greater distance, and this is demonstrated in the referenced papers. For example, for non-breeding geese a median distance of 300m is quoted; however, there are almost as many studies (6 out of 13) showing disturbance at distances at or greater than 450m as there are for 50-350m (7 out of 13)<sup>4</sup>.

Natural England highlights that Chapter 7 (Birds: displacement – Hermann Hötker) in Perrow (ed) (2017)<sup>3</sup> states that swans, geese, ducks and waders (species relevant to this application) '*are groups established as being most wary of wind farms*'. Hötker goes on to say that '*in such species the effect of wind farms can be noticed up to 800m for golden plover (Pederson and Poulsen 1991<sup>6</sup>) and Eurasian curlew (Pearce-Higgins et al 2009<sup>7</sup>)*'. Drewitt and Langston (2006)<sup>5</sup> also state that '*disturbance distances (i.e. the distance from wind farms up to which birds are absent or less abundant than expected) up to 800m (including zero) have been recorded for wintering waterfowl (Pedersen & Poulsen 1991<sup>6</sup>) though 600m is widely accepted as the maximum reliably recorded distance*'<sup>7</sup>.

Natural England also advise that the height of the wind turbine should be taken into consideration when assessing the displacement impacts on birds. A study on repowering of wind farms on birds showed significant relationships between turbine height and avoidance distance of species including lapwing and golden plover outside the breeding season, with an increase in minimum avoidance distance with increased turbine size<sup>8</sup>. Some of the studies included in the literature review in Perrow (ed) (2017)<sup>3</sup> may have related to cases of older, smaller turbines and therefore may not be representative of the current situation with larger turbines.

We note that page 15 of the shadow HRA states that '*it is notable that many studies have not identified any displacement effects at all*'. Natural England does not dispute that some studies show no effect; however, we do not consider that this negates the validity of those cases where an effect was demonstrated.

**Overall, Natural England's advice remains that a figure of 600m is used. We acknowledge that in some situations/seasons and for some species it may be more and in others it may be less. However, given the available evidence, it is considered that this generic measure is reasonable and precautionary when assessing impacts from proposals on important sites supporting sensitive species.**

#### *Disturbance/habituation*

We note that the justification provided for using the median distance in the sHRA is that '*the use of the median is advisable, and considered precautionary within the context of Immingham, which is an industrial site where birds are known to feed and roost in close proximity to large structures and adjacent to operational areas known to have higher ambient noise levels than the source levels produced by the proposed turbines*'. However, Natural England does not agree with reliance on this justification in the HRA. An operational wind turbine is not considered to be directly comparable to existing usage of the relevant areas, in this context, next to a coal yard.

In addition, birds might appear to have successfully habituated when in reality they have no choice

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<sup>6</sup> Pedersen, M.B. & Poulsen, E. 1991. Impact of a 90 m/2MW wind turbine on birds. Avian responses to the implementation of the Tjaereborg wind turbine at the Danish Wadden Sea. Danske Vildtundersøgelser Hæfte 47. Rønde, Denmark: Danmarks Miljøundersøgelser

<sup>7</sup> Pearce-Higgins, J. W., Stephen, L., Langston, R. H., Bainbridge, I. P., & Bullman, R. (2009). The distribution of breeding birds around upland wind farms. *Journal of Applied ecology*, 46(6), 1323-1331.

<sup>8</sup> Hotker, H. (2006). The impact of repowering of wind farms on birds and bats. Report by Nature and Biodiversity Conservation Union (NABU)

but to remain in disturbed habitats and withstand the potential consequences of poor foraging and increased energy expenditure. For example, Fleming et al. (2001) reported apparent habituation of wildfowl to mean noise levels from nearby military aircraft training activities equivalent to 60 dBA over a period of 24 hours<sup>9</sup>. Time-activity and heart-rate data suggested a minimum impact of aircraft activity and associated noise on wildfowl energetics. However, reproductive success (duckling growth rate and survival) in a penned experimental population of black ducks in the same location was dramatically reduced in comparison to penned controls in a lower noise site<sup>9</sup>.

We consider that due to high levels of existing disturbance at the site, birds currently using the site are likely to be experiencing multiple physiological stressors. It is also important to note that birds do not need to fly away from the source of disturbance to be significantly affected. There is evidence that birds are less likely to fly during harsh weather conditions, when food is limited and energy demands are higher, or when there are no alternative foraging areas nearby<sup>10</sup>. Also, although birds can apparently habituate to disturbance, in some cases the opposite effect can occur, when an accumulation of effects of disturbance from different sources combine to result in a disturbance effect far greater than that of each individual source. This phenomenon is sometimes referred to as 'facilitation' and it can be seen when the disturbance effect of similar noise levels varies depending on the presence of other sources of disturbance, including recreational activities<sup>11</sup>. **Therefore, we advise that a more precautionary approach is taken to the assessment of perceived sensitivity to additional disturbance or displacement. As detailed above, existing pressures on birds using the SPA should be taken into account.**

#### *Assessment of displacement to flightlines*

Page 15 of the sHRA states that "*there is flight activity within the vicinity of Turbine 1.*" But "*these small flights are relatively confined to Rosper Road Pools and do not overlap with Turbine 1.*" Natural England notes the maps in the Ornithological monitoring report appear to show flightlines for a number of species across the area, including Shelduck, Bar and Black Tailed Godwit and Curlew, where the turbine is proposed, throughout the period surveys were undertaken. We advise that further information should be provided in the sHRA on the number of recorded flights through this area throughout the vantage point surveys to better quantify this and demonstrate why the predicted flight adjustments are considered to be of '*small magnitude*'.

We note that 10.6.2.2 of Chapter 10: Ornithology states that "*the energetic costs of deviating around the turbines would be considered of negligible magnitude and therefore is also assessed as insignificant.*" However, Natural England does not agree with this conclusion in the absence of clear justification, and further information is needed to make an informed assessment.

It should be noted that in situations where birds are facing other pressures due to existing disturbances or times of adverse weather conditions, this expenditure will be additive.

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<sup>9</sup> Fleming, W.J., Dubovsky, J.A., Collazo, J.A., Temple, E.R. & Conomy, J.T. 2001. An overview of studies to assess the effects of military aircraft training activities on waterfowl on Piney Island, North Carolina. Terra Borealis: Effects of Noise on Wildlife Conference. Conference Proceedings Happy Valley-Goose Bay, Labrador, August 22-23. 2000. No2. Institute for Environmental Monitoring and Research.

<sup>10</sup> Gill, J.A., Norris, K. & Sutherland, W.J. 2001. Why behavioural responses may not reflect the population consequences of human disturbance. Biological Conservation 97:265-268

<sup>11</sup> Smit, C.J. & Visser, G.J.M. 1993. Effects of disturbance on shorebirds: a summary of existing knowledge from the Dutch Wadden Sea and Delta area. In: Disturbance to waterfowl on estuaries. Davidson, N. & Rothwell, P. Wader Study Group Bulletin 68, Special Issue

### *Noise disturbance impacts – construction*

Natural England note that a 200-300m zone of influence is used in the shadow HRA for assessing noise disturbance impacts from percussive piling. Clarification should be provided on why this is considered to be a suitable zone of influence, and whether this is informed by the predicted noise levels associated with the works.

### *In-combination assessment*

Natural England highlights that the shadow HRA does not appear to include an in-combination assessment following the screening stage of the HRA. We assume that all the likely significant effects identified are 'alone' as the sHRA states that likely significant effects alone and in combination have been assessed together. The in-combination requirement makes sure that the effects of numerous proposals, which alone would not result in a significant effect, are assessed to determine whether their combined effect would be significant enough to require more detailed assessment. Therefore, where there are small effects which are not significant alone, these should be assessed alongside small effects of other projects which were not significant alone.

Natural England notes that table 3 considers the 'in combination' effects at the appropriate assessment stage. However, the current sHRA does not provide a sufficient in-combination assessment. We advise that this assessment should identify where impacts have been fully avoided through mitigation and where there is still a residual impact that could act in combination. If mitigation or compensation has completely avoided or removed the effect that this would not act in combination with other projects. However, if there is a residual effect after an appropriate assessment has been carried out of the project alone, then there is a need for that appropriate assessment to further consider the impact of this residual effect in-combination with other plans and projects. We highlight that the in-combination assessment should therefore assess whether these residual effects may combine/interact with those associated with other relevant plans/projects to produce an effect that is greater than the effect of the project alone. Overall, the assessment should determine whether there is an adverse effect on site integrity in-combination for the relevant impact pathways.

In Natural England's opinion the competent authority can apply their professional judgment when considering the scope of the in-combination assessment. An exhaustive search for relevant plans and projects by a competent authority is normally required to comply with the Habitats Regulations. However, a pragmatic approach to identifying the most pertinent ones may need to be taken where there is a large number of proposals. Where a competent authority chooses to take a more pragmatic approach, suitable justification should be provided. Therefore, information should be provided on why only plans/projects up to 2km away from the proposal site have been included.

Natural England will review the in-combination assessment in more detail after further information is provided about impacts from the project alone, as detailed above.

### *Other advice*

#### *Strategic approach to the HRA*

Natural England would encourage the applicant to provide information to inform a strategic HRA, which fully assesses the impact of all of their currently proposed onshore wind turbines within the

Humber Ports. We consider that this would be a more effective approach to determining the full extent of the environmental impacts of this project on the Humber Estuary internationally designated sites and may enable a more streamlined approach through the planning process.

We recommend that consideration should be given to Regulation 67 of the Conservation of Habitats and Species Regulations 2017 (as amended)<sup>12</sup> regarding coordination where more than one competent authority is involved.

#### *Mitigation Areas - South Humber Gateway Mitigation Strategy (SHMS)*

Natural England has been working with North East Lincolnshire Council and other estuary stakeholders for many years to deliver a strategic approach to mitigation within the South Humber Gateway (for impacts associated with the loss of land functionally linked to the Humber Estuary SPA/Ramsar site). Natural England believes this is the most effective way to mitigate for impacts on functionally linked land. As the proposed development site falls within the South Humber Bank mitigation zone, the Applicant should liaise with your Authority regarding how they should contribute to the strategic approach, if appropriate.

### **WILDLIFE AND COUNTRYSIDE ACT 1981 (AS AMENDED)**

#### **Sites of Special Scientific Interest**

Natural England notes that the application site is located in proximity to the Humber Estuary SSSI. Based on the plans submitted, Natural England considers that the proposed development could have potential significant effects on the interest features for which the Humber Estuary SSSI site has been notified. Natural England requires further information in order to determine the significance of these impacts. Our advice regarding the potential impacts upon the Humber Estuary SSSI coincide with our advice regarding the potential impacts upon the Humber Estuary SPA / SAC / Ramsar as detailed above.

Please note that if your authority is minded to grant planning permission contrary to the advice in this letter, you are required under Section 28I (6) of the Wildlife and Countryside Act 1981 (as amended) to notify Natural England of the permission, the terms on which it is proposed to grant it and how, if at all, your authority has taken account of Natural England's advice. You must also allow a further period of 21 days before the operation can commence.

#### **Other advice**

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

Please consult us again once the information requested above, has been provided.

If you have any queries relating to the advice in this letter please contact me at

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<sup>12</sup>The Conservation of Habitats and Species Regulations 2017 [\\_The Conservation of Habitats and Species Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

Yours sincerely

Martha Griffin  
Yorkshire and Northern Lincolnshire Area Team  
Natural England

## Annex A- Additional Advice

Natural England offers the following additional advice:

### Protected Landscapes

Paragraph 182 of the [National Planning Policy Framework](#) (NPPF) requires great weight to be given to conserving and enhancing landscape and scenic beauty within Areas of Outstanding Natural Beauty (known as National Landscapes), National Parks, and the Broads and states that the scale and extent of development within all these areas should be limited. Paragraph 183 requires exceptional circumstances to be demonstrated to justify major development within a designated landscape and sets out criteria which should be applied in considering relevant development proposals. [Section 245](#) of the Levelling Up and Regeneration Act 2023 places a duty on relevant authorities (including local planning authorities) to seek to further the statutory purposes of a National Park, the Broads or an Area of Outstanding Natural Beauty in England in exercising their functions. This duty also applies to proposals outside the designated area but impacting on its natural beauty.

The local planning authority should carefully consider any impacts on the statutory purposes of protected landscapes and their settings in line with the NPPF, relevant development plan policies and the Section 245 duty. The relevant National Landscape Partnership or Conservation Board may be able to offer advice on the impacts of the proposal on the natural beauty of the area and the aims and objectives of the statutory management plan, as well as environmental enhancement opportunities. Where available, a local Landscape Character Assessment can also be a helpful guide to the landscape's sensitivity to development and its capacity to accommodate proposed development.

### Wider landscapes

Paragraph 180 of the NPPF highlights the need to protect and enhance valued landscapes through the planning system. This application may present opportunities to protect and enhance locally valued landscapes, including any local landscape designations. You may want to consider whether any local landscape features or characteristics (such as ponds, woodland, or dry-stone walls) could be incorporated into the development to respond to and enhance local landscape character and distinctiveness, in line with any local landscape character assessments. Where the impacts of development are likely to be significant, a Landscape and Visual Impact Assessment should be provided with the proposal to inform decision making. We refer you to the [Landscape Institute](#) Guidelines for Landscape and Visual Impact Assessment for further guidance.

### Biodiversity duty

The local planning authority has a [duty](#) to conserve and enhance biodiversity as part of its decision making. Further information is available [here](#).

### Designated nature conservation sites

Paragraphs 186-188 of the NPPF set out the principles for determining applications impacting on Sites of Special Scientific Interest (SSSI) and habitats sites. Both the direct and indirect impacts of the development should be considered. A Habitats Regulations Assessment is needed where there is a likely significant effect on a habitats site and Natural England must be consulted on '[appropriate assessments](#)'. Natural England must also be consulted where development is in or likely to affect a SSSI and provides advice on potential impacts on SSSIs either via [Impact Risk Zones](#) or as standard or bespoke consultation responses.

### Protected Species

Natural England has produced [standing advice](#) to help planning authorities understand the impact of particular developments on protected species. Natural England will only provide bespoke advice on protected species where they form part of a Site of Special Scientific Interest or in exceptional circumstances. A protected species [licence](#) may be required in certain cases.

### **Local sites and priority habitats and species**

The local planning authority should consider the impacts of the proposed development on any local wildlife or geodiversity site, in line with paragraphs 180, 181 and 185 of the NPPF and any relevant development plan policy. There may also be opportunities to enhance local sites and improve their connectivity to help nature's recovery. Natural England does not hold locally specific information on local sites and recommends further information is obtained from appropriate bodies such as the local records centre, wildlife trust, geoconservation groups or recording societies. Emerging [Local Nature Recovery Strategies](#) may also provide further useful information.

Priority habitats and species are of particular importance for nature conservation and are included in the England Biodiversity List published under section 41 of the Natural Environment and Rural Communities Act 2006. Most priority habitats will be mapped either as Sites of Special Scientific Interest on the Magic website or as Local Wildlife Sites. A list of priority habitats and species can be found on [Gov.uk](#).

Natural England does not routinely hold species data. Such data should be collected when impacts on priority habitats or species are considered likely. Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land, further information including links to the open mosaic habitats inventory can be found [here](#).

### **Biodiversity and wider environmental gains**

Development should provide net gains for biodiversity in line with the NPPF paragraphs 180(d), 185 and 186. Major development (defined in the [NPPF glossary](#)) is required by law to deliver a biodiversity gain of at least 10% from 12 February 2024 and this requirement is expected to be extended to smaller scale development in spring 2024. For nationally significant infrastructure projects (NSIPs), it is anticipated that the requirement for biodiversity net gain will be implemented from 2025.

Further information on biodiversity net gain, including [draft Planning Practice Guidance](#), can be found [here](#).

The statutory [Biodiversity Metric](#) should be used to calculate biodiversity losses and gains for terrestrial and intertidal habitats and can be used to inform any development project. For small development sites, the [Small Sites Metric](#) may be used. This is a simplified version of the [Biodiversity Metric](#) and is designed for use where certain criteria are met.

**The mitigation hierarchy as set out in paragraph 186 of the NPPF should be followed to firstly consider what existing habitats within the site can be retained or enhanced. Where on-site measures are not possible, provision off-site will need to be considered.**

Development also provides opportunities to secure wider biodiversity enhancements and environmental gains, as outlined in the NPPF (paragraphs 8, 74, 108, 124, 180, 181 and 186). Opportunities for enhancement might include incorporating features to support specific species within the design of new buildings such as swift or bat boxes or designing lighting to encourage wildlife.

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

Further information on biodiversity net gain, the mitigation hierarchy and wider environmental net gain can be found in government [Planning Practice Guidance for the natural environment](#).

### **Ancient woodland, ancient and veteran trees**

The local planning authority should consider any impacts on ancient woodland and ancient and veteran trees in line with paragraph 186 of the NPPF. Natural England maintains the Ancient Woodland [Inventory](#) which can help identify ancient woodland. Natural England and the Forestry Commission have produced [standing advice](#) for planning authorities in relation to ancient woodland and ancient and veteran trees. It should be taken into account when determining relevant planning applications. Natural England will only provide bespoke advice on ancient woodland, ancient and veteran trees where they form part of a Site of Special Scientific Interest or in exceptional circumstances.

### **Best and most versatile agricultural land and soils**

Local planning authorities are responsible for ensuring that they have sufficient detailed agricultural land classification (ALC) information to apply NPPF policies (Paragraphs 180 and 181). This is the case regardless of whether the proposed development is sufficiently large to consult Natural England.

Further information is contained in [GOV.UK guidance](#) Agricultural Land Classification information is available on the [Magic](#) website and the [Data.Gov.uk](#) website

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

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

### **[Green Infrastructure](#)**

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

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

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

### **Access and Recreation**

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

### **Rights of Way, Access land, Coastal access and National Trails**

Paragraphs 104 and 180 of the NPPF highlight the important of public rights of way and access. Development should consider potential impacts on access land, common land, rights of way and coastal access routes in the vicinity of the development. Consideration should also be given to the potential impacts on the any nearby National Trails. The National Trails website [www.nationaltrail.co.uk](http://www.nationaltrail.co.uk) provides information including contact details for the National Trail Officer. Appropriate mitigation measures should be incorporated for any adverse impacts.

Further information is set out in Planning Practice Guidance on the [natural environment](#)

Date: 07 November 2024



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**BY EMAIL ONLY**

Dear Tanya,

Natural England would like to provide a clarification to our consultation response letter to PA/2024/39, dated 17 July 2024.

Based on the information provided to date, we are maintaining our position regarding this application as set out in our statutory consultation response. However, the Applicant has raised specific concerns regarding the wording “displacement during operation should be assessed as an effective loss of habitat, and that a buffer zone of 600 m should be used for calculating the predicted extent of displacement”. They have interpreted that this could potentially infer that we advise that damaging levels of displacement from onshore wind turbines will definitely occur on habitats within 600 m. This was not our intention.

Therefore, we would like to clarify that Natural England’s advice is that further assessment (within the Appropriate Assessment) should be carried out within the recommended 600 m buffer zone to determine the predicted level and effects of displacement, informed by site-specific factors such as the habitats available, extent and type of bird usage within the buffer zone, relative importance of the area and existing pressures on the species present.

Displacement will therefore not necessarily lead to adverse effect on integrity of designated sites from impacts to supporting habitats located within 600 m of proposed turbines in all cases. As stated in our consultation response letter, a key consideration in the assessment of potential impacts from displacement will be the ecological functioning of the supporting habitat within the buffer zone of the proposal.

This clarification does not change our current advice or position for this case, but is intended to ensure Natural England’s recommended approach to assessing displacement impacts from onshore wind turbines is not misconstrued.

We will continue to work with the Applicant through our Discretionary Advice Service to review the further information collated by ABPmer for this case prior to resubmission to your Authority. However, we reiterate that it is the responsibility of your Authority to complete the Habitats Regulations Assessment as the competent authority, taking account of the information provided by ABPmer and statutory advice from Natural England.

Please let me know if you have any questions regarding Natural England’s advice on this proposal. Please send any further consultations to [consultations@naturalengland.org.uk](mailto:consultations@naturalengland.org.uk).

Kind regards,

Alice Megaw  
Yorkshire and Northern Lincolnshire Area Team

Natural England  
Date: 21 January 2025  
Our ref: 496800  
Your ref: PA/2024/397



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**BY EMAIL ONLY**

Dear Ms Coggan

**Planning consultation:** PA/2024/397 Amendments HRA Supplied - one wind turbine, measuring up to 149.9m to blade tip height . Associated infrastructure include access tracks, hardstanding, electrical infrastructure, drainage works, substation, temporary laydown areas and construction compound.

**Location:** Port of Immingham.

Thank you for your consultation dated 11 December 2024, the contents of which are noted.

We refer you to our previous advice on the impact of this application on the Humber Estuary designated sites, which is contained in our correspondence dated 11<sup>th</sup> June 2024. Natural England is currently undertaking a national review of available evidence to inform our guidance on onshore wind planning applications. Until we establish the outcome of that review, we are unable to provide updated advice.

We advise that it is the responsibility of the applicant to provide sufficient information about their proposed project and evidence to support assessment conclusions on the environmental impacts. It is for the competent authority to assess the scale, extent, timing, duration, reversibility and likelihood of any potential or increased risk of effects on designated sites, and to consider any mitigation which may be needed to avoid or minimize any adverse effects.

At this time, it is not possible for Natural England to advise with certainty that all impacts have been adequately assessed and will not hinder the conservation objectives for the Humber Estuary Special Protection Area (SPA) and Ramsar site.

Natural England will keep you informed of the progress with the evidence review. We are committed to providing detailed advice as soon as possible when the review is completed and we have been consulted on your authority's Habitats Regulations Assessment (HRA).

However, we acknowledge that your Authority is the decision-maker and may determine the planning application in the meantime. It is for your Authority to determine whether or not the proposal is consistent with national and local environmental policies.

Please let me know if you have any questions regarding this letter.

Yours sincerely,

Alice Megaw  
Yorkshire and Northern Lincolnshire Area Team  
Natural England

## **Appendix 4- Additional Information Provided by the Applicant**

Skeate, E., 2025b Commentary on in-combination effects. E-mailed note.

I have read the HRA for Westgate and have considered the potential for in-combination impacts of Westgate and the onshore turbine (T1) on Rosper Road pools. I understand that the concerns raised relate to potential impacts on habitat value (enclosing an open habitat), and to potential barrier effects (i.e. whether the addition of structures will deter birds from overflying the area).

Therefore, I have split these into two impact pathways:

- **Potential in-combination effects on birds flying to and from RR Pools**
- **Potential in-combination effects on habitat ‘openness’ and/or habitat value**

These are discussed below:

### **Potential in-combination effects on birds flying to and from RR Pools**

- Our Vantage Point surveys show that the key flight route used by birds at Immingham links RR pools and the foreshore. Due to location of both the warehouses and the turbine to the west of this flight route, neither the turbine nor the warehouses block continued use of this flight route.
- The HRA for Westgate states that the closest building will be 8-10m (the same height as the fire station). Since one warehouse is the same height as an existing local structure (and anticipating the other warehouse would not be much taller), these buildings would not be anticipated to result in any sort of barrier effect. Tagging undertaken on the Humber to look at habitat use of overwintering Curlew (one of the most sensitive species using RR Pools) confirms significant use of terrestrial habitats suggesting birds routinely overfly buildings (Mander *et al* 2022). Other species which use RR Pools, such as Lapwing and Golden Plover already routinely make flights over developed areas to pass between the foreshore and arable habitats inland. GPS tagging data of waterbirds (Curlew, Oystercatcher and Wigeon) carried out by ABPmer in Southampton Water (ABPmer 2020) also suggests birds regularly fly over port and industrial areas between foraging and roosting areas, including in close proximity to buildings and port infrastructure such as cranes. Although the turbine is taller than the warehouses, and therefore is more likely to be avoided rather than overflown, it is relatively distant from RR Pools (509m away). Birds may deviate flight routes subtly to avoid the turbine, although the adjustments needed to do this would be small in scale (an additional 100m at most, which would be flown in <10 seconds). Therefore neither development, either considered separately or together, would be expected to prevent birds from transiting to/from RR Pools, or overflying the site.

### **Potential in-combination effects on habitat ‘openness’ and/or habitat value**

- Habitat value can be affected by noise, visual impacts, human activity and scrub encroachment.
- Although open habitats are typically preferred by waders, nonetheless wader roosts can abut developed areas if the habitat remains undisturbed or if activities are predictable or are confined to specific areas. For example, at Old Fleet Basin in Hull the wader roost is located adjacent to particularly high industrial structures (the chimneys of Saltend Power Station).
- Although the Rosper Road pools itself is open, scrub has accumulated around the pool edges, particularly along the north eastern edge adjacent to Westgate and in the adjacent field to the north-east near the turbine location. The site is also relatively disturbed in terms of ambient noise, as it is located ~170m from the coal yard at Immingham. Nonetheless, the site remains well-used by coastal waterbirds, which are habituated to existing conditions.
- In relation to noise, the turbine is far enough away that operational noise would not be detectable to birds using RR Pools: even the maximum noise levels that could result from the turbine are well below ambient levels. Similarly, Westgate will adopt mitigation in the form of a 9m noise barrier so that there will be no increase in ambient noise levels resulting from the warehouses. Therefore, no increase in ambient noise would occur from either development alone or in-combination.
- Bird disturbance typically occurs through a combination of simultaneous visual and noise stimuli. In relation to the wind turbine, it is difficult separating the effects of noise and visual impacts on the birds. However, data on realised displacement responses of coastal waterbirds to similar (or larger) onshore wind farm arrays, provides a clear indication on the likely level of effect from combined noise and visual impacts resulting from the wind turbine. Although (in a worst-case scenario) onshore wind turbines can result in the displacement of birds, the zone of influence is limited to 200-300m (depending on the species) (Hötker 2017). Since RR Pools is >500m from the turbine, displacement effects at this distance would not be predicted, even though the turbine would still be visible to birds using RR Pools.
- In relation to Westgate, the 9m noise barrier also provides visual screening from the nearest warehouse, which would be located at least 15m from the site boundary and 40m from the island within RR Pools. The set-back distance of 15m is proposed to limit visual impacts of the buildings, and also the noise barrier itself. The existing hedge is 3m, and the noise barrier is three times the hedge height at 9m, but the set-back distance of 15m enables the barrier to be located further away to minimise visual impacts of the barrier itself. Assuming the barrier is tolerated, it would visually screen the closest warehouse, as the warehouse would only be 8-10m tall. It is notable that the height of the second building is not stated in the HRA: if it were to be particularly tall this could result in visual impacts on birds using Rosper Road Pools. However, if similar to the height of the first building, the 9m noise barrier would provide visual screening (if the barrier does not result in any detectable displacement impacts).

- The wind turbine would not be anticipated to result in visual impacts due to its distance from RR Pools, and the strength of scientific evidence supporting the displacement distances used within the assessment. The mitigation proposed to tackle noise impacts at Westgate would also provide visual screening. Therefore, assuming the Westgate mitigation is effective, visual impacts would not be anticipated from either development alone or in-combination.

## **References**

ABPmer (2020). Solent Waterbird Tracking, 2019 – 2020, ABPmer Report No. R.3463.A report produced by ABPmer for ABP Southampton, August 2020.

Mander, L., Nicholson, I., Green, R.M.W., Dodd, S.G., Forster, R.M & Burton, N.H.K (2022). Individual, sexual and temporal variation in the winter home range sizes of GPS-tagged Eurasian Curlews *Numenius arquata*, *Bird Study*, 69:1-2, 39-52, DOI: 10.1080/00063657.2022.2144129.