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Your ref: PA/2023/421



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BY EMAIL ONLY

Dear Rebecca Leggott

Planning consultation: Construction & operation of a post-combustion carbon capture plant, including carbon dioxide compressor & metering, coding equipment, stacks, substations, internal roads, partial ditch realignment, new & modified services, connections, internal roads, accesses, maintenance & laydown areas

Location: VPI Power Station, Rosper Road, South Killingholme, DN40 3DZ

Thank you for your consultation on the above dated 27 March 2023 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 Humber Estuary Special Protection Area (SPA)/Special Area of Conservation (SAC)/Ramsar site, Humber Estuary Site of Special Scientific Interest (SSSI), and North Killingholme Haven Pits SSSI. Natural England requires further information in order to determine the significance of these impacts and the scope for mitigation. The following information is required:

- Further assessment of potential construction and operational phase visual impacts to SPA/Ramsar birds;
- Further assessment of potential construction and operational phase noise impacts to SPA/Ramsar birds;
- Further assessment of potential operational phase air quality impacts.

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.

Additional Information required

THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017 (AMENDED)

Internationally designated sites

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 your authority is able to ascertain that the proposal will not result in adverse effects on the integrity of any of the sites in question.

Having considered your assessment, and the measures proposed to mitigate for any adverse effects, Natural England's advice is that your assessment is not sufficiently rigorous or robust to justify this conclusion and therefore **it is not possible** to ascertain that the proposal will not result in adverse effects on the integrity of the sites in question. We advise that your authority should not grant planning permission at this stage.

We advise that the following additional work on the assessment is required to enable it to be sufficiently rigorous and robust. Natural England should be re-consulted once this additional work has been undertaken and the HRA has been revised.

Potential air quality impacts

Natural England welcomes the *Report to Inform Habitats Regulations Assessment* ('HRA') (dated February 2023) and the air quality assessment in *ES Appendix 6B: Operation Stage Assessment* ('Appendix 6B') (no date), submitted in support of this application. Natural England provides the following advice on the information provided.

Screening of likely significant effects

We note that the HRA rules out likely significant effects from potential construction phase air quality impacts (both alone and in-combination). On the basis of the information provided, Natural England concurs with this view. However, we provide the following advice on potential operational phase impacts.

No information has been provided on how the ecological receptors have been selected or how the habitat information has been determined. For example, OE2 receptor, the grid reference provided does not fall within the designated site. We highlight that Appendix 6B, Table 6B.11 describes North Killingholme Haven Pits as 'northern wet heath' (OE1d) and 'Pioneer, low, mid upper saltmarshes' (OE2), however, the Defra Priority Habitat Inventory (PHI) shows the habitats as saline lagoon and deciduous woodland. In addition, low and medium altitude hay meadow does not form part of the Humber Estuary designations. Please provide further explanation and justification for the locations selected.

Section 5.31 of the HRA states that '*All impacts are considered to be insignificant at the ecological receptors as they do not exceed the 1% screening threshold for Process Contributions (PC)... except for annual average nitrogen oxides NOx at the worst-case impacted receptor (Humber Estuary (OE1))*'. However, we note that in Appendix 6B, tables 6B.29 – 6B.32, the percentage

change in Process Contributions over the baseline is greater than 1% of the environmental benchmark for the following receptors:

- OE1 (4.7%) and OE2 (1.7%) for Nitrogen oxides (NO_x)
- OE1 (3.5%) and OE2 (1.4%) for ammonia (NH₃)
- OE1d (1.5%) and OE1e (1.5%) for nitrogen deposition

We assume the justification to rule out likely significant effects from nitrogen deposition comes from section 6B.6.10 in Appendix 6B which states *'Impacts at OE1d and OE1e are both 1.5% and given that the background concentrations are already significantly exceeding the critical load, the impacts are still considered to be 'negligible' and the effect on the receptor 'not significant'.'*

Natural England does not accept the justification that if background concentrations are already in exceedance of the critical load, then impacts are automatically considered to be negligible. The ruling of the Dutch Nitrogen cases determined that in circumstances where the conservation status is unfavourable *'...the possibility of authorising activities which may subsequently affect the ecological situation of the sites concerned seems necessarily limited'*. Therefore, further assessment to determine whether additional pollutant input may lead to impacts to designated habitats is required.

It is not clear why potential impacts from NO_x at North Killingholme Haven Pits SSSI (which is part of the Humber Estuary SPA/Ramsar) have not been assessed further.

Furthermore, it is not clear why likely significant effects from NH₃ have been screened out. Section 6B.6.8 of Appendix 6B states that the potential impacts from NH₃ are *'considered to be 'negligible' and therefore the effects are 'not significant'*. However, Natural England does not agree that a Process Contribution of 3.5% of the environmental benchmark is not significant.

Therefore, we advise that it is not possible to rule out likely significant effects from the above impact pathways at the screening stage.

Appropriate Assessment

We note that the potential impacts of NO_x emissions at receptor OE1e has been assessed at the appropriate assessment stage and the potential impacts of nitrogen deposition is also discussed. We note the commentary in sections 6.4 – 6.6 of the HRA on the interacting effects of NO_x and nitrogen deposition. We note that although the annual average Predicted Environmental Concentration (PEC) of NO_x is less than 100% of the Air Quality Assessment Level (AQAL), the PEC of nitrogen deposition is greater than 100% of the AQAL.

It is not clear whether the appropriate assessment is assessing potential impacts of NO_x, nitrogen deposition, or both. For example, sections 6.11 and 6.12 provide justification as to why there would be no adverse effects on integrity to the Humber Estuary saltmarsh habitats from NO_x emissions. Whereas, sections 6.9 and 6.10 provide justification as to why there would be no adverse effects on integrity to the Humber Estuary SAC saltmarsh habitats from nitrogen deposition.

To justify why a higher critical load of nitrogen deposition would be appropriate, we note section 6.10 of the HRA states that saltmarsh habitat on the Humber Estuary is subject to frequent inundation, and therefore this will reduce the impact of nitrogen from atmosphere on the vegetation. Whilst we do agree that inundation will reduce impacts, advice on Air Pollution Information System (APIS) also states that pioneer low – mid saltmarsh areas are more resilient to nitrogen deposition than the mature upper areas, and we advise the higher marshes will be subjected to the least amount of tidal influence. Therefore, further clarification should be provided on the types of Humber Estuary SAC saltmarsh present within proximity of the proposed development, as this will further inform whether the upper critical load can be relied upon.

Natural England advises that both potential impacts from NO_x emissions and nitrogen deposition should be fully assessed at the appropriate assessment stage. The assessment should make it

clear which impact pathways are being assessed, and the outcomes of the site integrity test should be set out clearly.

Potential disturbance to SPA birds using Humber Estuary SPA/Ramsar and functionally linked land during construction and operation

Natural England notes from tables 10-25 of *ES Appendix 13A: Ecological Baseline Report* (January 2023) that significant numbers of SPA birds were recorded during the wintering and passage bird surveys on functionally linked land between Rosper Road and the Humber Estuary, as well as within the boundary of the Humber Estuary European Sites. Additionally, we note, from the information provided, that there are known breeding avocet at Rosper Road Pools.

Visual impacts

Your assessment concludes that likely significant effects from visual impacts have been screened out from this project alone. On the basis of the information provided, Natural England concurs with this view.

We note that the in-combination assessment rules out adverse impacts on integrity from visual impacts in-combination with other projects, including 'Land Adjacent to the Westgate Entrance, Port of Immingham (Open Storage Option)' and 'Project Gigastack'. However, we note the in-combination assessment assesses the VPI development with each neighbouring development individually and there is no consideration of the cumulative effects of all the developments acting together. For example, no assessment has been undertaken to assess the impacts of bird usage from structures on three sides of Rosper Road Pools. Therefore, we advise this should be further assessed in the HRA.

Noise impacts

We note that likely significant effects from noise disturbance during both construction and operational phases have been screened out for all locations – (i) functionally linked land at Rosper Road Pools, (ii) functionally linked land at adjacent terrestrial fields, and (iii) habitats within the SPA/Ramsar boundary.

On the basis of the information provided, Natural England concurs with the view that likely significant effects from potential noise impacts during both construction and operational phases to (iii) habitats within the SPA/Ramsar boundary can be ruled out due to distance from the proposed development. However, we have the following comments regarding (i) functionally linked land at Rosper Road Pools and (ii) functionally linked land at adjacent terrestrial fields.

We note that the HRA states, in numerous sections, that '*Studies indicate that noise levels >84 dBA typically elicit a flight response in birds and the same research recommends that construction noise levels are kept below 70 dB to avoid excessive disturbance of birds*'. However, it is not specified which studies this refers to. We think that this may be the 'Bird Disturbance Toolkit'. As we advised for the VPI Immingham Development Consent Order, Natural England considers this Toolkit as a relatively simplistic approach. The Institute of Estuarine and Coastal Studies (IECS) carried out a literature review of bird disturbance and reported (in 2009) that there was little evidence available on the impacts of construction disturbance to birds. On this basis, it is unclear how the very specific noise and distance 'triggers' for individual species of birds were derived for the subsequent toolkit.

It is also worth noting that the Humber Estuary is an SPA and therefore no construction works have been carried out that would cause significant disturbance to SPA birds, so any evidence taken from this site would be limited. Monitoring work associated with construction disturbance undertaken on this site has either been carried out outside the sensitive season; when there are low numbers of birds present; or when the competent authority has already determined that the proposed works will not adversely affect the integrity of the Humber Estuary designated site.

Natural England advises that caution should be exercised when attempting to define a threshold

based on noise levels alone. Other factors such as noise 'peakiness', including rise time of a noise signal and the frequency content of the noise source, should also be expected to affect bird behaviour. We advise that generic noise threshold levels are unlikely to offer a suitable approach for assessing the potential effects of noise on birds. Instead, we suggest that the assessment should determine if the predicted construction/operational noise levels are greater than the current background levels, using a 3dB(A) rule-of-thumb to determine significance.

We advise that the baseline noise levels should be established at the locations of sensitive ecological receptors and compared to the predicted noise levels. The assessment should set the sensitive receptors in the context of the existing noise environment – i.e. how noise levels will change, including the type of noise, such as consistent or sudden loud bangs etc. We note that as part of the VPI Immingham OCGT DCO the ambient range of noise levels across these fields were assessed as being 61dB LAeq and 51dB LAF90 along Rosper Road at the closest point of the field nearest to the proposed VPI Development, to 48dB LAeq and 43/46dB LAF90 along the eastern edge.

We note that the HRA and Chapter 13 refer to *ES Chapter 7: Noise and Vibration* (no date) for further detailed noise modelling assessment. However, we note 7.1.1 of Chapter 7 states that '*This chapter assesses the impact of noise on residential and other human receptors. The assessment of noise impacts on relevant ecological receptors is presented in Chapter 13: Ecology and Nature Conservation (ES Volume I).*' Therefore, it is unclear if the noise modelling has been undertaken in an ecological context.

We note that section 7.5.2 of *ES Chapter 7: Noise and Vibration* (no date) includes measures to mitigate noise impacts, although we note this is primarily focussed on human receptors. We advise that if any measures are required to mitigate adverse effects on integrity to the Humber Estuary qualifying species, this should be assessed at the appropriate assessment stage of the HRA.

Natural England will assess the in-combination assessment once the HRA has been updated, taking account of our advice above on the impacts alone, and when further detail has been provided on how the predicted noise levels will change compared to the ambient noise levels.

South Humber Gateway Mitigation Strategy

Natural England has been working with North 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 (AMENDED)

Nationally designated sites

Natural England notes that the application site is located in close proximity to 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 site has been notified. Our advice regarding the potential impacts upon the above SSSIs coincide with our advice regarding the potential impacts upon the European sites as detailed above. Natural England also offers the following additional advice.

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 protected species and other natural environment issues is provided at Annex A.

If you have any queries relating to the advice in this letter please contact me on emma.brading@naturalengland.org.uk. For any new consultations, or to provide further information on this consultation, please send your correspondences to consultations@naturalengland.org.uk.

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

Yours sincerely

Emma Brading

Lead Adviser
Sustainable Development
Yorkshire and Northern Lincolnshire Area Team

Annex A – Additional advice

Natural England offers the following additional advice:

Landscape

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

Best and most versatile agricultural land and soils

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

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

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

Protected Species

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

Local sites and priority habitats and species

You should consider the impacts of the proposed development on any local wildlife or geodiversity sites, in line with paragraphs 175 and 179 of the NPPF and any relevant development plan policy. There may also be opportunities to enhance local sites and improve their connectivity. Natural England does not hold locally specific information on local sites and recommends further information is obtained from appropriate bodies such as the local records centre, wildlife trust, geoconservation groups or recording societies.

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

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

Annex A – Additional advice

Ancient woodland, ancient and veteran trees

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

Environmental gains

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

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

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

You could also consider how the proposed development can contribute to the wider environment and help implement elements of any Landscape, Green Infrastructure or Biodiversity Strategy in place in your area. For example:

- Links to existing greenspace and/or opportunities to enhance and improve access.
- Identifying opportunities for new greenspace and managing existing (and new) public spaces to be more wildlife friendly (e.g. by sowing wild flower strips)
- Planting additional street trees.
- Identifying any improvements to the existing public right of way network or using the opportunity of new development to extend the network to create missing links.
- Restoring neglected environmental features (e.g. coppicing a prominent hedge that is in poor condition or clearing away an eyesore).

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

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 other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Relevant aspects of local authority green infrastructure strategies should be delivered where appropriate.

Annex A – Additional advice

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

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

Biodiversity duty

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