



Department for  
Energy Security  
& Net Zero

# Habitats Regulations Assessment for an Application Under the Planning Act 2008

## Viking CCS Pipeline

Regulation 63 of the Conservation of Habitats  
and Species Regulations 2017

April 2025



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## List of abbreviations

Term	Abbreviation
Adverse Effect on Integrity	AEoI
Appropriate Assessment	AA
Construction Environmental Management Plan	CEMP
Development Consent Order	DCO
Environmental Statement	ES
European Economic Area	EEA
Examining Authority	ExA
Functionally Linked Land	FLL
Habitat Regulations Assessment	HRA
Interested Parties	IPs
Likely Significant Effect	LSE
Nationally Significant Infrastructure Project	NSIP
National Site Network	NSN
Natural England	NE
Mean Low Water Spring	MLWS
Report on the Implications for European Sites	RIES
Special Areas of Conservation	SACs
Special Protection Areas	SPAs
Statement of Common Ground	SoCG
Statutory Nature Conservation Body	SNCB
Supplementary Advice on Conservation Objectives	SACO
The Planning Inspectorate	PINS

# 1 Introduction

## 1.1 Background

This is a record of the Habitats Regulations Assessment (“HRA”) that the Secretary of State for Energy Security and Net Zero (“the Secretary of State”) has undertaken under the Conservation of Habitats and Species Regulations 2017<sup>1</sup> (“the Habitats Regulations”) as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (“the 2019 Regulations”) in respect of the Development Consent Order (“DCO”) for the Viking Carbon Capture and Storage (CCS) Pipeline and its associated infrastructure (the “Project”). The Examining Authority (“ExA”) defines this as the “Proposed Development”. For the purposes of these Regulations, the Secretary of State is the competent authority.

The Project comprises a new 24 inch (”) (609 mm) diameter onshore pipeline of approximately 55.5 km in length, which will transport Carbon Dioxide (CO<sub>2</sub>) from the Immingham industrial area to the Theddlethorpe area on the Lincolnshire coast, where it will connect into the existing 36” (921 mm) diameter offshore Lincolnshire Offshore Gas Gathering System (LOGGS) pipeline. The Project intends to transport compressed and conditioned CO<sub>2</sub> received at a facility at Immingham to store in depleted gas reservoirs under the Southern North Sea. The offshore elements of the Project, including the transport of CO<sub>2</sub> through the LOGGS pipeline to the Viking gas fields under the North Sea, are subject to a separate consenting process.

Onshore pipelines over 16.093 km (10 miles) in length are classified as Nationally Significant Infrastructure Projects (NSIPs) under section 14(1)(g) of the Planning Act 2008 (as amended) and require development consent to be granted under section 31 of the Planning Act 2008 for their development. In accordance with the Planning Act 2008, a DCO is required to allow the construction, operation and maintenance of the Project.

The Project was accepted by the Planning Inspectorate (“PINS”) on 17 November 2023 and three Inspectors were appointed as the Examining Authority (“ExA”) for the Application. The Examination of the Project application began on 26 March 2024 and concluded on 26 September 2024. The ExA submitted its report of the examination including its recommendation (“the ExA’s Report”) to the Secretary of State on 05 December 2024. Numbered references to the ExA’s Report are presented in the format “[ER \*.\*]”.

This HRA also contains a consideration of the potential effects of the Project upon protected sites in European Economic Area (“EEA”) States (“transboundary sites”). This is described in more detail in Section 6.

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<sup>1</sup> <https://www.legislation.gov.uk/ukxi/2017/1012/contents>

## 1.2 Habitats Regulations Assessment

The Habitats Regulations aim to ensure the long-term conservation of certain species and habitats by protecting them from possible adverse effects of plans and projects. In the UK, the Habitats Regulations apply as far as the 12 nautical miles limit of territorial waters.

The Habitats Regulations provide for the designation of sites for the protection of habitats and species of international importance. These sites are called Special Areas of Conservation (“SACs”). The Regulations also provide for the classification of sites for the protection of rare and vulnerable birds and for regularly occurring migratory species within the UK and internationally. These sites are called Special Protection Areas (“SPAs”). SACs and SPAs together, referred to as European sites in legislation, form part of the UK’s National Site Network (“NSN”).

The Convention on Wetlands of International Importance 1972 (“the Ramsar Convention”) provides for the listing of wetlands of international importance. These sites are called Ramsar sites. Government policy is to afford Ramsar sites in the United Kingdom the same protection as sites within the NSN (collectively referred to in this HRA as “protected sites”).

Regulation 63 of the Habitats Regulations provides that:

*...before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in-combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, [the competent authority] must make an appropriate assessment of the implications for that site in view of that site’s conservation objectives.*

And that:

*In the light of the conclusions of the assessment, and subject to regulation 64, the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).*

This Project is not directly connected with, or necessary to, the management of a protected site. The Habitats Regulations require that, where the Project is likely to have a significant effect (“LSE”) on any such site, alone or in-combination with other plans and projects, an appropriate assessment (“AA”) is carried out to determine whether or not the Project will have an adverse effect on the integrity (“AEol”) of the site in view of that site’s conservation objectives. In this document, the first stage assessment of LSEs and, where required, the second stage assessment of AA to determine whether there is an AEol of a protected site, are collectively referred to as the Habitats Regulations Assessment (HRA).

The Secretary of State has had regard to relevant guidance on the application of the HRA including the PINS (2022) Advice Note 10<sup>2</sup>, European Commission guidance<sup>3</sup>, as well as joint

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<sup>2</sup> <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-ten/>

<sup>3</sup> <https://op.europa.eu/en/publication-detail/-/publication/11e4ee91-2a8a-11e9-8d04-01aa75ed71a1>

guidance by DEFRA, Natural England (“NE”), the Welsh Government, and Natural Resources Wales (2021) on ‘Habitats Regulations Assessment: protecting a European site’<sup>4</sup>.

### 1.3 Site conservation objectives

Where an AA is required in respect of a protected site, Regulation 63(1) of the Habitats Regulations requires that it be an AA of the implications of the plan or project for the site in view of its conservation objectives. Government guidance also recommends that in carrying out the LSE screening, applicants must check if the proposal could have a significant effect on a protected site that could affect its conservation objectives.

DEFRA Guidance indicates that disturbance to a species or deterioration of a protected site must be considered in relation to the integrity of that site and its conservation objectives<sup>5</sup>. It states that *“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 designated”*.

Conservation objectives have been established by NE. When met, each site will contribute to the overall favourable conservation status of the species or habitat feature across its natural range. Conservation objectives outline the desired state for a protected site, in terms of the interest features for which it has been designated. If these interest features are being managed in a way which maintains their nature conservation value, they are assessed as being in a ‘favourable condition’. An AEoI is likely to be one which prevents the site from making the same contribution to favourable conservation status for the relevant feature as it did at the time of its designation. There are no set thresholds at which impacts on site integrity are considered adverse. This is a matter for interpretation on a site-by-site basis, depending on the designated feature and nature, scale, and significance of the impact.

NE has issued generic conservation objectives, which should be applied to each interest feature of the site. Supplementary advice on conservation objectives (“SACOs”) for each site underpins these generic objectives to provide site-specific information and give greater clarity to what might constitute an adverse effect on a site interest feature. SACOs are subject to availability and are currently being updated on a rolling basis.

Where supplementary advice is not yet available for a site, NE advises that HRAs should use the generic objectives<sup>6</sup> and apply them to the site-specific situation. For SPAs, the overarching objective is to avoid the deterioration of the habitats of qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Habitats Regulations. This is achieved by, subject to natural change, maintaining and restoring:

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<sup>4</sup> <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

<sup>5</sup> <https://www.gov.uk/guidance/appropriate-assessment>

<sup>6</sup> <http://publications.naturalengland.org.uk/publication/6734992977690624?cache=1656417868.31>

- the extent and distribution of the habitats of the qualifying features;
- the structure and function of the habitats of the qualifying features;
- the supporting processes on which the habitats of the qualifying features rely;
- the populations of the qualifying features; and
- the distribution of the qualifying features within the site.

For SACs, the overarching objective is to avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving favourable conservation status of each of the qualifying features. This is achieved by, subject to natural change, maintaining and restoring:

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

The conservation objectives and, where available, supplementary advice on conservation objectives have been used by the Secretary of State to consider whether the Project has the potential to have an AEoI of sites, either alone or in-combination with other plans or projects.

### 1.4 The Report on the Implications for European Sites and statutory consultation

Under Regulation 63(3) of the Habitats Regulations the competent authority must consult the appropriate Statutory Nature Conservation Body (“SNCB”) and have regard to any representation made by that body within such reasonable time as the authority specifies. NE is the SNCB for England and for English waters within the 12 nm limit.

The ExA, with the support of the Inspectorate’s Environmental Services Team, produced a Report on the Implications for European Sites (“the RIES”) [PD-022]. The purpose of the RIES was to compile, document, and signpost information submitted by the Applicant and IPs during the Examination (up to 29 July 2024). It was issued to ensure that IPs, including NE as the SNCB under Regulation 5 of the Habitats Regulations, had been formally consulted on Habitats Regulations matters in respect of the Application for the Project during the Examination.

The RIES was published on the PINS NSIP website and the ExA notified IPs that it had been published. Consultation on the RIES was undertaken between 12 August 2024 and 02 September 2024. Comments were received from the Applicant [REP5-062] and Natural England [REP5-083] at DL5 (2 September 2024). Responses to these comments on the RIES were then submitted by the Applicant [REP6-044] at DL6 (19 September 2024).

## 1.5 Documents referred to in this HRA

This HRA has taken account of, and should be read in conjunction with, the documents produced as part of the Application and Examination, which are available on the PINS NSIP website<sup>7</sup>. In particular:

- the ExA's Report;
- the RIES;
- the Applicant's assessment of effects, including:
  - the Applicant's Habitats Regulations Assessment Report ("HRA Report") [REP6-011];
- the Environmental Statement ("ES") [APP-041 – APP-063]; and
- the Statement of Common Ground ("SoCG") with NE [REP6-028]

Plus, all other information submitted during the Examination and during the Secretary of State's consideration of the Application.

The final signed SoCG between the Applicant and NE [REP6-028] was submitted at Deadline 9. The SoCG confirmed that all matters relating to HRA and otherwise were agreed between the two parties, and that there were no HRA matters outstanding between them in respect of the Project.

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<sup>7</sup> <https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN070008>

## 2 Project description

The Project is located within the administrative areas of North Lincolnshire Council, North East Lincolnshire Council, West Lindsey District Council, and East Lindsey District Council. The location of the Project is shown in the Location Plan [APP-013], well as Land Plans [APP-016 – APP-018] and is described in detail in ES Chapter 3 [APP-045].

The Project comprises the construction, operation and decommissioning of approximately 55.5 km buried 24” (609 mm) diameter onshore pipeline, which will transport Carbon Dioxide (CO<sub>2</sub>) from the Immingham industrial area to the Theddlethorpe area on the Lincolnshire coast, where it will connect into the existing 36” (921 mm) diameter offshore LOGGS pipeline.

The key components of the Project comprise:

- Immingham Facility;
- Approximately 55.5 km 24” onshore steel pipeline (including cathodic protection)
- Three Block Valve Stations;
- Theddlethorpe Facility;
- Existing LOGGS Pipeline to the extent of the DCO Site Boundary and the Dune Isolation Valve;
- Temporary construction compounds, laydown, park and welfare facilities; and
- Temporary access points during construction

The site is split into five sections:

- **Section 1** – Immingham Facility to A180;
- **Section 2** – A180 to A46;
- **Section 3** – A46 to Pear Tree Lane;
- **Section 4** – Pear Tree Lane to Manby Middlegate (B1200); and
- **Section 5** – Manby Middlegate (B1200) to Theddlethorpe and down to Mean Water Low Springs (MLWS)

### 2.1 Changes to the Application during Examination

Two formal change requests were accepted by the ExA during the Examination:

- **Change Request 1** – related to “design changes 1 and 2”. Design change 1 was for the Reduction of the Order Limits for works related to the Immingham Facility and associated accesses, and design change 2 was for the removal of an option for the pipeline route in section 1 of the Proposed Development.
- **Change Request 2** - related to “design changes 3 to 8”:

- **Change 3:** Relocate Block Valve Station 3 (Louth Road BVS) to the south of Louth Road near Alvingham.
- **Change 4:** Narrowing of the Order Limits near the Anglian Water Treatment Works near Louth, to the South of Louth Road BVS.
- **Change 5:** Removal of Theddlethorpe Facility Option 2 from the Application.
- **Change 6:** Removal and modification of the Order Limits around the Theddlethorpe Facility Option 1 and Option 2.
- **Change 7:** Removal of a construction access point in Northeast Lincolnshire that adjoins the A18 Barton Road south of Laceby.
- **Change 8:** Removal of a construction access point in Northeast Lincolnshire that adjoins the A46 west of Laceby.

In relation to change request 1 [AS-053] and change request 2 [AS-080 and AS-081], the Applicant provided Environmental Technical Notes. The technical notes considered the implications of the change request, which concluded that the changes resulted in a reduction to the order limits considered previously in the HRA [APP-118], and the areas removed as a result of the changes were not required to mitigate or compensate for any potential Adverse Effects on the Integrity (AEol) of European Sites. As such it was concluded that there are no changes to the findings as reported in the HRA report [APP-118].

### 3 Stage 1: Screening for Likely Significant Effects (“LSEs”)

Under Regulation 63 of the Habitats Regulations, the Secretary of State must consider whether the Project will have an LSE on a protected site, either alone or in-combination with other plans or projects. The purpose of this section is to identify any LSEs on protected sites that may result from the Project and to record the Secretary of State’s conclusions on the need for an AA.

Section 4.1 of the RIAA presents the broad approach undertaken to the approach for screening for LSE and the selection process to identify relevant protected sites and qualifying features. The protected sites and qualifying features that were considered in the Applicant’s assessment of LSE are presented in Section 4.2 of the HRA Report [REP6-011]. The Applicant screened the following protected sites for inclusion within the assessment:

- Humber Estuary Special Protection Area (SPA) - within the DCO Site Boundary;
- Humber Estuary Special Area of Conservation (SAC) - 1.27 km east of the DCO Site Boundary;
- Humber Estuary Ramsar - within the DCO Site Boundary;
- Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC - within the DCO Site Boundary; and,
- Greater Wash SPA with marine components - within the DCO Site Boundary.

The spatial relationship between the Order Limits of the Project and protected sites is shown in Figure 1 of the Applicant’s HRA Report [REP6-011] and Figure 1 below.

Based on the information before him, the views of IPs and NE, as well as the recommendations of the ExA, the Secretary of State is content to adopt the rationale of the Applicant, NE, and the ExA that the correct protected sites and qualifying features have been identified.

# Viking CCS Pipeline Habitats Regulations Assessment

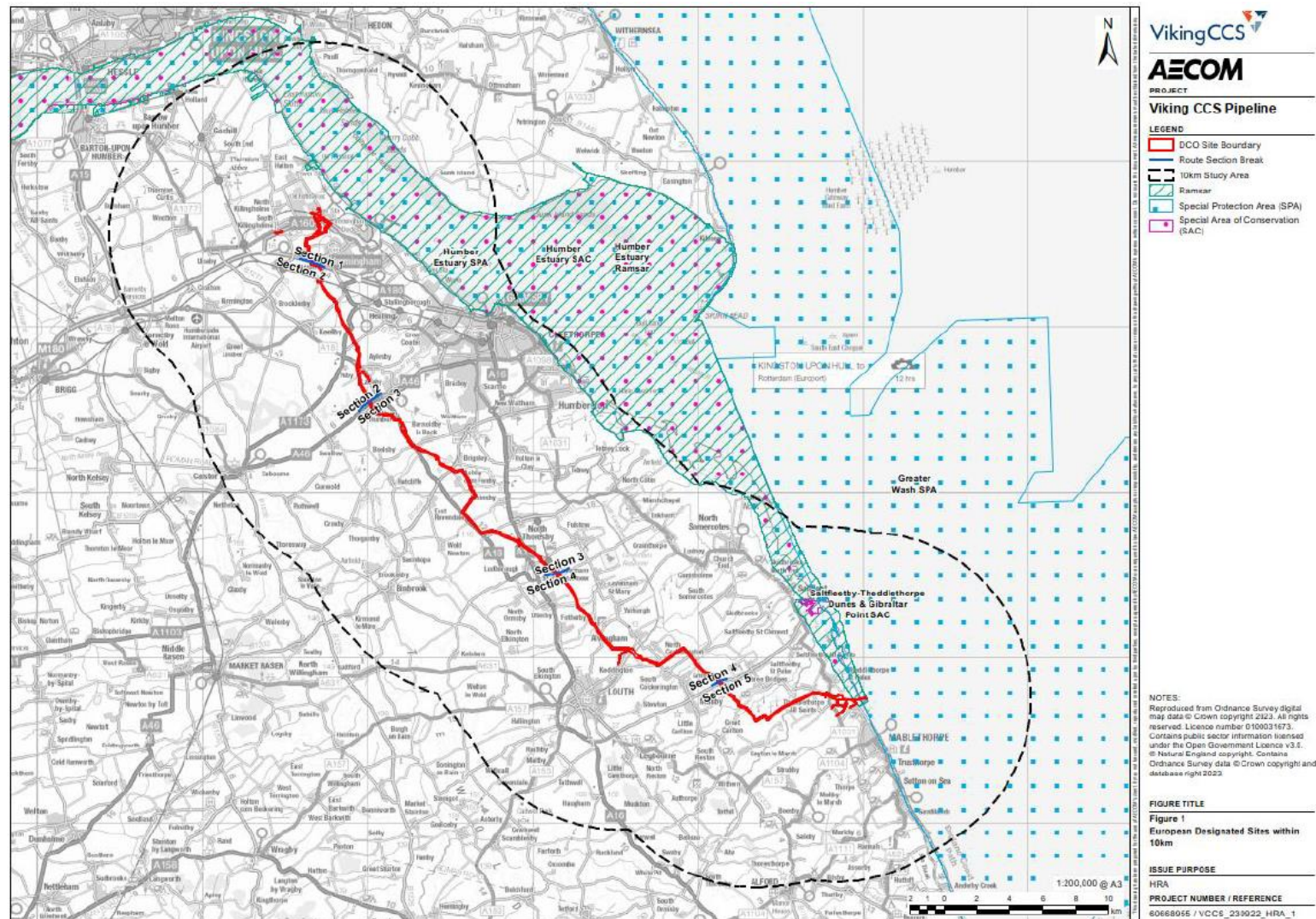


Figure 1: Spatial relationship of the Project and protected sites

### 3.1 Likely Significant Effects alone

The Applicant identified the effects considered to have the potential to result in LSEs, from the Project alone in Section 6 of the HRA Report.

The effects considered by the Applicant to have the potential to result in LSEs on protected sites during construction, operation, and decommissioning of the Project were:

- Direct habitat loss or degradation;
- Loss of functionally linked land for breeding birds (permanent or temporary);
- Loss of functionally linked land for non-breeding birds (permanent or temporary);
- Permanent and temporary loss of functionally linked land for waterfowl;
- Noise and visual disturbance (including changes in lighting) of breeding birds;
- Noise and visual disturbance (including changes in lighting) of non-breeding birds;
- Changes in water quality (physical or chemical);
- Atmospheric pollution – dust and particulates;
- Effects from dust and/or particulates and direct injury and/or mortality upon Natterjack toad; and
- Noise, changes in lighting and visual disturbance of waterfowl, killing or injury, changes in water quality as a result of fine sediment or dust reaching watercourses, and / or noise and vibration affecting river lamprey and sea lamprey.

The protected sites and qualifying features affected and the potential impact pathways are provided in Table 7-1 of the HRA Report. The potential for LSE alone was identified for the following 4 protected sites:

- Humber Estuary Special Protection Area (SPA)
- Humber Estuary Special Area of Conservation (SAC)
- Humber Estuary Ramsar
- Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC

However, during the Examination, the ExA [PD-010] queried the conclusion to rule out LSE on Greater Wash SPA due to the lack of consideration of displacement effects on red-throated diver from proposed stacking at Theddlethorpe.

The Applicant [REP1-045] stated that displacement of this species is only considered a concern from structures or ships in the marine environment. NE [REP1-079] responded with commentary on the likely locations of red-throated diver and agreed with the Applicant's position.

At the end of Examination, no further concerns were raised by IP's in relation to the Applicant's conclusions of LSE alone during construction, operation and decommissioning.

### 3.2 Likely Significant Effects in-combination

The Applicant identified the effects considered to have the potential to result in LSEs, from the Project in-combination with other plans or projects, as detailed in Section 7.4 of the HRA Report.

The Applicant concluded that, of the 44 plans and projects considered for the in-combination assessment, 10 have the potential for LSE in the absence of mitigation as shown in section 7.4.3 of the HRA Report.

The potential effect pathways that the Applicant considered could lead to LSE when considered in-combination with other plans or projects are:

- Noise & visual disturbance;
- Loss of functionally-linked habitat;
- Water quality; and
- Air quality.

At the end of Examination, the ExA, NE and all other IP's were satisfied with the Applicant's approach to the assessment of in-combination effects and agreed with the conclusion [ER 4.4.4].

### 3.3 Likely Significant Effect conclusion

The Secretary of State has carefully considered the potential effects of the Project on all qualifying features of the protected sites raised during the Examination, taking into account their conservation objectives, to determine whether there will be LSEs in the context of the Habitats Regulations. The Secretary of State considers that sufficient information has been provided to inform an assessment in line with his duties under the Habitats Regulations.

Based on the information before him, the views of IPs and NE, as well as the recommendations of the ExA, the Secretary of State concludes that Likely Significant Effects from the Project, alone and in-combination with other plans or projects, could occur during construction, operation, and decommissioning of the Project. Table 1 of this document presents the protected sites for which the Secretary of State considers that significant effects cannot be excluded, either alone or in-combination, alongside the qualifying features and relevant impact pathways. The LSEs are therefore taken forward to AA to consider whether the Project would result in an AEol of the identified protected sites.

## 4 Appropriate Assessment Methodology

The requirement to undertake an AA is triggered when a competent authority, in this case the Secretary of State, determines that a plan or project is likely to have a significant effect on a protected site either alone or in-combination with other plans or projects. Guidance issued by DEFRA<sup>8</sup> states that the purpose of an AA is to assess the implications of the plan or project in respect of the site's conservation objectives, either individually or in-combination with other plans and projects, and that the conclusions should enable the competent authority to ascertain whether the plan or project will adversely affect the integrity of the site concerned. The focus is therefore specifically on the species and/or habitats for which the protected site is designated.

In line with the requirements of Regulation 63 of the Habitats Regulations:

*“In considering whether a plan or project will adversely affect the integrity of the site, the competent authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given.”*

The purpose of this AA is to determine whether an AEoI on the features of the protected sites identified in Table 1 of this HRA, as a result of the Project alone or in-combination with other plans or projects, can be excluded in view of the site's conservation objectives and using the best scientific evidence available.

In accordance with the precautionary principle embedded in the integrity test and established through case law, the Secretary of State may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the protected site, and this must be demonstrated beyond all reasonable scientific doubt. If the Secretary of State cannot exclude AEoI of the affected protected sites beyond all reasonable scientific doubt, then he can only agree to a plan or project if it complies with the requirements of Regulation 64 of the Habitats Regulations. Regulation 64 provides that the Secretary of State may agree to the plan or project only if satisfied that there are no alternative solutions, and that the plan or project must be carried out for imperative reasons of overriding public interest (IROPI).

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<sup>8</sup> <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

## 5 Stage 2: Appropriate Assessment

The Secretary of State has undertaken an objective scientific assessment of the implications of the Project on the qualifying features of the protected sites identified in his screening assessment, using the best scientific evidence available. The assessment has been made in light of the site's conservation objectives, which are set out in Table 1.

### 5.1 Permanent loss of functionally linked land for breeding birds during Construction and Decommissioning

In Section 7.3.5 of the HRA Report [REP6-011], the Applicant assessed the potential for an AEoI of the Humber Estuary SPA from the Project alone and in-combination with other plans and projects as a result of permanent loss of FLL during construction.

The HRA report details that a pair of Avocet's were recorded within the Theddlethorpe Gas Terminal (TGT), immediately adjacent to the Order Limits, in June 2022, with an incubating bird present nearby. However, it was noted that these birds were absent at the following survey and it was considered this was due to predation.

The HRA report went on to assess the TGT site's suitability to support breeding birds, specifically Avocet, through reviewing movement barriers and the presence of ephemeral and ruderal vegetation.

The HRA report concluded that the likelihood that the TGT site supports regular breeding population of avocet is negligible and that the recorded nesting attempt by avocet at TGT in 2022 is an irregular opportunistic occurrence. The Applicant therefore concluded that there would be no AEoI for breeding birds of the Humber Estuary SPA resulting from permanent loss of FLL.

NE [REP3-018] noted their agreement with the Applicant's assessment and conclusions of this matter at Deadline 3 in the SoCG and therefore the ExA was satisfied an AEoI could be ruled out [ER 4.5.2].

Based on the information before him, the Secretary of State is satisfied that the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the breeding bird features of the Humber Estuary SPA from permanent loss of FLL.

### 5.2 Temporary loss of functionally linked land for non-breeding birds during Construction

In Section 7.3.9 of the HRA Report [APP-118], the Applicant assessed the potential for an AEoI of the Humber Estuary SPA and Ramsar from the Project alone and in-combination with other plans and projects as a result of temporary loss of FLL during construction.

The HRA report concluded that there would be no AEol from the Project alone and in-combination due to the agricultural nature of the impacted land. The Applicant considered that parallels can be drawn between the farming practices undertaken on the land which would result in the land being temporarily unavailable to birds and the temporary nature of the land being lost to construction practices.

In its RR [RR-073] NE did not agree with the assessment due to the location of the proposed works and number of birds within and in proximity to the Order Limits. NE considered that further assessment was required on the sequence / timing of works and the availability of roost and feeding sites to provide information on the proportion of suitable habitat that would be affected at any one time and determine whether additional mitigation measures may be required.

The Applicant provided an updated HRA at DL2 [REP2-024] and DL4 [REP4-017] to include further information on FLL with specific reference to curlew, pink-footed goose, golden plover, and lapwing.

In its DL4 submission, [REP4-093] NE advised that whilst it would have been beneficial to have further justification around alternative land availability for curlew and potential impacts from displacement from known foraging areas, the Applicant has provided further information on timing and duration of works and that it agreed with the assessment's conclusion.

Considering the further information provided by the Applicant and the general agreement by NE, the ExA was therefore satisfied that an AEol from the Project alone or in-combination can be excluded beyond reasonable scientific doubt for the Humber Estuary SPA and Ramsar [ER 4.5.2].

Based on the information before him, the Secretary of State is satisfied that the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the non-breeding bird qualifying features of the Humber Estuary SPA and Ramsar from temporary loss of FLL.

### 5.3 Noise and visual disturbance of breeding birds within functionally linked land during Construction, Operation, and Decommissioning

In Section 7.3.14 of the HRA Report [APP-118], the Applicant assessed the potential for an AEol of the Humber Estuary SPA and Ramsar from the Project alone and in-combination with other plans and projects as a result of noise and visual disturbance to breeding birds within FLL during construction, operation, and decommissioning.

The HRA report concluded that, with the implementation of appropriate mitigation measures, there would be no AEol from the Project alone and in-combination as all construction works will be avoided during the breeding season.

In its RR [RR-073] NE requested further clarification on the planned maintenance works at the dune isolation valve due to its proximity to the 'Viking Fields', an area known to support SPA breeding birds. The ExA [PD-010] also requested that the Applicant sets out where the appropriate mitigation is secured.

The Applicant [REP1-044] signposted NE to information within the HRA Report that details maintenance works would be undertaken outside of the nesting season and it is unlikely the works would create a disturbance greater than the baseline. In response to the ExA, the Applicant confirmed that the mitigation measures were added into the Draft Construction Environmental Management Plan (CEMP) [REP1-013] as commitment B38, and the Operational Phase Mitigation [REP2-014] as OP21. These are secured as Requirement 5 and 15 of the DCO.

NE [REP4-093] welcomed the justification from the applicant and confirmed their concerns had been resolved. The ExA [ER 4.5.2] was satisfied that the concerns of NE had been addressed and, subject to mitigation measures being secured within the Order, agreed an AEol of the Humber Estuary SPA could be ruled out.

Based on the information before him, the Secretary of State is satisfied that, subject to mitigation measures being secured through the Order, the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the breeding bird qualifying features of the Humber Estuary SPA from noise and visual disturbance.

### 5.4 Noise and visual disturbance of non-breeding birds within functionally linked land during Construction and Decommissioning

In Section 7.3.20 of the HRA Report [APP-118], the Applicant assessed the potential for an AEol of the Humber Estuary SPA and Ramsar from the Project alone and in-combination with other plans and projects as a result of noise and visual disturbance to non-breeding birds within FLL during construction, operation, and decommissioning.

The HRA report concluded that with the implementation of mitigation in the form of close-board noise fencing there would be no AEol from the Project alone and in-combination due to noise thresholds not being exceeded in areas with SPA bird presence.

However, during the Examination NE [RR-073] [REP1-079] raised a number of concerns as to the adequacy of the Applicant's assessment and proposed mitigation measures. NE requested the following:

- An assessment of impacts to non-breeding birds using 'Viking Fields' from works associated with the Theddlethorpe Facility and Southern Compound;
- The locations at which noise mitigation is required before an AEol can be excluded; and
- The extent of how much habitat will be affected at any one time to determine whether additional mitigation measures are required.

In addition, the ExA [PD-010] questioned whether the erection of close-boarded fencing would sufficiently reduce noise and disturbance to a level whereby an AEol can be ruled out. The ExA specifically referenced pink footed goose as a receptor due to the large number recorded in proximity to the Project.

The Applicant [REP1-044] confirmed existing woodland to the east of the proposed Southern Compound location provides screening between the works and Viking Fields, therefore noise and visual effects at this location will not be significant. In addition, the Applicant [REP4-017] updated the HRA Report at DL4 to provide further information on the screening thresholds used.

NE [REP4-093] confirmed agreement with the assessment and conclusions and that no further information was required on this matter.

The Applicant also added further details on the locations of the fencing at DL2 [REP2-024] and confirmed the height of the proposed fencing is 2.4m which is the same as proposed for reducing noise effects on residential properties at ISH3 [REP4-056]. In addition, the Applicant [REP6-011] confirmed that the key areas of value for SPA birds are identified to be in particular parts of the scheme separated by a large distance, and pipeline route sections will be installed sequentially rather than simultaneously to ensure there is limited potential for cumulative effects.

Based on that information, in their SoCG, NE [REP6-028] noted their agreement with the effectiveness of close-board fencing, as secured in the Final CEMP, as a measure capable of mitigating impacts on non-breeding birds within FLL, and that no additional mitigation would be required. The ExA [ER 4.5.2], was satisfied that the concerns of NE had been addressed and, subject to mitigation measures being secured within the Order, agreed an AEoI of the Humber Estuary SPA could be ruled out.

Based on the information before him, the Secretary of State is satisfied that, subject to mitigation measures being secured through the Order, the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the non-breeding bird qualifying features of the Humber Estuary SPA from noise and visual disturbance.

### 5.5 Atmospheric Pollution – dust and particulates during Construction and Decommissioning

In Section 7.3.45 of the HRA Report [REP6-011], the Applicant assessed the potential for an AEoI of the Humber Estuary SPA and Ramsar, and Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC from the Project alone and in-combination with other plans and projects as a result of atmospheric pollution from dust and particulates during construction and decommissioning.

The HRA report concluded that with the implementation of a suite of forty-seven mitigation measures, as detailed in the mitigation register in the Draft CEMP [REP6-050], there would be no AEoI of the Humber Estuary SPA and Ramsar or Saltfleetby–Theddlethorpe Dunes and Gibraltar Point SAC from the Project alone and in-combination. The Final CEMP will also include the provision of a dust management plan.

NE [REP1-030] noted their agreement with the mitigation measures at DL1 and no further concerns were raised by IPs or the ExA during the Examination on this matter.

Based on the information before him, the Secretary of State is satisfied that, subject to mitigation measures being secured through the Order, the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the qualifying features of the Humber Estuary SPA and Ramsar or Saltfleetby–Theddlethorpe Dunes and Gibraltar Point SAC from dust and particulates.

## 5.6 Effects upon River Lamprey and Sea Lamprey during Construction

In Section 7.3.49 of the HRA Report [REP6-011], the Applicant assessed the potential for an AEoI of the Humber Estuary SPA and Ramsar from the Project alone and in-combination with other plans and projects as a result of direct mortality or injury upon river lamprey and sea lamprey which could result from open-cut crossing methodologies, noise and vibration impacts, indirect impacts from dust and particulates, changes in water quality and / or disturbance from lighting during construction.

The HRA report concluded that with the implementation of a suite of twenty-one mitigation measures, including non-intrusive crossing methods, pollution prevention, and a drainage strategy which will form part of the Final CEMP, there would be no AEoI of the Humber Estuary SPA and Ramsar from the Project alone and in-combination.

No concerns were raised by NE, IPs or the ExA during the Examination on this matter.

Based on the information before him, the Secretary of State is satisfied that, subject to mitigation measures being secured through the Order, the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the qualifying features of the Humber Estuary SPA and Ramsar from effects upon river lamprey and sea lamprey.

## 5.7 Direct Habitat Loss or Degradation during Construction and Decommissioning

In Section 7.3.54 of the HRA Report [APP-118], the Applicant assessed the potential for an AEoI of the Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC from the Project alone and in-combination with other plans and projects as a result of direct habitat loss or degradation which could occur due encroachment of machinery into adjacent habitats during the upgrade of the Dune Valve during construction and decommissioning.

The HRA Report originally concluded that with the implementation of a suite of three mitigation measures, including a construction exclusion zone, a retained minimum buffer, and availability of a suitably qualified ecologist which will form part of the Final CEMP and decommissioning management plan respectively, there would be no AEoI of the Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC from the Project alone and in-combination.

In its RR, NE [RR-073] requested clarification that no works, fencing, or vehicle access will take place within the SAC. The Applicant [REP2-024] updated the HRA Report to confirm this was the case.

No further concerns were raised by NE, IPs or the ExA during the Examination on this matter.

Based on the information before him, the Secretary of State is satisfied that, subject to mitigation measures being secured through the Order, the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the qualifying features of the Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC from direct habitat loss or degradation.

## 5.8 Changes in Water Quality during Construction and Decommissioning

In Section 7.3.59 of the HRA Report [APP-118], the Applicant assessed the potential for an AEoI of the Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC from the Project alone and in-combination with other plans and projects as a result of changes in water quality which could occur due to contaminated surface water runoff or a pollution event reaching adjacent habitats during construction and decommissioning.

The HRA report concluded that with the implementation of a Drainage Strategy which will identify all known risks to the water environment and include appropriate measures to prevent pollution during construction and manage runoff rates, a Water Management Plan which details principles and procedures to ensure water features are monitored and protected, and the Final CEMP there would be no AEoI of the Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC from the Project alone and in-combination.

No concerns were raised by NE, IPs or the ExA during the Examination on this matter.

Based on the information before him, the Secretary of State is satisfied that, subject to mitigation measures being secured through the Order, the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the qualifying features of the Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC from changes in water quality.

## 5.9 Effects from dust and/or particulates and direct injury and/or mortality to Natterjack Toad during Construction

In Section 7.3.40 of the HRA Report [APP-118], the Applicant assessed the potential for an AEoI of the Humber Estuary SAC and Ramsar from the Project alone and in-combination with other plans and projects as a result of direct mortality or injury which could occur due to upgrade works of the existing Dune Valve during construction and decommissioning.

However, in its DL4 response, NE [REP4-093] highlighted to the applicant that they had been made aware that Natterjack Toad have been identified within 'Viking Fields' and therefore advised the Applicant that the AA should be updated to include this information.

The Applicant [REP6-011] subsequently updated the HRA Report to include assessment of the potential for an AEoI as a result of direct mortality or injury from installation of the electrical cable across the Viking Fields as well as upgrade works of the existing Dune Valve.

The HRA Report proposed a variety of control measures to mitigate potential effects to Natterjack Toads. Firstly, habitat manipulation which involved sensitively managing the habitat along the route of the cable installation prior to works (and prior to the Natterjack Toad breeding season) to reduce the likelihood of Natterjack Toad using the area, but ensuring they are still able to commute across it. Secondly, an Ecological Clerk of Works (ECoW) would undertake a fingertip search for natterjack toad immediately prior to construction to indicate presence of Natterjack Toads. Lastly, in the unlikely event that natterjack toad is found within the works area at any point works will stop, and NE will be consulted for further advice and / or a licence sought.

The HRA Report concluded that with the implementation of these measures that there would be no AEoI of the Humber Estuary SAC and Ramsar from the project alone and in-combination.

No concerns were raised by NE, IPs or the ExA on the sufficiency of the proposed control measures or the conclusions made by the Applicant on this matter.

Based on the information before him, the Secretary of State is satisfied that, subject to mitigation measures being secured through the Order, the Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the qualifying features of the Humber Estuary SAC and Ramsar from harm to Natterjack Toad.

### 5.10 Appropriate Assessment conclusion

As the competent authority under the Habitats Regulations for this Application under the Planning Act 2008, the Secretary of State has undertaken an AA in respect of the conservation objectives of four protected sites to determine whether the Project, either alone or in-combination with other plans or projects, will result in an AEoI.

The Secretary of State has carefully considered all the information available to him, including the recommendations of the ExA, the advice of NE as the SNCB, the views of all other IPs, and the Applicant's case.

Based on the available information before him, and subject to the mitigation measures as secured in the final Order, the Secretary of State is satisfied that the Project, either alone or in-combination with other plans or projects, will not adversely affect the qualifying features of the Humber Estuary SAC, SPA and Ramsar Site or Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC. The Secretary of State is satisfied that further tests set out in the Habitats Regulations are therefore not required.

## 6 Transboundary assessment

The Secretary of State considers that it is important to consider the potential impacts on protected sites in other European Economic Area (“EEA”) states, known as transboundary sites. The ExA also considered the implications for transboundary sites. The conclusions of the ExA’s considerations and the Secretary of State’s own views on this matter are presented below.

On 25 November 2022, following the Applicant’s request for an EIA scoping opinion, PINS undertook a transboundary screening and consultation on behalf of the Secretary of State pursuant to Regulation 32 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and the United Nations Environment Programme Convention on Biological Diversity 1992. A second and final screening was undertaken on 02 May 2024 following submission of the Application documents. PINS considered that the Project was unlikely to have a significant effect either alone or in-combination on the environment in an EEA state.

On both screening occasions, PINS were of the view that the Project is not likely to have a significant effect on a transboundary site, either alone or cumulatively. No transboundary consultations were undertaken.

The Applicant did not identify likely significant effects (LSE) on non-UK European sites in European Economic Area (EEA) States in its HRA Report [APP-118] or within its ES [APP-043 to APP-063]. No such impacts were raised for discussion by any IPs during the Examination, including following publication of the Inspectorate’s transboundary screening [OD-008].

The Secretary of State has not been presented with any substantive evidence to demonstrate that transboundary impacts would have an AEoI on any protected site in an EEA states. As such, the Secretary of State is satisfied that the Project, either alone or in-combination with other plans or projects, would not have an AEoI on any transboundary protected site. The Secretary of State is satisfied that further stages of a transboundary assessment are therefore not required.

## 7 Conclusion

The Secretary of State has carefully considered all information presented within the Application, during the Examination, and the representations made by NE and all IPs, along with the ExA's Recommendation Report.

The Secretary of State concludes that LSEs cannot be excluded at four protected sites, when the Project is considered alone or in-combination with other plans or projects. These LSEs were taken forward to an AA to consider whether the Project would result in an AEol of the protected sites.

Having considered the information available to him and having made a full assessment of the potential for an AEol of each of the protected sites for which the potential for LSE was identified, taking into account the views of the Applicant, NE, all IPs, as well as the ExA, the Secretary of State concludes that an AEol can be excluded beyond reasonable scientific doubt, subject to the mitigation measures secured through the final Order.

As such, the Secretary of State is satisfied that there is no significant risk to any protected site and their qualifying features as a result of the Project and considers that no further tests set out in the Habitats Regulations are required.

**Table 1: Protected sites and qualifying features considered in the assessment of LSE.**

Protected site	Qualifying feature(s)	SACOs	Potential for Likely Significant Effects
<b>Humber Estuary SPA</b>	Avocet (breeding and wintering) Bittern (breeding and wintering) Hen harrier (wintering) Golden plover (wintering) Bar-tailed godwit (wintering) Ruff (passage) Marsh harrier (breeding) Little tern (breeding) Shelduck (wintering) Knot (wintering and passage) Dunlin (wintering and passage) Black-tailed godwit (wintering and passage) Redshank (wintering and passage) Waterbird assemblage	See Footnote <sup>9</sup>	Permanent loss of functionally linked land for breeding birds  Permanent loss of functionally linked land for non-breeding birds  Temporary loss of functionally linked land for non-breeding birds  Temporary loss of functionally linked land – waterbird assemblage  Noise, visual disturbance, changes in lighting affecting breeding birds

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<https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9006111&SiteName=humber%20estuary&SiteNameDisplay=Humber+Estuary+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAAarea=&NumMarineSeasonality=15>

			<p>Noise, visual disturbance, changes in lighting affecting non-breeding birds</p> <p>Atmospheric pollution – dust and particulates</p>
<b>Humber Estuary Ramsar</b>	<p>Wetland of International Importance</p> <p>Ramsar Criterion 1:</p> <p>A near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons.</p> <p>Ramsar Criterion 3:</p> <p>The dune slacks at Saltfleetby-Theddlethorpe on the southern extremity of the Ramsar site are the most north-easterly breeding site in Great Britain of the natterjack toad.</p> <p>Ramsar Criterion 5</p> <p>Assemblages of international importance:</p> <p>153,934 waterfowl, non-breeding season 5-year peak mean 1996/97-2000/2001)</p>	See Footnote <sup>10</sup>	<p>Atmospheric pollution affecting Ramsar habitats – dust and particulates</p> <p>Killing or injury to natterjack toad</p> <p>Permanent loss of functionally linked land for waterfowl</p> <p>Temporary loss of functionally linked land for waterfowl</p> <p>Noise, changes in lighting and visual disturbance of waterfowl</p>

	<p>Ramsar Criterion 6: Species/populations occurring at levels of international importance:</p> <ul style="list-style-type: none"> <li>• Common shelduck</li> <li>• Eurasian golden plover</li> <li>• Red knot</li> <li>• Dunlin</li> <li>• Black-tailed godwit</li> <li>• Bar-tailed godwit</li> <li>• Common redshank</li> </ul> <p>Ramsar Criterion 8 The Humber Estuary acts as an important migration route for river lamprey. and sea lamprey between coastal waters and their spawning areas.</p>		Effects upon river lamprey and sea lamprey
<b>Humber Estuary SAC</b>	<p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>Coastal lagoons</p> <p>Dunes with sea buckthorn (<i>Hippophae rhamnoides</i>)</p> <p>Embryonic shifting dunes</p> <p>Estuaries</p> <p>Mudflats and sandflats not covered by seawater at low tide</p>	See Footnote <sup>11</sup>	Effects upon river lamprey or sea lamprey

	<p>Fixed dunes with herbaceous vegetation (`grey dunes`)</p> <p>Glasswort <i>Salicornia</i> sp. and other annuals colonising mud and sand</p> <p>Sandbanks which are slightly covered by sea water all the time</p> <p>Shifting dunes along the shoreline with (<i>Ammophila arenaria</i>) (`white dunes')</p>		
<p><b>Saltfleetby-Theddlethorpe Dunes &amp; Gibraltar Point SAC</b></p>	<p>Dunes with <i>Hippophae rhamnoides</i>. (Dunes with sea-buckthorn);</p> <p>Embryonic shifting dunes;</p> <p>Fixed dunes with herbaceous vegetation (grey dunes). (Dune grassland)</p> <p>Humid dune slacks; and,</p> <p>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes). (Shifting dunes with marram).</p>	<p>See Footnote<sup>12</sup></p>	<p>Direct habitat loss or degradation</p> <p>Changes in water quality</p> <p>Atmospheric pollution – dust and particulates</p>

<sup>12</sup> [UK0030270\\_Saltfleetby-Theddlethorpe Dunes & Gibraltar Point\\_SAC\\_Published 10 Jul 2024](#)

## Viking CCS Pipeline Habitats Regulations Assessment

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