Department for Energy Security & Net Zero

Habitats Regulations Assessment for an Application Under the Planning Act 2008

East Yorkshire Solar Farm

Regulation 63 of the Conservation of Habitats and Species Regulations 2017

May 2025

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Contents

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[1] ("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 East Yorkshire Solar Farm 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 the construction, operation and decommissioning of a solar PV electricity generating facility and export connection to the national grid, at National Grid's Drax Substation. The design life of the Scheme is 40 years, with decommissioning to commence 40 years after final commissioning. The solar PV panels would be mounted as single axis tracker (SAT) units. No battery storage is proposed and the export connection to the national grid is subject to a 400MW peak cap.

The Project constitutes a nationally significant infrastructure project ("NSIP") as defined by sections 14 and 15 of the Planning Act 2008 as it includes the construction or extension of a generating station in England, not generating electricity from wind and is not an offshore generating station, but has a capacity of more than 50MW.

The Project was accepted by the Planning Inspectorate ("PINS") on 19 December 2023 and three Inspectors were appointed as the Examining Authority ("ExA") for the Application. The Examination of the Project application began on 22 May 2024 and concluded on 21 November 2024. The ExA submitted its report of the examination including its recommendation ("the ExA's Report") to the Secretary of State on 17 February 2025. 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.

[1] https://www.legislation.gov.uk/uksi/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, from 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 ("AEoI") 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 AEoI 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 (2024) Advice Note 10[2], European Commission guidance[3], as well as joint

[2] https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-ten/

[3] 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'[4].

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[5]. 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[6] 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:

[4] https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

[5] https://www.gov.uk/guidance/appropriate-assessment

[6] 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-011]. The purpose of the RIES was to compile, document, and signpost information submitted by the Applicant and IPs during the Examination (up to 01 October 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 15 October 2024 and 5 November 2024 and comments were received from NE [REP7-008].

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[7]. In particular:

- the ExA's Report;
- the RIES;
- the Applicant's assessment of effects, including:
    - the Applicant's Habitats Regulations Assessment Report ("HRA Report") [AS-038];
- the Environmental Statement ("ES") [APP-052 – APP-132]; and
- the Statement of Common Ground ("SoCG") with NE [REP6-017]
- 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 [REP6-017] was submitted at Deadline 6. 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.

[7] https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010143

2 Project description

The Project is located within the administrative areas of East Riding of Yorkshire Council and North Yorkshire Council. The location of the Project is shown in the Location Plan [APP-014], well as Land Plan [AS-004] and is described in detail in ES Chapter 2 [APP-054].

The Project comprises the construction, operation (including maintenance and repair) and decommissioning of a solar photovoltaic (PV) electricity generating facility with a total capacity exceeding 50 megawatts (MW) and export connection to the national grid, at National Grid's Drax Substation. The 'Site' comprises approximately 1,276.5 hectares (ha) of land which is predominantly agricultural in nature.

The key components of the Project comprise:

- 16 Solar PV Areas which make up 966.4 ha and will contain the ground mounted solar PV panels and associated infrastructure, Grid Connection Substation, and associated development;
- An Interconnecting Cable Corridor and Grid Connection Corridor within which the 33 kV cables will be installed linking the Solar PV Areas within the Solar PV Site to the Grid Connection Substation;
- A Grid Connection Corridor which the 132 kilovolt (kV) Grid Connection Cables will be installed linking the Grid Connection Substations to National Grid's Drax Substation which is approximately 6.2 kilometres (km) south-west of the Solar PV Site (Solar PV Area 3c) at the closest point;
- Site Accesses including additional land required to facilitate access to the Site, such as new access routes or measures to provide better visibility splays; and
- An Ecology Mitigation Area which is to be managed to provide good quality habitat for overwintering and migratory bird species, mitigating the loss of functionally linked land elsewhere in the Site.

2.1 Changes to the Application during Examination

Although no formal change requests were made by the Applicant, changes to the key application documents, including the wording of the dDCO, were submitted and updated during the Examination. The changes sought to address points raised by Interested Parties (IP) and the ExA and to update or provide additional information resulting from changes and discussions that had occurred during the Examination.

The Applicant's changes to the Application documents, together with any additional information submitted, are detailed in the Application Guide submitted at Deadline 8 [REP8-003]. This provides a guide to all documents submitted as part of the Application and was updated at each deadline when new or revised documents were submitted. It provides a full record of all documentation submitted into the Examination by the Applicant.

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 4.2 of the HRA Report 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 4.2.5 of the HRA Report [AS-038]. The Applicant identified the following protected sites lie within 20km of The Project and therefore screened them for inclusion within the assessment:

- River Derwent SAC;
- Lower Derwent Valley SPA;
- Lower Derwent Valley SAC;
- Lower Derwent Valley Ramsar;
- Humber Estuary SPA;
- Humber Estuary SAC;
- Humber Estuary Ramsar;
- Skipwith Common SAC;
- Thorne & Hatfield Moors SPA; and
- Thorne Moor SAC

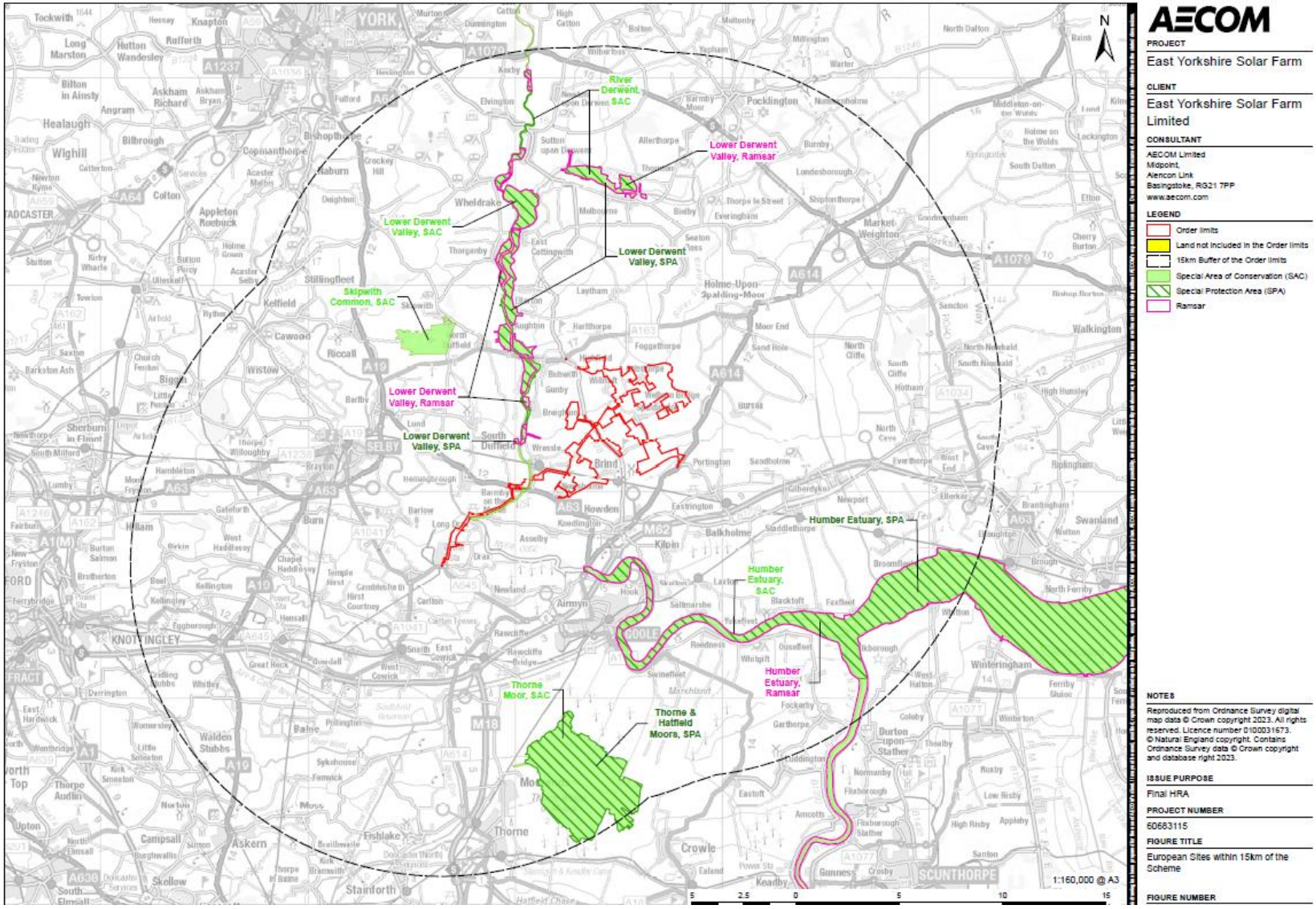
The spatial relationship between the Order Limits of the Project and protected sites is shown in Figure 5 of the Applicant's HRA Report [AS-038] and Figure 1 below.

Based on the distance from the Project site, lack of hydrological connection, and absence of suitable habitat for their qualifying features, the HRA Report concluded no LSE from the Project, alone or in-combination, on any of the qualifying features of:

- Skipwith Common SAC;
- Thorne and Hatfield Moors SPA; and
- Thorne Moor SAC.

NE confirmed in its RR [RR-266] that it agreed with the Applicant's conclusion of no LSEs in respect of the three sites listed immediately above. As such, there was no discussion of these sites during the Examination.

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.


River Derwent, SAC
Lower Derwent Valley, Ramsar
Lower Derwent Valley, SAC
Lower Derwent Valley, SPA
Skipwith Common, SAC
Lower Derwent Valley, Ramsar
Lower Derwent Valley, SPA
Humber Estuary, SPA
Humber Estuary, SAC
Humber Estuary, Ramsar
Thorne Moor, SAC
Thorne & Hatfield Moors, SPA
N
1:160,000 @ A3
AECOM
PROJECT
East Yorkshire Solar Farm
CLIENT
East Yorkshire Solar Farm Limited
CONSULTANT
AECOM Limited
Midpoint,
Alencon Link
Basingstoke, RG21 7PP
www.aecom.com
LEGEND
Order limits
Land not included in the Order limits
15km Buffer of the Order limits
Special Area of Conservation (SAC)
Special Protection Area (SPA)
Ramsar
NOTES
Reproduced from Ordnance Survey digital map data © Crown copyright 2023. All rights reserved. Licence number 0100031673. © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2023.
ISSUE PURPOSE
Final HRA
PROJECT NUMBER
60683115
FIGURE TITLE
European Sites within 15km of the Scheme
FIGURE NUMBER

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 Sections 5 and 6 of the HRA Report [AS-038].

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:

- Noise and visual disturbance
- Water quality
- Loss of functionally linked habitat
- Temporary loss of/ damage to qualifying habitat
- Atmospheric pollution

The protected sites and qualifying features affected and the potential impact pathways are provided in Table 6 of the HRA Report. The potential for LSE alone was identified for the following 7 protected sites:

- River Derwent SAC;
- Lower Derwent Valley SPA;
- Lower Derwent Valley SAC;
- Lower Derwent Valley Ramsar;
- Humber Estuary SPA;
- Humber Estuary SAC;
- Humber Estuary Ramsar;

However, during the Examination, the ExA [EXQ1 2.1.6] and NE [REP1-094] noted that the bullhead feature of the River Derwent SAC had not been assessed within the Screening for LSE in respect of disturbance from horizontal direction drilling (HDD) during construction. The Applicant [REP1-081; REP2-012; REP2-019] responded and updated the HRA Report to rule out LSE from noise disturbance on bullhead as, similarly to lamprey, bullhead possess low sensitivity to vibration impacts other than those arising in the water column. Furthermore, the HRA Report stated material substrate vibration or associated noise in the water column that would result in behavioural or physical impacts to bullhead and lamprey is highly unlikely given the large volumes of substrate between the HDD and the river using a 30m setback and a minimum 5m depth below the bed which is secured through requirement 11 of the DCO. In addition, HDD is planned outside of the core fish migration season of September to February and May.

NE [REP6-017] noted the avoidance of the core fish migration season and stated that measures intended to avoid impacts on European site features should be considered as mitigation and therefore be assessed at Appropriate Assessment. Despite this technicality, NE did not consider this would materially impact the conclusions of the HRA Report and accepted The Applicant's above assessment.

At the end of Examination, no further concerns were raised by the ExA or IPs 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 Table 10 of Section 7 of the HRA Report. In total, 28 plans and projects were considered for the in-combination assessment.

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:

- Noise and visual disturbance
- Water quality
- Loss of functionally linked habitat
- Temporary loss of/ damage to qualifying habitat
- Atmospheric pollution

The potential for LSE in-combination was identified for the following 7 protected sites:

- River Derwent SAC;
- Lower Derwent Valley SPA;
- Lower Derwent Valley SAC;
- Lower Derwent Valley Ramsar;
- Humber Estuary SPA;
- Humber Estuary SAC;
- Humber Estuary Ramsar;

At DL6 the Applicant [REP6-023] highlighted recent information published on 30 September 2024 about plans for Mylen Leah, a solar development approximately 1.8km north of the Project's Order Limits at its closest point. It had not yet been subject to an Environmental Impact Assessment (EIA) screening or scoping opinion. The Applicant provided a review according to the cumulative effects methodology set out in Environmental Statement (ES) Chapter 5 [APP-057]. Based on the available information, it concluded that there was no potential for cumulative effects to arise from the Proposed Development together with Mylen Leah. The review and conclusion are relevant to the consideration of potential in-combination effects.

NE [REP7-008] noted that an in-combination assessment with the Mylen Leah project is not likely to be possible at this stage due to the lack of information available and therefore such an assessment would be more appropriately carried out by the Mylen Leah project.

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 4.2.34].

3.3 Likely Significant Effects 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 AEoI 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[8] 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).

8 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 Noise and visual disturbance during construction and decommissioning – Lower Derwent Valley SPA/Ramsar and Humber Estuary SPA/Ramsar

In Section 8.1 of the HRA Report [AS-038], the Applicant assessed the potential for an AEoI of the Lower Derwent Valley SPA/Ramsar and the Humber Estuary SPA/Ramsar from the Project alone and in-combination with other plans and projects as a result of noise and visual disturbance during construction and decommissioning.

The Applicant [APP-244] conducted ornithological surveys across the Order Limits and established ornithological presence, associated with the above protected sites, sensitive to noise disturbance from The Project. Further information regarding the results of the ornithological surveys are detailed in section 5.5 of this report. The HRA Report then assessed the extent of three worst-case Noise Generating Activities (NGA) from the Project, which included HDD and tracked excavation, on the aforementioned ornithological receptors through noise contours in the context of LAeq (time-averaged noise) and LAmax (maximum noise levels).

The assessment found that disturbing noise levels in most instances do not extend beyond the first row of arable fields and of those activities which do go beyond the first row of arable fields, the small sized nature and poor supporting habitat of the fields in question renders the presence of sensitive bird receptors unlikely. The assessment concluded that while temporary noise disturbance due to construction works is likely, the geographic extent of disturbance will be limited. The Applicant also stated that the agricultural nature of the surrounding area holds a similar noise level (baseline) to the Project's activities and therefore qualifying birds that have historically been using particularly disturbed areas or fields, may be habituated to higher noise levels and have significantly higher tolerance thresholds.

Therefore, the HRA Report concluded no AEoI from noise disturbance as the overall impact on the local bird populations is expected to be minimal. Furthermore, the minimal impact would be mitigated by golden plover and pink-footed goose Ecology Mitigation Areas which will be in place prior to the start of construction works (see section 5.5 for further details). As construction commences, this mitigation habitat will be adding to the foraging value of the local agricultural landscape and provide additional foraging opportunities for any birds that are temporarily displaced (including by noise disturbance) from around the Order limits.

NE [RR-266] disagreed with the initial conclusions of The HRA Report that AEoI from noise disturbance could be ruled out for the following reasons:

- The assessment cites the 'Institute of Estuarine and Coastal Studies (IECS): waterbird disturbance toolkit (2013)' which utilises a 200m distance/ buffer as appropriate for assessing ornithological disturbance. NE do not support the IECS 2013 toolkit due to a lack of peer review and instead stated that 300m is a more appropriate distance to use as an ornithological disturbance buffer.
- Despite the potential suitability of adjacent arable fields to the Project site as habitat for SPA / Ramsar birds, the HRA Report does not put exceedances into context of the birds present or utilising the area, or provide detail about timings of works / type of works planned at any given time. NE therefore advised that the timings of construction activities should be mapped and described before a conclusion of no AEOI can be made.
- No discussion around possible mitigation options for noise disturbance, despite potentially significant increases in comparison to background noise levels. Further assessment of how mitigation might reduce noise impacts, including measures such noise fencing was therefore requested.

The Applicant subsequently updated the HRA Report [AS-038] to incorporate the requests made by NE and stated that due to the opportunistic use of the fields surrounding the PV area it would be difficult to identity where acoustic fencing would need to be located as the birds are only present on some occasions and absent on others, and this is not predictable.

NE [REP6-017] stated that with the above updates and subject to the habitat in the aforementioned Ecology Mitigation Areas being established prior to the commencement of construction works and any construction works in the closest parts of the Project to the mitigation area being undertaken first to minimise any potential for disturbance from noise, that an AEoI from noise disturbance could be ruled out. The Applicant [REP6-017] subsequently confirmed the above commitments are secured in the Landscape Ecological Management Plan (LEMP) via Requirement 6 in the DCO, which requires approval by the relevant planning authority in consultation with NE.

On that basis, the ExA [ER 4.5.6] was satisfied that the concerns of NE had been addressed.

The HRA Report [AS-038] assessed visual disturbance as a likely impact at up to 500m from source and therefore most species would notice the presence of construction machinery/personnel on approach to arable fields adjoining the Project. It was stated that most individuals would therefore avoid foraging in arable fields immediately adjacent to the Order Limits, instead opting to forage in agricultural parcels that are clearly visually buffered from the construction works. However, the Applicant stated this behaviour is similar to the routine displacement that occurs from the baseline agricultural works, with birds likely relocating to other fields. AEoI from visual disturbance was therefore ruled out as the Ecology Mitigation Area would provide sufficient foraging resource for individuals displaced by the Project, as similarly observed at the baseline.

NE [RR-266] and the ExA [ER 4.4.88] confirmed their agreement with the Applicant's conclusion in relation to visual disturbance subject to mitigation being appropriately secured within the DCO.

Paragraphs 8.1.39 to 8.1.47 of the HRA Report [AS-038] contain the in-combination assessment of noise and visual disturbance effects on the waterbird assemblage and individual qualifying bird features of the Lower Derwent Valley SPA and Ramsar and the Humber Estuary SPA and

Ramsar during construction and decommissioning in which it was concluded that there would be no AEoI.

NE [RR-266] requested that further detail was required for the in-combination assessment before a conclusion of no AEoI could be reached. The Applicant [AS-038] updated the HRA Report and concluded that, considering the sequential nature of cable installation works, large tracts of arable land being available, natural inter-annual variation in suitability, comparable disturbance from the cable installation activities to conventional farming activities and the highly mobile nature of dependent bird species, the potential for in-combination effects between the Project and other projects was inherently limited. Therefore, no residual significant disturbance effect was expected to arise.

Following the updates to the HRA Report, NE agreed [AS-024 and REP3-048] an AEoI arising from in-combination effects could be ruled out. No further concerns were raised by the ExA or IPs.

Based on the 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 integrity of the qualifying features of the Lower Derwent Valley SPA and Ramsar and the Humber Estuary SPA and Ramsar from noise and visual disturbance.

5.2 Noise and visual disturbance during construction and decommissioning – Lower Derwent Valley SAC and River Derwent SAC

In Section 8.1 of the HRA Report [AS-038], the Applicant assessed the potential for an AEoI of the Lower Derwent Valley SAC and River Derwent SAC from the Project alone and in-combination with other plans and projects as a result of permanent loss of FLL during construction.

The Applicant [APP-244] conducted a phase 1 otter survey to establish the presence of the otter qualifying feature along main river corridors which have potential to be impacted by the Project. A single lay-up resting place (also known as a ‘couch’) was recorded along a large unnamed ditch (DE53) north of the River Derwent just outside the Order limits. Other drainage ditches and streams in proximity to the River Derwent SAC that are traversed by the Grid Connection Corridor (e.g., DE03, DE52, OU13, OU20 and OU24) were identified as potentially suitable for otter. The surveys did not detect any holts within the Survey Area, the otter features that are most sensitive to noise and visual disturbance. Surveys within the Solar PV Areas yielded no signs of otter and therefore it was concluded no material risk of construction/decommissioning disturbance to otter in this part of the Site.

Informed by the above surveys, the locations with highest risk of disturbance to otter were established and HDD was selected as a means of crossing in these areas instead of open-cut trenching. The Applicant [APP-244] proposed to mitigate disturbance by implementing a 30m standoff distance between these high-risk locations all work areas. The 30m standoff distance was informed by noise modelling forecasts which indicated that, whilst exceeding the decibel baseline of the location, it lies within the observed noise tolerance range for otter. To further

mitigate potential disturbance effects, it was proposed that works would mainly take place during the daytime when otters are not present and noise fencing would be used at HDD entry points. The HRA Report therefore concluded no AEoI from noise and visual disturbance.

NE welcomed [RR-266] the inclusion of a HDD buffer to minimise disturbance to the River Derwent SAC and Lower Derwent Valley SAC species but noted apparent inconsistencies with the specified buffering distance between different application documents and therefore could not agree with the conclusion of no AEoI.

NE welcomed HDD as a measure for mitigating impacts on waterways in which there could potentially be otter, however it considered that further information should be provided as to why watercourses DE52, DE03 and OU24 had not been considered for HDD. Each of these waterways had been scoped in for suitability as otter habitat (as stated in the Riparian Mammal Survey Report [APP-093]) and would be directly crossed by the grid connection corridor, potentially resulting in significant disturbance. Due to the suitability of OU20, OU24 and OU13 for otter, it considered that noise barriers should be used to avoid disturbance of these waterways during any adjacent construction phase activities.

The Applicant [REP1-066] clarified that general buffering distance will be 10m from the bank top except for the River Derwent, River Ouse and watercourse DE53 which will be 30m. These distances will be secured within the CEMP, along with noise mitigation and timing of the works. Additionally, it stated Watercourses DE52, DE03, OU13, OU20 and OU24 were all identified in surveys as suitable for dispersal only, rather than for resting places or holts. Evidence of otter use was only found along DE53, the River Ouse and the River Derwent. Since the crossing works would be short-term and typically be undertaken during the day, no need for HDD or noise fencing as mitigation exists. The Applicant noted the need to secure buffers for HDD activities in relation to specific watercourses. These are discussed in Tables 3 and 4 of the Framework CEMP and have been updated to provide further clarity. This confirms there will be a 30 m buffer to prevent impacts to the River Derwent SAC.

The ExA [ExQ1 Q2.1.5] also queried the lack of quantification of the nocturnal works nor cross-reference to relevant information contained in other application documents for the occasional early morning/late evening and potentially some night-time HDD in wintertime.

The Applicant responded [REP1-081] that HDD operations would be temporary, with drilling operations typically requiring several days per crossing. The likely duration of potential nocturnal works, e.g. HDD crossings, had been specifically referenced in the updated HRA Report to be submitted at DL2. Reference to other relevant application documents, e.g. the Framework CEMP [APP-238], had been included. However, the likely frequency of other nocturnal works and any associated lighting requirements were not yet confirmed. Section 2.3 of the Framework CEMP defined the core working hours which would generally occur during the day but stated that night-time working may be required due to an emergency or during HDD where the activity needed to be completed as soon as practicable to limit services disruption.

Following the clarification and updates to the HRA Report [AS-038] NE agreed [AS-024; REP3-048] with the conclusion of no AEoI from noise and visual disturbance to otter due to the measures to manage effects. It considered that noise barriers should still be used on the HDD sites adjacent to watercourses with recorded otter presence in addition to all other mitigation proposed. It reiterated that night-time use of HDD should be minimised and only occur in

instances when 24/hour working was unavoidable, to avoid disturbance to otter nocturnal activities. Assuming the above measures were implemented NE were content that this matter was resolved.

NE [RR-266] considered that further consideration was required for the in-combination assessment regarding if there is potential for timing overlap in construction with other plans or projects before a conclusion of no AEoI could be reached. The Applicant [AS-038] updated the HRA Report to detail that as adequate noise fencing is being deployed around the HDD entry points and a 30m stand-off distance being maintained, any noise and visual disturbance to otter will be sufficiently mitigated. Any adjoining developments with the potential to result in disturbance to bankside habitats would also need to undertake noise modelling and deliver mitigation such as noise fencing, preventing any in-combination disturbance impacts from occurring. Furthermore, the temporary nature of the HDD crossing works (to be completed within several days) will make it extremely unlikely that there will be a temporal overlap with disturbing works undertaken for other nearby developments (e.g. Helios Renewable Energy Project).

Following the updates, NE [REP6-017] confirmed their agreement with the Applicant's conclusions and no further concerns were raised by the ExA or IPs.

Based on the 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 integrity of the qualifying features of the Lower Derwent Valley SAC and River Derwent from noise and visual disturbance.

5.3 Changes in water quality during construction, operation and decommissioning - River Derwent SAC, Lower Derwent Valley SAC/SPA/Ramsar and Humber Estuary SAC/SPA/Ramsar

In Section 8.2 of the HRA Report [AS-038], the Applicant assessed the potential for an AEoI of the River Derwent SAC, Lower Derwent Valley SAC/SPA/Ramsar and Humber Estuary SAC/SPA/Ramsar from the Project alone and in-combination with other plans and projects as a result of changes in water quality during construction, operation and decommissioning.

As the Project lies in proximity to waterbodies, the Applicant [APP-244] identified the potential for water quality impacts to arise from the construction phase alone due to site preparation, solar PV facility construction, and cable installation. Specifically, activities such as topsoil excavation and heavy machinery could cause increased sedimentation into watercourses, posing significant risks to invertebrate/fish communities and could indirectly the availability and suitability of breeding, foraging and roosting habitats for designated bird species.

Additionally, the Applicant identified potential impacts during the operational phase as surface run-off from areas of hardstanding and impermeable surfaces could introduce both toxic and non-toxic pollutants to the aquatic environment.

The HRA Report [APP-244] concluded that, with the implementation of a suite of measures included within the CEMP, Water Management Plan (WMP), and Surface Drainage Water

Strategy to mitigate the potential water quality impacts, there would be no AEoI from the Project alone and in-combination. The measures include:

- Temporary Drainage Systems: Preventing particulates from entering surface water drains.
- Protection of Land Drains and Water Features: Using drain covers, sandbags, earth bunds, and geotextile silt fences.
- Storage of Excavated Topsoil: Storing topsoil away from water features and for limited periods.
- Wash-Down Areas: Designating areas for equipment wash-down to retain and dispose of sediment-enriched water.
- Accidental Spillages and Leakages: Implementing measures to minimize risks from toxic contaminants.
- Trenchless HDD Crossing Points: Employing measures to reduce environmental risks, such as hydraulic fracture risk assessments and appropriate shoring systems.
- The Project's design approach, including vegetated attenuation ponds, mitigates impacts from surface run-off from impermeable surfaces like Solar PV Panels and Grid Connection Substations.

NE [RR-266] requested that further detail was required for the in-combination assessment before a conclusion of no AEoI could be reached. The Applicant [AS-038] updated the HRA Report to detail that the Project and all other developments considered in-combination will mitigate their own water quality impacts by adhering to the legal thresholds set by the Environment Agency and these permissible thresholds for water quality parameters consider effects from multiple developments. Therefore, there is no potential for the Project to result in water quality impacts in-combination with other projects and plans.

NE [REP6-018] considered the additional information appropriate and agreed with applicant's conclusions. No further concerns were raised by the ExA or IPs.

Based on the 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 integrity of the qualifying features of the River Derwent SAC, Lower Derwent Valley SAC/SPA/Ramsar and Humber Estuary SAC/SPA/Ramsar from changes in water quality.

5.4 Atmospheric pollution (dust deposition) during construction and decommissioning – River Derwent SAC

In Section 8.3 of the HRA Report [AS-038], the Applicant assessed the potential for an AEoI of the River Derwent SAC from the Project alone and in-combination with other plans and projects as a result of atmospheric pollution during construction and decommissioning.

Despite the grid connection corridor lying within 200m of the River Derwent SAC, the Applicant [APP-244] concluded that with a suite of measures secured within the CEMP to mitigate potential impacts from the excessive release of dust, there would be no AEoI from the Project alone and in-combination. The measures include:

- Adherence to good practice guidelines and standards, such as the Guidance for Pollution Prevention (GPP), CIRIA documents, and British Standards Institute (BSI) documents.
- Conduct earthworks during drier months to reduce runoff-associated contamination.
- Dampen earthworks and temporary storage sites for excavated materials in dry weather.
- Store topsoil/subsoil at least 20 meters from watercourses and cover with geotextile mats or seed to promote vegetation growth.
- Adequately cover stockpiles or encourage vegetation growth to bind soils and reduce dust release.
- Regularly wash down equipment and plant in designated areas where runoff is isolated for treatment prior to discharge.

NE [RR-266] requested that further detail was required for the in-combination assessment before a conclusion of no AEoI could be reached. The Applicant [AS-038] updated the HRA Report to detail that none of the projects considered within the in-combination assessment fall within the 200m impact zone for dust deposition surrounding the River Derwent SAC. While there is spatial overlap between the Scheme and several other developments (e.g. Helios Renewable Energy Project, SEGL2, Drax Carbon Capture and Drax Re-power), this occurs in the Grid Connection Corridor to the south of the River Ouse and outside said 200m buffer zone.

NE [REP6-018] considered the additional information appropriate and agreed with applicant's conclusions. No further concerns were raised by the ExA or IPs.

Based on the 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 integrity of the qualifying features of the River Derwent SAC from atmospheric pollution.

5.5 Loss of functionally linked habitat during operation – Lower Derwent Valley SPA/Ramsar and Humber Estuary SPA/Ramsar

In Section 8.3 of the HRA Report [AS-038], the Applicant assessed the potential for an AEoI of the Lower Derwent Valley SPA/Ramsar and Humber Estuary SPA/Ramsar from the Project alone and in-combination with other plans and projects as a result of loss of FLL during operation.

Given that The Project is located 1.3km from the Lower Derwent Valley SPA/Ramsar and 3km from the Humber Estuary SPA/Ramsar, the Applicant conducted non-breeding bird surveys within the Order Limits from 2022 to 2023 to assess functional linkage. These surveys identified significant numbers of key species, including Greylag goose, pink-footed goose (PFG), and golden plover, utilising the site. Consequently, the Applicant determined that mitigation measures would be necessary to prevent AEoI.

Bird surveys for the 2023/2024 passage/wintering period were ongoing when the Applicant [APP-244] originally proposed 30ha of mitigation land (15ha and 15ha) for golden plover and PFG in the north-west part of the Scheme. The Ecology Mitigation Areas were selected based on the sizes of plots where peak counts of non-breeding birds were recorded. In addition, the mitigation land would focus on optimising the management of existing arable farmland for PFG

and golden plover, and therefore land management techniques were proposed to ensure a regular food source is available to birds throughout the winter.

NE agreed [RR-266] with the Applicant that mitigation would be needed to avoid AEoI on protected sites, but it noted bird surveys for the 2023/2024 passage/wintering period were ongoing. Therefore, NE could not yet confirm if they agreed that the proposed mitigation (ie, within the Ecology Mitigation Areas) within the HRA and Framework LEMP would be sufficient to avoid AEoI.

On receipt of the updated non-breeding bird surveys, the Applicant [REP1-081] amended the original mitigation plans whereby 28.75ha would be managed to mitigate FLL loss, instead of the 15ha previously proposed. This reflected the larger bird abundances/field sizes occupied recorded in the 2023/24 surveys than the previous surveys. It considered that this did not alter the overall size of the Mitigation Zone required as the area proposed was larger than the minimum area required.

The Applicant [REP1-066; REP2-019] considered that the use of the land was opportunistic and variable for most qualifying species, with numbers exceeding 1% of the SPA population being recorded occasionally within the Solar PV areas during the two years of survey. It considered that the data also confirmed that the overall area identified for habitat offsetting (within Ecology Mitigation Areas 1g and 1h on the north-west part of the application site) for golden plover and PFG (109ha in total, within which 28.75ha of golden plover habitat and 15ha for PFG would be maintained in any year) would deliver sufficient mitigation habitat.

NE [REP3-048] noted that the results of the 2023/2024 surveys returned significantly higher peak counts of PFG, lapwing and golden plover than those recorded in the 2022/2023 surveys. It considered that further assessment was required to determine whether the proposed Mitigation Zones (15ha for PFG and 28.75 for golden plover/lapwing) would provide sufficient mitigation for potential effects on these species. NE requested the Applicant provide:

- Reconsideration on the appropriateness of the approach used to determine the required mitigation land requirements as The Applicant used ‘minimum field size’ rather than a peak population count or ’bird-days’ approach.
- Further assessment of the claims that golden plover and lapwing mitigation land would also be of foraging value to PFG.

The Framework LEMP [REP3-016] states that approximately 79.09ha of Ecology Mitigation Areas 1g and 1h would remain in arable rotation, with 15ha of that managed towards the requirements of PFG in any given year. NE [REP3-048] also considered that further assessment was needed of whether the 15ha would be able to feed geese throughout the season in the same way as currently. As different crops would be likely to become available over the season on different fields, information was needed on how this would be replicated in the Ecology Mitigation Areas and whether 15ha would be sufficient to achieve this. It was proposed to leave stubble fields in the 15ha, which would last only for the beginning of the winter. Although other fields were likely to be planted with winter cereals there was no certainty around that and therefore no certainty that the geese would be fed in the later parts of the season. NE noted that it was evident from survey data that PFG use the site throughout the winter. Confirmation was needed of whether winter cereals would continue to be planted and further details or a schedule of the crop rotation planned outside of the 15ha should be provided. NE noted they would welcome the

provision of a master spreadsheet, that would be created as part of the detailed LEMP and would specify future cropping regimes within the mitigation area.

NE welcomed the increase in the Mitigation Zone from 15ha to 28.75ha for golden plover but requested clarification whether the 28.75ha excluded a (150m) buffer next to the field edges or was the total usable area. The Applicant [AS-045] stated due to the Mitigation Zone being on the edge of the Order Limits and that not all boundaries align with the Solar PV areas, a 150m blanket buffer was not required. It also stated that as the panels were not considered disturbing, the 150m distance would only be implemented for disturbing elements of the infrastructure, such as field stations. NE considered that if 150m was considered over-precautionary, evidence should be presented to show that birds would use areas of the fields within 150m of the panels. If no evidence was available a 150m buffer should be used.

In relation to lapwing, NE noted that despite the peak count increase in bird numbers found in the 2023/24 surveys, the HRA Report and Mitigation Zone design had not been updated to specifically assess the requirement to mitigate for impacts on lapwing. It noted that lapwing have the same habitat requirements as golden plover and will compete for the same invertebrate food, so considered that further justification was required that 28.75ha would produce enough prey to provide for the combined peak numbers of both lapwing and golden plover.

The Applicant [REP4-029] responded that in relation to PFG, golden plover and lapwing it had now undertaken 'bird day' calculations (contained in a second Technical Note [REP4-037] sent to NE) as an alternative to the maximum field size approach originally used. It considered that the calculations demonstrated that the quantity of mitigation land proposed was sufficient to provide for all of these species and drew attention to the additional information on the Mitigation Zones provided to NE in the first Technical Note [AS-045].

In its additional submission made between DL5 and DL6 [AS-044] NE concluded that, based on post-DL3 discussion and additional information provided by the Applicant, and subject to all relevant mitigation measures being secured, sufficient additional assessment had been provided to rule out AEoI.

In relation to PFG, NE noted that the revised assessment was based on the highest peak number of individuals recorded and that The Applicant clarified how 15ha of a total 79.09ha would be managed to target the months in which PFG were found on the application site (October to December). It considered that would be adequate and that the Applicant had demonstrated that Ecology Mitigation Areas 1g and 1h (15ha of which would be managed on a rotational basis) would have adequate carrying capacity for PFG.

NE highlighted that density of PFG on sugar beet fields (as recorded in published studies) was used for the purposes of the bird-days calculations although the Applicant was proposing to feed geese on stubble and associated split-grain. It noted that as sugar beet has higher energy content than stubble the calculation may not be representative of the Mitigation Zone required but understood that an accurate value for stubble and split grain was not available. It concluded that as the calculation demonstrated that an area of 12.16ha would be required and the Applicant was proposing 15ha, together with the potential for PFG to graze some of the lapwing and golden plover Mitigation Zones, the total provision was sufficient.

In respect of golden plover and lapwing, NE considered that the Applicant's updated bird-days calculations demonstrated that the Golden Plover Mitigation Zone (28.75ha) would be able to

incorporate a 150m buffer next to the field edges and the remaining area of 26.3ha would be adequate to support the peak numbers of golden plover and lapwing.

NE considered that Ecology Mitigation Areas 1g and 1h must be secured through the DCO (Schedule 2, R6) for at least the lifetime of the Proposed Development. It commented that the HRA and Framework LEMP should be updated to incorporate all relevant additional information received during the Examination relating to assessment of and mitigation of impacts on wintering/passage birds associated with these European sites (e.g. additional bird-days calculations and management/monitoring regimes).

The Applicant provided an updated HRA Report [AS-038) and updated Framework LEMP [AS-040] between DL5 and DL6 that incorporated the additional information.

In addition, NE [RR-266] requested that further detail was required for the in-combination assessment before a conclusion of no AEoI could be reached. The Applicant [AS-038] updated the HRA Report stating the losses due to other schemes do not need discussing in detail in this project's HRA, and in many cases would not be known definitively until a DCO for those projects was submitted. The threshold for determining whether the loss of an area of functionally linked land requires mitigation is set so low specifically to capture the potential for multiple developments which all affect fields supporting only relatively small numbers of SPA birds to act in combination. Based on information available, there are no other projects that would result in significant loss of land for SPA birds which lie close to the PV area of The Project and even if there were the Scheme fully addresses its contribution to loss of functionally linked land.

By the end of examination NE [REP6-017] agreed with the conclusion that an AEoI from loss of FLL could be ruled out. No further concerns were raised by IPs or the ExA.

Based on the 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 integrity of the qualifying features of the Lower Derwent Valley SPA/Ramsar and Humber Estuary SPA/Ramsar as a result of loss of FLL during operation.

5.6 Temporary loss of/ Damage to qualifying habitat during construction and decommissioning – River Derwent SAC

In Section 8.5 of the HRA Report [AS-038], the Applicant assessed the potential for an AEoI of the River Derwent SAC from the Project alone and in-combination with other plans and projects as a result of temporary loss/ damage to qualifying habitat during construction and decommissioning.

The Applicant [APP-244] concluded that there would be no AEoI because, although a section of verge habitat within the River Derwent SAC boundary will be temporarily removed during construction for an access track, the verge soils will be stripped, stored separately, and then reinstated after construction and decommissioning to preserve the local seedbank.

The Applicant further concluded that an AEoI on Otter could be ruled out as the Phase 1 Survey found no evidence of otters along the section of the ditch where construction was taking place.

In addition, both the temporary verge habitat loss and any potential resulting impacts on otter (if present) would be temporary, ceasing upon reinstating of verge soils.

NE [RR-266] considered that as the vegetated banks are supporting habitat for otter there was potential for AEoI if it was not fully restored. It considered that the HRA Report must confirm that a restoration plan for the removed vegetation would be undertaken and the plan must be developed prior to commencement of development and secured within the DCO.

The Applicant clarified [REP1-066, REP2-019 and REP2-012] that the affected area was not part of the watercourse banks but comprised a grass verge and was a path-side verge on the southern boundary of the field. The affected area would be restored following the works and a separate habitat restoration plan for the affected area was not considered necessary as details of the restoration works had been added to the Framework LEMP [REP1-063] (secured by Requirement 6 of the DCO) and included measures to reinstate the habitat to full ecological functionality.

On the basis of the confirmation provided in the DL2 HRAR that a restoration plan for verge habitat would be included in the Framework LEMP and that there was no evidence of otter using Ditch DE21, indicating it was not supporting habitat for otter, NE considered the issue resolved [AS-024 and REP3-048].

Based on the 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 integrity of the qualifying features of the River Derwent SAC as a result of temporary loss/ damage to qualifying habitat.

5.7 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 for seven 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 The River Derwent SAC, Lower Derwent Valley SAC/SPA/Ramsar, and Humber Estuary SAC/SPA/Ramsar. 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 20 October 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 15 March 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 [AS-038] or within its ES [APP-052 to APP-070]. No such impacts were raised for discussion by any IPs during the Examination, including following publication of the Inspectorate's transboundary screening[9].

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.

[9] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010143/EN010143-000520-EYSF%20-%20Regulation%2032%20Transboundary%20Screening%20document.pdf

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 seven 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 AEoI of the protected sites.

Having considered the information available to him and having made a full assessment of the potential for an AEoI 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 AEoI can be excluded beyond reasonable scientific doubt, subject to the 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
Humber Estuary SPA	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[10]	Loss of functionally linked land Noise and visual disturbance Changes in water quality

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

Humber Estuary Ramsar	Wetland of International Importance Ramsar Criterion 1 The site is a representative example of 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. It is a large macro-tidal coastal plain estuary with high suspended sediment loads, which feed a dynamic and rapidly changing system of accreting and eroding intertidal and subtidal mudflats, sandflats, saltmarsh and reedbeds. Examples of both strandline, foredune, mobile, semi-fixed dunes, fixed dunes and dune grassland occur on both banks of the estuary and along the coast. The estuary supports a full range of saline conditions from the open coast to the limit of saline intrusion on the tidal rivers of the Ouse and Trent. Wave exposed sandy shores are found in the outer/open coast areas of the estuary. These change to the more moderately exposed sandy shores and then to sheltered muddy shores within the main body of the estuary and up into the tidal rivers. The lower saltmarsh of the Humber is dominated by common cordgrass Spartina anglica and annual glasswort Salicornia communities. Low to mid marsh communities are mostly represented by sea aster Aster tripolium, common saltmarsh grass Puccinellia maritima and	See Footnote[11]	Changes in water quality

11 https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK11031&SiteName=humber%20estuary&SiteNameDisplay=Humber%20Estuary%20Ramsar&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=&HasCA=0

	sea purslane Atriplex portulacoides communities. The upper portion of the saltmarsh community is atypical, dominated by sea couch Elytrigia atherica (Elymus pycnanthus) saltmarsh community. In the upper reaches of the estuary, the tidal marsh community is dominated by the common reed Phragmites australis fen and sea club rush Bolboschoenus maritimus swamp with the couch grass Elytrigia repens (Elymus repens) saltmarsh community. Within the Humber Estuary Ramsar site there are good examples of four of the five physiographic types of saline lagoon. Ramsar Criterion 3: The Humber Estuary Ramsar site supports a breeding colony of grey seals Halichoerus grypus at Donna Nook. It is the second largest grey seal colony in England and the furthest south regular breeding site on the east coast. 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 Bufo calamita. Ramsar Criterion 5 Assemblages of international importance: 153,934 waterfowl, non-breeding season 5-year peak mean 1996/97-2000/2001) Ramsar Criterion 6: Species/populations occurring at levels of international importance: • Common shelduck		

	• Golden plover • Knot • Dunlin • Black-tailed godwit • Bar-tailed godwit • Common redshank • Redshank 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.		
Humber Estuary SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae) Coastal lagoons Dunes with sea buckthorn (Hippophae rhamnoides) Embryonic shifting dunes Estuaries Mudflats and sandflats not covered by seawater at low tide Fixed dunes with herbaceous vegetation (`grey dunes`) Glasswort Salicornia sp. and other annuals colonising mud and sand	See Footnote[12]	Changes in water quality

12 https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK0030170&SiteName=humber%20estuary&SiteNameDisplay=Humber+Estuary+SAC&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=8

	Sandbanks which are slightly covered by sea water all the time Shifting dunes along the shoreline with (Ammophila arenaria) (`white dunes')		
River Derwent SAC	Watercourse of plain to montane levels with the Ranunculion fluitantis and Callitricho- Batrachion vegetation River lamprey Sea lamprey Bullhead Otter	See Footnote[13]	Changes in water quality Noise and visual disturbance Atmospheric pollution
Lower Derwent Valley SAC	Lowland hay meadows Alluvial forests Otter	See Footnote[14]	Changes in water quality Noise and visual disturbance
Lower Derwent Valley SPA	Waterbird assemblage Bewick's swan Golden plover	See Footnote[15]	Changes in water quality Noise and visual disturbance Loss of functionally linked land

[13] https://publications.naturalengland.org.uk/publication/4824082210095104

[14] https://publications.naturalengland.org.uk/publication/5660734323163136

[15] https://publications.naturalengland.org.uk/publication/6223883187257344

	Ruff Shoveler Teal Wigeon Pochard		
Lower Derwent Valley Ramsar	Alluvial flood meadow Assemblage of migratory waders - Passage Teal, Anas crecca - Wintering Waterbird assemblage - Wintering Wetland invertebrate assemblage Wigeon, Mareca penelope - Wintering	See Footnote[16]	Changes in water quality Noise and visual disturbance Loss of functionally linked land

16 https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=UK11037&SiteName=lower%20derwent%20valley&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

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