Date: 31 July 2026
Our ref: 554492
Your ref: EN010148

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

T 0300 060 3900

Planning Inspectorate
c/o QUADIENT
69 Buckingham Avenue
Slough
SL1 4PN

BY EMAIL ONLY

Dear Inspector,

NSIP Reference Name / Code: Tween Bridge Solar Farm / EN010148

Title: Natural England's comments for Deadline 5 in respect of the Tween Bridge Solar Farm Project, promoted by RWE Renewables UK Solar and Storage Limited.

Examining Authority's submission deadline: 04 August 2026

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.

For any further advice on this consultation please contact the team via consultations@naturalengland.org.uk.

Yours sincerely,

Laura Tyndall
Sustainable Development
Yorkshire and Northern Lincolnshire Area Team

Summary of Natural England's advice

Natural England is satisfied that, providing that all mitigation measures are appropriately secured (see Part II of this letter for further detail), adverse effects on the integrity of the following internationally designated sites can be ruled out:

- Humber Estuary Special Protection Area (SPA)
- Humber Estuary Special Area of Conservation (SAC)
- Humber Estuary Ramsar
- Thorne Moor SAC and Hatfield Moor SAC
- Thorne and Hatfield Moors SPA

Internationally designated sites

- Potential loss/ damage to designated habitats (NE0) ('green')
- Loss of functionally linked land (FLL) for the relevant qualifying bird features of the listed SPA/Ramsar sites (NE1-NE6, NE8) ('green')
- Potential noise and visual disturbance impacts to functionally linked land for relevant qualifying bird features of the listed SPA/Ramsar sites (NE7) ('green) and (NE9) ('green')
- Potential lighting impacts to qualifying bird features of the listed SPA site (NE10) ('green')
- Proposed management of Mitigation Area M1(A) (NE11a) ('yellow')
- Potential hydrological impacts to SAC features (NE11b) ('grey')
- Potential air quality impacts to SAC features (NE12) ('green') (NE13) ('yellow' – See Appendix 1)
- Potential abstraction impacts resulting from Horizontal Directional Drilling (HDD) ('green') (NE14)
- Potential water quality impacts during construction and operation (NE15, NE17-NE18) ('green') (NE16) ('green')
- The in-combination assessment (NE19) ('green').

Nationally designated sites

- Potential impacts on the Humber Estuary SSSI designated features (NE20) ('green')
- Potential impacts on Thorne, Crowle & Goole Moors SSSI designated features (NE21) ('green')
- Potential impacts on the Hatfield Chase Ditches SSSI designated features (NE22) ('green')

Protected Species

- Protected species – Otter (NE23a) ('green')
- Protected species – Badger (NE23b) ('green')
- Protected species – Bats (NE23c) ('green')
- Protected species – Great crested newt (NE23d) ('amber')
- Protected species – Water vole (NE23e) ('green')
- Protected species – Breeding birds (NE23f) ('grey')

Biodiversity Net Gain (BNG)

- Biodiversity Net Gain (NE24) ('grey')

Soils and best and most versatile agricultural land

- Comments on *Appendix 15.1: Agricultural Land Classification Report* (NE25a) ('grey')
- Comments on the *Outline Soil Management Plan* (NE25b) ('grey')

Biodiversity enhancement

- Advice regarding the management of solar farms to enhance biodiversity (NE26) ('grey')

Ancient woodland and ancient/veteran trees

- General advice (NE27) ('grey')

PART I: Summary and conclusions of Natural England's advice
PART II: Natural England's detailed advice
PART III: Natural England's comments on the Development Consent Order (DCO)

Part I: Summary and conclusions of Natural England's advice

1.1 Natural England's advice in our response to Deadline 5 is based on information submitted by RWE Renewables UK Solar and Storage Limited (*'the Applicant')* in support of its application for a Development Consent Order ('DCO') in relation to Tween Bridge Solar Farm *('the project'*).

1.2 Natural England's comments are based on a review of the updated documents (as submitted at Deadline 4) most relevant to our statutory purpose.

1.3 Our comments are set out against the following sub-headings which represent our key areas of remit:

- Internationally designated sites
- Nationally designated sites
- Protected species
- Biodiversity net gain
- Soils and best and most versatile agricultural land
- Ancient woodland and ancient/veteran trees

1.4 Our comments are flagged as red, amber, yellow, green or grey:

- **Red** are those where there are fundamental concerns which it may not be possible to overcome in their current form.
- **Amber** are those where further information is required to determine the impacts of the project and allow the Examining Authority to properly undertake its task and/or where further information is required on mitigation/compensation proposals in order to provide a sufficient degree of confidence as to their efficacy.
- **Yellow** are those where Natural England does not agree with the Applicant's position or approach. We would ideally like this to be addressed but are satisfied that for this particular project it is unlikely to make a material difference to our advice or the outcome of the decision-making process. However, we reserve the right to revise our opinion should further evidence be presented. It should be noted by interested parties that whilst these issues/comments are not raised as significant concerns in this instance, it should not be understood or inferred that Natural England would be of the same view in other cases or circumstances.
- **Green** are those which have been successfully resolved (**subject always to the appropriate requirements being adequately secured**).
- **Grey** are notes for Examiners and/or competent authority.

1.5 Part I provides an updated overview for Deadline 5 of the issues and a Summary of Natural England's advice. Part II contains Natural England's detailed comments regarding the main issues which it considers will continue to need to be addressed by the Secretary of State. Part III contains Natural England's updated comments for Deadline 5 on the draft Development Consent Order (DCO) and associated documents.

1.6 Natural England considers that the only outstanding key issue from Deadline 5 onwards is NE23d (Protected species – great crested newt (GCN)). We acknowledge the additional information provided by the Applicant in the updated outline Ecological Construction Management Plan (oECMP) (Rev 4) [REP4-053] in relation to GCN surveys. We have consulted with the relevant internal Natural

England team, however, due to limited capacity we will need to provide further update at Deadline 6. If we receive advice sooner, we will submit an addendum to our Deadline 5 response.

1.7 As detailed in Part II, all other key issues (aside from NE23d), have been moved to either ‘green’, ‘yellow’ or ‘grey’ for Deadline 5. Please refer to our detailed comments in Part II for information on the securing of the relevant mitigation measures for each key issue.

Part II: Natural England's updated advice for Deadline 5

3. Natural England's detailed advice

3.1 Part II, Table 1 of these representations expands upon the detail of all the significant issues ('amber' issues) that were outstanding at Deadline 3. As noted in Part I, point 1.7, all issues other than NE23d are now considered either resolved ('green' or 'yellow'), or are 'grey' issues. Please refer to Part 1 for definitions of these.

3.2 Natural England will continue engaging with the Applicant to seek to resolve the remaining outstanding concern.

Natural England's updated advice for Deadline 5, Part II, Table 1

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	NE commentary and advice.	Risk: (Red, Amber, Yellow, Green or Grey)
NE0	**International designated sites** • Thorne Moor SAC • Thorne and Hatfield Moors SPA	Potential loss/ damage to designated habitats (C) and (O)	In relation to the 0.54ha of Thorne Moor SAC and Thorne and Hatfield Moors SPA within the Order Limits, it is now clearly stated in Table 3-2 (page 25) of the outline Ecological Construction Management Plan (oECMP) Rev 4 [REP4-053] that no construction works are to be undertaken within the boundary of Thorne Moor SAC and Thorne and Hatfield Moors SPA. As per the draft DCO, the oECMP is secured under Requirement 8(2)(b). Natural England advise that this point is now resolved.	**Green**
NE1a (NE1 - NE6)	**International designated sites** • Humber Estuary SPA • Humber Estuary Ramsar	Loss of functionally linked land (FLL) for the relevant qualifying bird features of the listed SPA/Ramsar sites	We consider that the updates provided at Deadline 4 in the shadow Habitats Regulations Assessment (HRA) (Rev 6) [REP4-011] and outline Landscape Ecological Management Plan (oLEMP) (Rev 5) [REP4-055] sufficiently address our Deadline 3 comments in relation to mitigation for loss of FLL for Humber Estuary SPA/Ramsar birds. This includes further assessment within Table 5 of the HRA around the overall suitability of the mitigation strategy for each of the target species, alongside further assessment of connectivity, adjacent habitat, and habitat management (including sward heights and scrape management) within the oLEMP for each of the mitigation parcels. To avoid adverse effects on the integrity of the Humber Estuary SPA/Ramsar, the delivery, monitoring, management and remedial measures of/for all mitigation areas (totalling 183.74 hectares across mitigation areas M1–M5, M7-M8 and M11-M13	**Green**

NE key issue ref	Topic	Issue summary (C) – construction phase (O) – operational phase	NE commentary and advice.	Risk: (Red, Amber, Yellow, Green or Grey)
		Mitigation strategy (C) and (O)	and M15) as further detailed in sections 6, 7, 8 and 9 of the oLEMP, must be secured through DCO Requirement 8(2)(a) for at least the operational lifetime of the Scheme. As per 6.22 and 6.23 of the oLEMP, the mitigation areas must be available and functioning prior to construction commencing. Please note that Natural England should only be included as a consultee on monitoring reports where the site is failing its targets. Section 8.5. of the oLEMP states that details of specific remedial measures where the site is failing targets will need to be agreed with the relevant local planning authority (LPA) and Natural England prior to implementation. However, we advise that Natural England will not need to be consulted on these and these should be agreed with the relevant LPA. As previous, all details provided in the outline Non-Breeding Bird Mitigation Strategy (oNBBMS) (Rev 7) [REP4-029] must also be within the oLEMP. In relation to our previous comments about the permissive footpath within mitigation area M1(A), please refer to **NE11a** for further comments as we consider this aspect a 'yellow' issue (see Part I, page 3 for definition).	
NE7	**International designated sites** • Humber Estuary SPA • Humber Estuary Ramsar	Potential noise and visual disturbance impacts to FLL - Humber Estuary SPA/Ramsar sites. (C)	The Applicant has confirmed in the updated HRA point 7.2.71 that *"…construction will be timed to avoid being completed when non-breeding birds could be present within mitigation areas, with no construction to take place within 200m of the mitigation areas between November to February."* Alongside this, further clarity has been provided around the role of the Ecological Clerk of Works (ECoW) in determining when the requirement for additional noise mitigation (e.g. temporary acoustic screening/ barriers) has been reached, in paragraph 7.2.73. Following email communications with the Applicant dated 29 July 2026 in which we enquired around the justification for the months of restriction considering the bird survey results, the Applicant has confirmed they will be amending these to October to February in all relevant documents at Deadline 5. Based on the proposed October to February restriction period, alongside the measures outlined in 7.2.67 – 7.2.76 of the HRA, we consider this point is now resolved.	**Green**

NE8	**International designated sites** • Thorne and Hatfield Moors SPA	Potential loss of functionally linked land (FLL) for the relevant qualifying bird features of the listed SPA/Ramsar sites. (C) and (O)	<u>Displacement/ disturbance impacts to functionally linked land</u> We welcome the additional assessment and further information provided at Deadline 4, demonstrating the sizes of the neutral grassland buffers to be managed to provide suitable foraging habitat for nightjar in the updated HRA (sections 7.2.7, 7.2.9 and 7.2.93 - 7.2.94, and Figures 7-2 and 7-3) and oLEMP (2.3.1 and Figures 6 and 7). Based on the assessment throughout the HRA and oLEMP, alongside this additional information, Natural England consider that adverse impacts can be ruled out in relation to potential loss of FLL for Thorne and Hatfield Moors SPA and we now consider this point to be resolved.	**Green**
NE8a	**International designated sites** Thorne and Hatfield Moors SPA	Potential collision risk for nightjar using FLL. (O)	We welcome the additional information provided at Deadline 4 around monitoring and remedial measures in relation to collision risk in 8.8 of the oLEMP. It is important to note that monitoring and remedial measures cannot be relied on to make a conclusion of no adverse effect on integrity (AEOI); however, we acknowledge the limited available evidence regarding collision risk for nightjar from solar panels. Based on this context, and alongside the information and assessment provided around the relevant aspects of the scheme design (e.g. retention of nightjar foraging areas, appropriate panel height, layout and spacing, provision of habitat buffers and enhancement etc.), we agree AEOI from collision risk can be ruled out in this case. We consider however, that the monitoring and remedial measures set out for nightjar will be key for the post-consent phase in validating this conclusion of no AEOI. Subject to the additional assessment relating to collision risk in the NE8a section of the Statement of Common Ground (SoCG) (from Rev 2 onwards) [REP2-095] also being included in the HRA to support the overall conclusion of no AEOI in 8.1.3, Natural England advise that this point is now resolved.	**Green**
NE9	**International designated sites** • Thorne and Hatfield Moors SPA	Potential noise and visual disturbance impacts to qualifying bird features of the listed SPA site. (C)	The Applicant has confirmed in the updated HRA point 7.2.71 that *"…construction will be timed to avoid being undertaken during sensitive periods adjacent to the Thorne and Hatfield Moors SPA when nightjar could be present, generally between April to August, with no construction to take place within 200m of this SPA within this period."* Alongside this, further clarity has been provided around the role of the ECoW in determining when the requirement for additional noise mitigation (e.g. temporary acoustic screening/ barriers) has been reached, in paragraph 7.2.73. With the April to August restriction proposed, alongside the measures outlined in 7.2.67 – 7.2.76 of the HRA, we consider this point is now resolved.	**Green**

NE10	**International designated sites** • Thorne and Hatfield Moors SPA • Humber Estuary SPA	Potential lighting impacts to qualifying bird features of the listed SPA site. (C) and (O)	*Note – Resolved at Deadline 3 (30 June 2026), see comments below for reference:* <u>Lighting impacts</u> We welcome that the updated sHRA assesses the potential increase in light spill to Thorne and Hatfield Moors SPA, and FLL to the Humber Estuary SPA, and demonstrates there will not be a net increase in light spill to these once mitigation is applied. Mitigation measures outlined in section 7.2.47 of the sHRA include: no construction works after dusk, shorter hours in the winter, and the use of cool LED lamps avoiding the lighting of hedge rows where required. We recommend the mitigation for light spill is clearly stated in the Ecological Construction Management Plan, making specific reference to the management of light spill impacts to relevant SPA species. Subject to this update, we can confirm this issue can be moved to 'green' status.	**Green**
NE11a	**International designated sites** • Humber Estuary SPA • Humber Estuary Ramsar	Proposed management of mitigation area M1(A) (C) and (O)	<u>Please note NE11 has been separated into NE11a (Proposed management of mitigation area M1(A)) and NE11b (Potential hydrological impacts to SAC features) for this Deadline 5 response as the points in each section relate to different impact pathways for different sites.</u> In NE11 of our Deadline 3 response, we referred to comments in NE1a around potential impacts of the footpath on the suitability of the M1(A) site for SPA birds. Although M1(A) comprises part of the overall mitigation strategy/package for impacts to FLL for the Humber Estuary SPA/Ramsar, the Applicant has detailed that it is not relied on as a 'core' aspect (as summarised in 6.33 of the oLEMP). Therefore, we are satisfied that with the measures outlined in 6.33 of the oLEMP and other relevant sections of the HRA, the proposed footpath within M1(A) will not result in AEOI to the Humber Estuary SPA/Ramsar in this case. However, it continues to be our recommendation that re-consideration is given to the location of the footpath, if possible. For example, is there any potential for the path be re-routed to the edge of the parcel. Although the Applicant is not relying on this as a 'core' area of mitigation, this could enhance the function of the parcel for various bird species. Therefore, Natural England consider this to be a 'yellow' issue.	**Yellow**
NE11b	**International designated sites** • Thorne Moor SAC	Potential hydrological impacts to SAC features (C) and (O)	We advised in our Deadline 3 response that the proposed management of M1(A) would not result in impacts to, or conflict with any potential future enhancements of, the hydrology of Thorne Moor SAC. We therefore advised that this aspect of the issue was resolved. In our Deadline 3 response, we also re-referred to recommendations from our Relevant Representations response including maintaining higher water levels within the southern permitter ditch, reprofiling the old peat cuttings along the boundary of the mitigation parcel and blocking the boundary ditch at each end. The Applicant has provided comments in their latest SoCG (Rev 3) to be submitted at Deadline 5 around the potential wider drainage impacts from drain blocking and have stated that as this isn't required for any mitigation, this is not proposed. We acknowledge these comments and re-iterate that the proposed management of M1(A) (as detailed in the oLEMP) would not result in impacts to, or conflict with any potential future enhancements of, the hydrology of Thorne Moor SAC.	**Grey**

			As in our Deadline 3 response, we again note the statement in the SoCG (Rev 2) as follows *'…the Applicant is also proposing that this land is transferred to Natural England, or another appropriate body, to enable its long-term management in accordance with the conservation objectives of the designated site, although understand that previously this was not considered feasible due to Natural England's lack of resources.'* We will continue discussions with the Applicant about the feasibility of this separately and will provide any updates as necessary. We will maintain this as a grey issue (as a note for Examiners and/or competent authority) whilst discussions are ongoing.	
NE12	**International designated sites** • Thorne and Hatfield Moors SAC	Air quality impacts to SAC features (C)	*Note – Resolved at Deadline 3 (30 June 2026), see comments below for reference:* <u>Dust impacts on SAC features</u> The HRA now includes assessment of potential impacts from dust, referencing the adoption of the Outline Ecological Construction Management Plan as mitigation for potential dust impacts in Table 7-2. We also note that sections 3.3.16 to 3.3.21 of the oECMP now include additional measures but note that these measures are only referenced for Thorne and Hatfield Moors (SPA) for breeding nightjar. We advise the HRA should include all relevant construction phase impacts for the SAC, as for the SPA. However, subject to this update we consider that the measures outlined for dust will be sufficient for preventing adverse impacts.	**Green**
NE13	**International designated sites** • Thorne and Hatfield Moors SAC	Air quality impacts to SAC features (C)	*Note – Confirmed the following at Deadline 3 (30 June 2026), see below for reference:* Natural England has now changed its approach to responding to air quality impacts and we have attached our standard advice on NSIPs (Appendix 1). You should review any further information received in line with Natural England's advice to assess the application. This standard advice is Natural England's formal statutory advice. It provides decision makers with the information needed to fulfil their statutory duties when making decisions on NSIP applications with potential air pollution impacts. Any overall conclusion regarding impacts on statutory protected sites must take into account the standard advice for air pollution.	**Yellow**
NE14	**International designated sites** • Thorne Moors SAC • Hatfield Moors SAC • Thorne and Hatfield Moors SPA	Potential abstraction impacts resulting from Horizontal Directional Drilling (HDD) (C)	The Applicant confirmed in their SoCG (Rev 2) that water is to be sourced offsite. Subject to no water abstraction as part of the directional drilling from the ditch network within the Order Limits being secured through the DCO via. the secured oECMP at Requirement 8(2)(b), Natural England advise that this point is now resolved.	**Green**

NE15	**International designated sites** • Humber Estuary SAC/SPA/ • Ramsar • Thorne Moors SAC • Hatfield Moors SAC • Thorne and Hatfield Moors SPA	Potential water quality impacts - construction (C)	Alongside the measures detailed within the oECMP, the Applicant has set out the relevant measures to prevent impacts on water quality for the relevant designated sites within the updated HRA in 7.2.56-7.2.57. Subject to these measures in the oECMP being secured through Requirement 8(2)(b), Natural England advise that this point is now resolved.	**Green**
NE16	**International designated sites** • Thorne Moors SAC • Hatfield Moors SAC • Thorne and Hatfield Moors SPA • Hatfield Chase SSSI	Potential water quality impacts - construction (C)	*Note – Resolved at Deadline 3 (30 June 2026), see comments below for reference:* <u>Horizontal Directional Drilling - Bentonite breakout</u> We welcome that additional detail has been provided in 7.2.61 of the HRA around bentonite breakout, and the following is included in 7.2.62: *"Further details regarding HDD breakout will be included within a HDD Method Statement that will form part of the final Construction Environmental Management Plan(s)."* Subject to Natural England being consulted as a statutory consultee on the bentonite breakout plan to be produced, we advise this issue can be moved to 'green'.	**Green**
NE17	**International designated sites** • Thorne Moors SAC • Hatfield Moors SAC • Thorne and Hatfield Moors SPA	Potential water quality impacts - operation (O)	<u>Cleaning of solar PV modules</u> We welcome the additional detail in the updated HRA at 7.2.48 around the details that will be included in a Pollution Prevention Plan for any exceptional cases where cleaning of solar panels with cleaning products is required, rather than de-ionised water. Subject to these measures in the oECMP being secured through Requirement 8(2)(b), Natural England advise that this point is now resolved.	**Green**

NE18	**International designated sites** • Humber Estuary SAC • Humber Estuary Ramsar • Thorne Moors SAC • Thorne Moors SAC	Potential water quality impacts - operation (O)	<u>Firefighting water runoff</u> The Applicant has provided comments in their latest SoCG (Rev 3 - to be submitted at Deadline 5), to confirm that the detailed drainage plan will be developed post-consent in relation to retention and testing of firefighting water associated with BESS. It should be ensured that there is no additional nutrient input or contamination of designated site watercourses through release of 'firewater' from BESS following emergency procedures. We defer advice to the Environment Agency at the relevant post consent/permitting stage. Natural England advise that this point is now resolved, however, due to the above we consider this a 'yellow' issue.	**Yellow**
NE19	**International designated sites** • Humber Estuary SAC • Humber Estuary Ramsar • Thorne and Hatfield Moors SAC • Thorne and Hatfield Moors SPA	In-combination assessment (C and O)	We welcome the additional in-combination assessment provided by the Applicant at Deadline 4 in the updated HRA paragraphs 7.2.109 – 7.2.118. We concur with the conclusion that there will be no significant in-combination impacts and advise that this point is now resolved.	**Green**
NE20	**Nationally designated sites** • Humber Estuary SSSI	Potential impacts on the Humber Estuary SSSI designated features (C) and (O)	We consider that the additional information provided at Deadline 4 for the Humber Estuary SPA/Ramsar is sufficient to also conclude there will be no impacts on the Humber Estuary SSSI and Natural England advise that this point is now resolved.	**Green**

NE21	**Nationally designated sites** • Thorne, Crowle & Goole Moors SSSI	Potential impacts on Thorne, Crowle & Goole Moors SSSI designated features (C) and (O)	We welcome the additional information provided by the Applicant in paragraphs 7.5.75 to 7.5.77 which provides further consideration around whether the buffers in which no panels are to be sited along the boundary of the SSSI are wide enough to minimise the loss of foraging resource for SSSI assemblage species. We also welcome the additional information in 5.1 and 5.3 of the oLEMP further assessing the impact of the introduction of the honey bee hives which will be located over 1km from Thorne, Crowle & Goole Moors SSSI. We welcome that the above additional information has been provided, and Natural England advise that this point is now resolved.	**Green**
NE22	**Nationally designated sites** • Hatfield Chase Ditches SSSI	Potential impacts on the **Hatfield Chase Ditches SSSI** designated features (C)	We welcome that the water quality measures to prevent pollution of Hatfield Chase Ditches SSSI are now detailed within 7.5.81 of the updated ES chapter 7. Natural England advise that this point is now resolved.	**Green**
NE23	**Protected Species**	General comments	*Note – This is a 'grey' issue (note for Examiners and/or competent authority), however see Deadline 3 comments below for reference:* Natural England advise that protected species surveys should be undertaken in line with best practice guidance. Where alternative methods are proposed, information should be provided regarding why best practice is not being followed, what changes have been made, what alternative sources of data and/or certainty and being used/relied upon, and how the bespoke approach relates to the impact assessment and mitigation proposals. It is the responsibility of the person or organisation undertaking the works to make the decision as to whether a protected species licence will be required, typically based on advice from a consultant ecologist and based on appropriate consideration of survey data, specialist knowledge of the species concerned, the specific nature of the works and the habitats present. If the proposed works are likely to result in an impact to a protected species and/or their habitats, and such impacts cannot be avoided or appropriately mitigated for, then a protected species licence will likely be required to cover activities that would otherwise constitute an offence under the relevant legislation. If an individual or organisation chooses to proceed without a licence, and/or in accordance with the measures within a Precautionary Working Method Statement (PWMS), then Natural England advises that such persons document their decision-making process and outline the measures that will be taken to avoid committing an offence. Natural England does not provide commentary on, or approval for, PWMS approaches.	**Grey**

			It should be noted that if works are carried out under a non-licensed Method Statement and a protected species is subsequently identified on site, all works must cease immediately, and Natural England must be contacted to obtain the appropriate licence.	
NE23a	**Protected species**	Protected species – Otter	*Note – Resolved at Deadline 3 (30 June 2026), see comments below for reference:* The Otter and Water Vole Survey Report [APP-077] highlights that the surveys were constrained due to a number of reasons, including not being able to access all water bodies. From review of Figure 1 of the Otter and Water Vole Survey Report [APP-077], it is unclear where the restrictions were, although we note that no details are provided on surveys outside of the redline boundary. Whilst Natural England recommend that otter surveys should be completed within 200m of the proposed works, in line with best practice guidance, overall, due to the limited nature of impacts from the development on habitat suitable for otter, we advise that in this case, the survey approach followed is not considered a significant constraint. Natural England note that no evidence of otter was recorded within the site limits in 2025. We therefore advise that the proposed mitigation, such as retention of all ditches, and buffering, are considered appropriate in this case. We welcome the commitment to undertaken pre-construction surveys, and advise that the methodology proposed is considered appropriate, based on the existing survey data and potential impacts. Natural England welcomes the confirmation provided in the Outline Ecological Construction Management Plan [REP2-068] that works in the vicinity of otter habitat will be avoided during the hours of darkness and within 2 hours after sunrise and 2 hours before sunset, with this reduced to one hour between November to February (inclusive) because of the limited daylight. It is additionally welcomed that where ditch management and improvement are proposed, a suitably qualified ecologist will survey the area prior to works to ensure no impacts on protected species are likely to occur. Natural England advise that this point is now resolved.	**Green**
NE23b	**Protected species**	Protected species - Badger	*Note – Resolved at Deadline 3 (30 June 2026), see comments below for reference:* The Outline Ecological Construction Management Plan [REP2-068] confirms that updated badger surveys will be undertaken prior to the works commencing, in order to record recent signs of badger activity in the Order Limits and evidence of badger setts. Natural England recommend that these surveys should be undertaken in line with best practice guidance. We recommend that the additional surveys are planned to allow sufficient time for a licence application to be submitted and assessed (if required) before works need to begin. Please note that Natural England will expect updated surveys to have been completed if the survey data is 6 months or older in age at the time at which a licence application is formally submitted. Please refer to our Relevant Representations [RR-023] for further advice regarding submitting a licence application, should this be required.	**Green**

			Natural England welcomes the confirmation provided in 8.2 Response to Relevant Representations [REP1-043] that the locations of badger setts within the working area will be identified and appropriately marked, with relevant information communicated to the site personnel through toolbox talks and site inductions. We recommend that these talks should include informing them of the legal protections afforded to badgers, the locations of setts, actions to be taken if a badger is encountered and contact details for appropriate persons (including an ecologist with relevant experience of badger mitigation). This should be secured via the Ecological Construction Management Plan. Table 2-1 of the Design Parameters Document [REP1-012] confirms that panels will be a minimum clearance of 800mm from the ground, to enable badger movement. Natural England welcome this, and the confirmation provided in 8.2 Response to Relevant Representations [REP1-043] that mammal gates used throughout the order limits will be two-way. We advise that it should be ensured that this measure is appropriately secured through the oLEMP. We welcome that the Outline Landscape Ecological Management Plan confirms that these gates will be monitored at the same time as the habitat monitoring, to ensure that they are functioning appropriately. Natural England welcomes the confirmation provided in the Outline Ecological Construction Management Plan [REP2-068] that there will be a strict 30m limit for works with heavy machinery or ground investigations within 30m of a sett. Subject to the above measures being adequately secured, Natural England advise that this point is now resolved.	
NE23c	**Protected species**	Protected species - Bats	*Note – Resolved at Deadline 3 (30 June 2026), see comments below for reference:* Natural England welcome that the bat activity surveys have been undertaken in line with best practice guidance, based on a low habitat suitability categorisation. We note that the proposed retention of hedgerows, ditch networks, ponds and woodlands will likely result in the avoidance of impacts on key foraging and commuting habitats within the development. The proposed management of lighting during construction, as noted in Section 3.3.25 of the Outline Ecological Construction Management Plan [REP2-068], is considered appropriate for this scheme. We recommend that any lighting installed during the construction and operational phases of the scheme should be in accordance with Guidance Note GN/08 Bats and Artificial Lighting at Night. It has been stated that if PRF-I trees require felling that Reasonable Avoidance Measures (RAMs) will be utilised. We welcome the confirmation provided in the Outline Ecological Construction Management Plan [REP2-068] that any categorisation of tree roost suitability will be conducted by a suitably qualified ecologist. Natural England advise that this point is now resolved.	**Green**

NE23d	**Protected species**	Protected species – Great crested newt	*We acknowledge the additional information provided by the Applicant in the updated oECMP in relation to GCN surveys. We have consulted with the relevant internal team, however, due to limited capacity we will need to provide further update at Deadline 6. If we receive advice sooner, we will submit an addendum to our Deadline 5 response. In the meantime, please refer to our Deadline 3 comments below for reference:* Natural England advise that the current survey effort is insufficient to provide robust evidence of Great Crested Newt presence/absence across the scheme footprint, with it noted that almost half of the scheme's ponds remain un-surveyed and inaccessible. As such, it is not currently possible to conclude that Great Crested Newts are absent from the site, and their presence cannot be ruled out in un-surveyed areas. To address this uncertainty, we recommend that further survey work should be undertaken. Where this is not possible, a precautionary approach should be adopted, whereby Great Crested Newts are assumed to be present in the areas of highest habitat suitability where there are historical records of the species. Natural England recommends that where access permission to land or waterbodies are denied, we would expect that an effort is made to repeat these access requests. Evidence should be retained to show what efforts have been made to seek access and, should a full licence application eventually be needed, Natural England may request to view these records. Where access is continually denied, or ponds continue not to be surveyable, Natural England recommend that alternative sources of information, such as historical records and terrestrial habitat mapping, should be used to assess the 'reasonable maximum' population of great crested newts that the un-surveyed parts of the site could support, with the scheme designed accordingly.	**Amber**
NE23e	**Protected species**	Protected species – Water vole	*Note – Resolved at Deadline 3 (30 June 2026), see comments below for reference:* Natural England note that continued use of suitable ditches within the order limits by water vole was identified in the 2025 surveys. We advise that the proposed embedded mitigation detailed in the Outline Ecological Construction Management Plan [REP2-068], such as buffer distances, are considered appropriate and in line with best practice expectations. Natural England welcomes the commitment in the Outline Ecological Construction Management Plan [REP2-068] that updated water vole surveys will be undertaken prior to construction, along each watercourse within/adjacent to the relevant phase. We recommend that these should be undertaken in accordance with the Water Vole Mitigation Handbook and include coverage of the locations of the proposed 45 culverts. We welcome that where ditch management and improvements are proposed, a suitably qualified ecologist will survey the area prior to works to ensure no impacts on protected species are likely to occur. Natural England notes that Chapter 7: Ecology and Nature Conservation [REP2-035] states that 45 culverts will be installed for access tracks. We recommend that any culverts should be installed in line with the recommendations in the Water Vole	**Green**

			Mitigation Handbook, where applicable. Subject to this being secured via the Ecological Construction Management Plan, Natural England advise this point is now resolved.	
NE23f	**Protected species**	Protected species – Breeding birds	*Note – This is a 'grey' issue (note for Examiners and/or competent authority), however see Deadline 3 comments below for reference:* The oLEMP states that skylark plots will be provided in accordance with Countryside Stewardship guidance. Care should be taken to ensure that the actions required for developing/managing skylark habitat work in conjunction with the requirements for wintering birds, given that the intention is to provide mitigation for both within the same plots. The advice provided in Section NE8 regarding the dimensions of field margins for foraging nightjar is relevant for creating/sustaining habitats for other breeding birds. Wider margins will provide greater foraging and nesting opportunities for breeding birds and is encouraged. When developing habitat for breeding birds, like skylark, we recommend that our advice provided in NE2 regarding setting objectives and targets for species should be applied. This is to ensure that habitat can be managed long term and adapted as need be. The assessment of impacts to skylark, and grey partridge, both of which occur in significant numbers on site, falls outside of Natural England's statutory remit. We advise that the applicant should consult with local stakeholders, including the Local Planning Authority, for advice regarding these species and breeding birds more broadly.	**Grey**
NE24	**Biodiversity Net Gain (BNG)**	Biodiversity Net Gain	*Additional comment for Deadline 5 - We welcome that the BNG metric has been published following our previous comments. Please note that we will not be providing further comments on BNG for this Application and this remains a 'grey' issue (note for Examiners and/or competent authority). However, please see our Deadline 3 comments below for reference:* As previously stated in our relevant representations response, Natural England welcomes the commitment to delivering Biodiversity Net Gain (BNG) on this project. We welcome that this commitment is reflected in the DCO (Requirement 8 (3a)) to achieve a minimum of at least 10% BNG across all biodiversity unit types, as to be secured via the Landscape and Ecological Management Plan (LEMP). As recommended previously, we consider that it would also be helpful to make the full BNG metric available for stakeholder review. Although BNG is not yet mandatory for NSIPs, we refer to additional information around BNG for NSIPs that has recently been published at: Biodiversity net gain: nationally significant infrastructure projects - GOV.UK.	**Grey**

			As previously noted, we note that the developer has deviated from the Defra biodiversity metric trading rules. Trading rules are established to ensure losses are compensated for through creating or enhancing habitats on a 'like-for-like' basis, and of equal or higher value. In this case scrub habitat is being lost and is being replaced with woodland. We note the updated BNG assessment (Rev 2) states in 3.21 that *"The trading rules for BNG have not been met in relation to loss of scrub as a broad habitat type, as scrub habitats are being lost without like-for-like replacement. However, woodland of the same distinctiveness as the required scrub habitat is being provided, which, while not the same broad habitat type, contributes positively to overall habitat quality. In addition, the scheme is delivering over a 10% net gain in biodiversity units."* We acknowledge that additional justification has been provided, however, it continues to be our advice that although BNG is not mandatory, BNG proposals should be in line with best practice guidance. Following our previous comments around monitoring, we welcome that the updated oLEMP sections 7.1 and 7.2 contain commitment to additional monitoring of planting proposals.	
NE25a	**Soils and best and most versatile agricultural land**	Comments on *Appendix 15.1: Agricultural Land Classification Report*	*Note – This is a 'grey' issue (note for Examiners and/or competent authority), however please see our additional comments around handling of peaty soils below:* <u>As noted at Deadline 3, we acknowledged the inclusion of the additional section in the outline Soil Management Plan (oSMP) [REP2-078] at Deadline 2 in relation to handling of any peaty soils and noted we would provide further comments following review. Therefore, please refer to our additional comments below</u>: *Paragraph 4.5.10* - The England Peat Map (EPM) provides a national-scale assessment of peat extent, depth and condition across England. The mapping includes all peaty soils containing more than 20% organic matter, with no minimum peat depth threshold applied. As such, the EPM is a useful screening tool for identifying areas where peaty soils are likely to be present. However, while the dataset represents the best available evidence at a national level, it is not sufficiently accurate for site-specific decision-making. In particular, the peat depth model has an estimated error margin of approximately ±30 cm, which limits its ability to reliably distinguish between shallow and deep peat deposits. Furthermore, uncertainties remain within the model outputs, especially in lowland areas where ground-truthing data are comparatively limited. The EPM extent probability layer should therefore be used to understand both the likelihood of peat occurrence and the associated level of uncertainty. Although the published peat extent layer uses a 40% probability threshold, peat and peaty soils are known to occur in areas with predicted probabilities as low as 20-30%. Consequently, some locations that contain peat may not be represented within the mapped extent. *Mitigation and Recommendations:* Given these limitations, the EPM should be treated as a strategic-level planning tool rather than definitive evidence of peat presence or absence. Where development proposals or land management decisions could be affected by peat soils, a precautionary approach should be adopted. This should include a review of the underlying probability mapping, consideration of adjacent areas with lower peat probabilities, and targeted site-specific investigations such as peat probing, soil surveys, and ground-truthing to confirm peat extent, depth and condition. These measures will help reduce	**Grey**

			uncertainty, ensure appropriate assessment of environmental risks, and inform the design of suitable avoidance, protection or restoration measures where peat is identified. *Para 4.5.11* - Given the limitations and uncertainties associated with the EPM, the statement that peaty soils were not found at depths of less than 120 cm across the Order Limits should be treated with a degree of caution. The EPM is a strategic, national-scale dataset and is not intended to provide definitive evidence at the site level. In addition, the peat depth model has an estimated error margin of approximately ±30 cm and may not reliably distinguish between shallow and deep peat. Peaty soils are also known to occur in areas that fall below the published 40% probability threshold used to define the mapped extent. While peaty soils can often be identified in the field by their typically dark brown to black colouration and high organic matter content, visual appearance alone is not sufficient to confirm the presence, extent or depth of peat. Therefore, the apparent absence of peat at depths shallower than 120 cm should be verified through appropriate site-specific investigations, including soil sampling, peat probing and ground-truthing surveys. A precautionary approach should be adopted in localised areas where peaty soils have been identified, as well as in locations adjacent to mapped peat areas or where EPM probability data indicate a moderate likelihood of peat occurrence. This will help ensure that any peat resources are accurately characterised and that suitable avoidance, protection or management measures are incorporated into the project design where necessary. *Please also see Deadline 3 & Relevant Representations comments below for reference:* *Deadline 3* We welcome the inclusion of Natural England's comments regarding potential permanent loss of BMV across access tracks. In relation to peaty soils, we note that an additional section has been provided in an updated OSMP – we will provide further comments following review. *Relevant Representations* Natural England notes that 'The Order Limits consist of approximately 1,831 ha of agricultural land' (page 4, HRA) and Appendix 15.1 Agricultural Land Classification (ALC) assesses the grading of 1848.2 ha. Natural England also note that section 15.3.43 of the ES states that the area involved in the installation of the cables 'involves temporary disturbance' and that 'The works will involve only a small part of this area and soil survey can be completed at a later date once the corridor width has been defined and can inform the final Soil Management Plan prior to construction works commencing.' Natural England re-iterates that a detailed ALC and soil survey of the agricultural land should be undertaken across the full Study Area. Our advice remains that this data should be provided prior to consent in order to inform decision making. Soil data collected as part of an ALC survey can also be used to inform the soil resource and management plan as set out in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. Natural England advises that there is a risk of soil damage, ALC degradation and long term or permanent loss of BMV from cable installation (grid connection cable route). Therefore, soil will need to be handled according to best practice and reinstated to a high standard to reduce the	

			impacts. The results from a detailed ALC survey would provide soils data to inform a soil management plan for the whole Site regardless of whether the use is permanent or temporary in nature. We advise, however, that the Examining Authority should determine whether the proposed approach is acceptable. Based on the information provided in the ALC survey, we highlight that the proposal has the potential to affect approximately 819.2 ha of BMV agricultural land (although the ES states this is as 813 ha). We also note that of the fixed infrastructure that covers BMV land, 'all except 0.4ha will be restored at decommissioning.' The impact is predicted to be 'temporary and of low magnitude, and the overall effect is minor adverse, which is not significant' (15.7.3 ES). Natural England notes that the ALC report identifies the presence of peat in several sample locations across the Order Limits, with peat recorded at varying depths in the soil profile. The ES concludes that peaty soils were not identified at agricultural depth in a way that would influence ALC grading. However, Natural England advise that the presence of peat within the soil profile warrants consideration in terms of carbon storage, ecological sensitivity, and appropriate handling measures. We recommend that the ES should include a clear estimate of the volume of peat to be disturbed and an assessment of the potential impact on carbon sequestration, in line with the IEMA (2022) guidance, as previously committed to by the applicant.	
NE25b	**Soils and best and most versatile agricultural land**	Comments on the *Outline Soil Management Plan*	*Note – This is a 'grey' issue (note for Examiners and/or competent authority), however see Deadline 3 comments below for reference:* We welcome the Outline Soil Management Plan (oSMP) now includes Natural England's advice that all soils should be handled in a dry and friable condition and that it is expected that soil handling will be confined to the drier summer period (April through September) to minimise risk of soil damage. Soil handling should normally be avoided during October to March inclusive. Natural England welcomes the inclusion of recommended tests for soil handling in the OSMP section 3. Namely, soil handling methods should be as specified as in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (including accompanying Toolbox Talks). Natural England welcome that the 'implementation of this outline SMP, and adherence to its principles, will be the responsibility of the Applicant who will appoint a competent Principal Contractor who will implement onsite during the construction and decommissioning stages'. Given the high quality of the agricultural land, we recommend that this should include supervision of soil handling by a competent soil specialist.	**Grey**

NE26	**Biodiversity enhancement**	Advice regarding the management of solar farms to enhance biodiversity.	*Note – This is a 'grey' issue (note for Examiners and/or competent authority), however see Deadline 3 comments below for reference:* Section 2.10 of the *National Policy Statement for Renewable Energy Infrastructure* (EN-3, 2024) highlights that solar farms have the potential to greatly increase the biodiversity value of a site, especially on land which was previously intensively managed. Research indicates that solar farms managed specifically for biodiversity show significant increases in plants, invertebrates, and birds, compared with sites which are not. Consequently, the implementation of good design and management on solar sites can result in significant environmental enhancements beyond that which is required through Biodiversity Net Gain. We welcome the enhancements which have already been proposed, though we advise that there may be further scope for biodiversity enhancement. Please refer to Annex G *[within our Relevant Representations response]* for further information regarding the management of solar farms to enhance biodiversity, which may help refine your plans.	**Grey**
NE27	**Ancient woodland and ancient/veteran trees**	Ancient woodland and ancient/veteran trees - General	*Note – This is a 'grey' issue (note for Examiners and/or competent authority), however see Deadline 3 comments below for reference:* Natural England has adopted standing advice for ancient woodland, which should be referred to. Natural England is not providing bespoke advice on the ancient woodland information provided in the ES for this project. The requirement for mitigation/compensation has not been assessed by Natural England.	**Grey**

Part III: Natural England's comments on the draft Development Consent Order (DCO) and associated documents

Page	Topic/DCO Requirement	Natural England's comments
41-48	Requirements 1-22	We have no additional specific comments to make regarding Requirements 8, 10, 14 and 15.
43-44	Requirement 8 - Landscape and ecology management plan	As per comments in NE1a above, any additional details provided in the outline Non-Breeding Bird Mitigation Strategy should be adequately secured via the LEMP. Subject to the LEMP containing all relevant detail in relation to mitigation measures for the Humber Estuary SPA/Ramsar, we have no further comments on this requirement.
NA	Works within the designated sites	As detailed in NE0 above, we consider that the restriction to works within the Thorne Moor SAC, Thorne and Hatfield Moors SPA and Thorne, Crowle and Goole Moors SSSI designated site boundaries is now suitably secured via the DCO through Requirement 8(2)(b).

Appendix 1 - Standard Advice for Air Quality Impacts in National Significant Infrastructure Projects (NSIPs)

Natural England provides the following standard advice on air pollution. This advice relates to the protection of protected sites under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) and the Wildlife and Countryside Act 1981 and should be taken as Natural England's formal representation. This standard advice is applicable to all stages of the NSIP process and may be used by the applicant for NSIP pre application stages, by the Examining Authority (ExA) during the statutory stages of the NSIP and by the relevant Secretary of State as the competent authority.

Protected sites are 'sites of special scientific interest' (SSSIs) and 'habitats sites' (also called 'European sites'). For the purposes of this advice, Habitats Sites are Special Areas of Conservation (SACs), possible SACs, Special Protection Areas (SPAs), Potential SPAs, Ramsar sites, and sites identified, or required, as compensatory measures for adverse effects on Habitats Sites. Although their regulatory frameworks differ, the general principles and approach for air pollution assessment outlined for Habitats Sites are also relevant for SSSIs. Where the following advice applies to both, we use the term protected sites. Where the advice or approach differs, the individual terms are used.

This includes advice on information that is required to assess this and how to interpret the results of air quality modelling for the decision maker to conclude whether air quality impacts would have an adverse effect on the integrity of a Habitat site or a SSSI. You should also consider any relevant caselaw that could affect how you carry out any air quality assessments.

Air pollutants

This advice covers the following air pollutants from the construction, operation and decommissioning phases of a proposal

- ammonia (NH3)
- nitrogen oxides (NO, NO2 or NOx)
- nitrogen deposition
- acid deposition
- sulphur dioxide (SO2)

Standing advice on air pollution and development is also available here: https://www.gov.uk/guidance/air-pollution-and-development-advice-for-local-authorities

Whilst the standing advice does not cover NSIPs, it does include additional technical advice which may prove useful. However, in summary, Table 1 provides the steps that we advise should be taken to assess air quality impacts on protected sites. The applicant should provide their own assessment containing the information and detailed modelling you need. You need to review this and make your own conclusion.

Table 1: Sequential approach to air quality assessments

Stage	Step		Supplemental evidence/ basis for judgment
Initial screening for credible risk of an effect	**1**	Check Distance criteria - could significant emissions reach a protected site? Yes = move to Step 2 No = no further HRA required	The Air Pollution Information System (APIS) includes an introduction to air pollution. APIS provides site specific information on the interest features of individual protected sites and the sensitivity to air quality impacts of those features. Please see Table 2 for industrial air pollution screening distances. For road traffic impacts, roads on the affected road network that lie within 200m of a designated site should be considered. Use Magic Map to check the location of designated sites. Search for the location then select the 'Designations' option.
	2	Check if the qualifying habitats or supporting habitat of qualifying species are sensitive to air quality impacts. Yes = move to Step 3 No = no further HRA required APIS Site relevant Critical Loads and Levels (based on literature and professional judgement) http://www.apis.ac.uk/srcl Some habitats may not have a critical load because there is not enough data. In these cases, you should find the critical load for a similar habitat type or feature.	The qualifying features of Habitats Sites can be identified in the relevant Site Conservation Objectives and Supplementary advice packages, which include a definitive list of legally qualifying features. These objectives are available here. Alternatively, a list of qualifying features can also be found by searching for the Habitats Site and SSSIs on Designated Sites View , alongside Conservation Objectives and Supplementary Advice for Habitats Sites. The above links will also show whether any of the qualifying features for Habitats Sites have a Restore or Maintain Conservation Objective in relation to air quality thresholds (critical levels or loads). If the site is a SPA or an SAC/SSSI designated for an animal species (as opposed to a habitat), determine whether the predicted pollution effects

			on the supporting habitat will have a negative effect on the notified species.
Detailed AQ modelling	**3**	Undertake detailed modelling using a recognised dispersal model – i.e. Atmospheric Dispersion Modelling System (ADMS) Unless robust site-specific evidence is provided, we advise the lower range of the critical load should be used in modelling. If there are site specific reasons why it is more appropriate to use the higher end of the range, then this should be clearly evidenced.	Air Quality modelling should include relevant scenarios that are clearly identified. One such example of scenarios is a baseline plus future forecasts as follows: Baseline, a construction year, and future operational year(s), do nothing (without proposal), do something (with proposal); taking into account background trends for each pollutant). For proposals that will emit pollutants from a point source, it is helpful to provide isopleths of the dispersion modelling results, showing the predicted contours of pollutant concentration and deposition of the development. These may be assessed against the locations of protected sites and sensitive features within those sites. At least 3 years of meteorological data should be included within the AQ modelling for sources other than for road transport modelling The Institute of Air Quality Management (IAQM) has produced the following document to assist its members in the assessment of the air quality impacts of development on designated nature conservation sites: air-quality-impacts-on-nature-sites-2020.pdf
Applying screening thresholds	**4a**	Apply Screening Threshold Alone If below threshold alone, move to step 4b. If above = move straight to step 5	Ascertain the Process Contribution (PC) from the plan or project (emissions and predicted deposition). Apply Screening threshold (1% of critical level or load) alone using the annual averages. If the process contribution is less than 1% of the relevant long-term benchmark (Environmental Assessment Level, Critical Level or Critical Load),

			the emission is not likely to have a significant effect alone irrespective of the background levels.
	4b	Apply Screening Threshold In-combination. If below threshold in-combination = no LSE/significant risk of damage etc and no further assessment required. If above = move straight to step 5 Applicants might use the Joint Nature Conservation Committee (JNCC) 'decision-making thresholds' as a reason for not completing an in-combination assessment. If so, you should check they have correctly followed the JNCC guidance on decision-making thresholds. If this guidance shows they do not need to complete an in-combination assessment, continue to step 5. If applicants have not used the decision-making thresholds, or have not followed them correctly, they will need to provide an in-combination assessment.	Use information from competent authorities (Planning Portal, PINS NSIP register or Environmental Permitting register) to determine if there are plans or projects in the pipeline (not included in the current baseline) that should be considered in-combination If the combined process contribution is less than 1% of the relevant long-term benchmark (Environmental Assessment Level, Critical Level or Critical Load), the emission is not likely to have a significant effect in-combination irrespective of background levels.
Detailed Assessment of ecological impacts	**5**	This step is to consider the ecological impacts of AQ on the interest features of the designated site and is not based only on numerical figures. If it is not certain whether sensitive features are located within the areas to be impacted, a site visit may be helpful to determine this. For SSSIs, this step should provide all the information necessary, including any required mitigation, for the decision maker to	The following information is likely to be helpful for the decision maker: Is the sensitive feature(s) located within the pollution footprint? Should it be there for the site to meet its Conservation Objectives or is there some other, natural reason (e.g. hydrology), why the sensitive feature(s) would not be expected to occur there? Check APIS Trends Tab for reasonable expectation on whether background pollution may be decreasing or not.

		determine if there would be an adverse effect on a SSSI. If Habitats Sites are impacted by the proposals, move to Step 6.	Habitats that have already been subject to high background nitrogen deposition can develop tolerance to further deposition. This cannot be used to justify further exceedance as it would undermine conservation objectives to reverse decline. You should consider predicted effects on the species richness of a habitat against the site's conservation objectives.
Appropriate Assessment (AA) for habitats sites	**6**	The competent authority to undertake their AA to conclude whether or not there will be an adverse effect on integrity (AEOI) of habitats sites. Any mitigation proposed should also be assessed at this point. Should the AA conclude that the proposal would have an AEOI that cannot be excluded with mitigation measures, consider the derogation route of the HRA process. Should compensation measures be required under derogation, please contact Natural England for specific advice. Note: If an AA has been undertaken of the proposals alone and concluded that there will not be an adverse effect on integrity, if there are residual impacts that are not fully mitigated, these will need to be considered in combination with other plans or projects	Where mitigation is required to enable a conclusion of no adverse effect on integrity to be reached the AA must be able to show that mitigation measures can be relied upon to avoid adverse effects over the full lifetime of the project (ie construction, operation and decommissioning where relevant). To be viable, such measures should be **effective, reliable, timely, guaranteed** and of **sufficient duration**. The assessment of such measures should be supported by evidence. When deciding on whether the proposals set out in the NSIP will have an adverse effect on Integrity on a Habitats Site, the Conservation Objectives and any supplementary advice should be taken into account. Including whether the site is already exceeding the environmental thresholds for ammonia, nitrogen oxides and nitrogen deposition and has a restore conservation objective.

Mitigation measures

If you cannot conclude there is no adverse effect, the applicant will need to apply mitigation measures. Measures will only be appropriate if you can quantify their effectiveness in reducing emissions on the protected site. You

should check that mitigation measures are in place to avoid adverse effects on site integrity over the lifetime of the project.

Mitigation may include measures that:

- the applicant volunteers
- you impose through formal conditions or restrictions in any permission or authorisation – these may be different or stricter measures than ones proposed by the applicant

Examples could include:

- relocation or redesign of developments to avoid impacts on protected sites
- control of other emissions of the same pollutants with an overlapping effect
- a change in stack height for industrial processes
- Euro 6 standards for construction machinery
- adding wooded shelterbelts, trees, green walls and hedges to limit dispersal of emissions, as long as these measures in themselves would not negatively impact the protected site

Table 2: Industrial air pollution screening distances

Emission source	Distance for SSSIs	Distance for habitats sites
Industrial developments	2km	5km
General combustion processes (under 20MW energy input)	500m	500m
General combustion processes (20MW to 50MW energy input)	2km	2km
General combustion processes (over 50MW energy input)	2km	10km
Mechanical and biological waste treatment	500m	500m
Landfill waste	2km	2km
Compost (under 500 tonnes maximum annual operational throughput)	500m	500m
Compost (500 to 75,000 tonnes maximum annual operational throughput)	1km	1km
Compost (over 75,000 tonnes maximum annual operational throughput)	2km	2km
Airports, helipads and other aviation proposals	5km	5km
Oil and gas exploration and extraction	500m	500m
Quarries	200m	200m
Other industrial developments causing air pollution	500m	500m

Additional advice

Common Standards Monitoring[1] is used to define the ecological condition of a protected site. It is undertaken on a broader level and does not currently consider air quality impacts. The relevant benchmark for assessing impacts is the critical thresholds. Therefore, the existing status of a designated site should not be the sole reason for judgement on potential impact.

For many protected sites, the current background pollution may already be exceeding the relevant critical load/level from a different source type to the project being assessed (e.g. where the main source of background exceedance is due to agriculture, but the proposal is an industrial project). Proposals must consider their own impacts against the relevant environmental thresholds. There are many reasons why background levels are high, but the conservation objective is to 'maintain or restore' air pollutants to within these benchmarks. The objective would be undermined by proposals that add further emissions, including if it compromises any strategic initiatives to reduce air pollution levels.

You must determine if there is evidence that the increased emissions represent a measurable risk and could compromise the strategic initiatives. You would need to consider information on:

- the extent to which any declining national trends in air pollution, or strategic initiatives to tackle emissions affecting the site more locally, might otherwise lead to improvements
- the rate at which such improvements are anticipated
- the extent of the impacts of a plan or project, and whether those impacts can properly be considered temporary and reversible

If the affected area is small, consider the risk to site integrity proportionally. For example, how important is the area in terms of rarity, location, distribution, vulnerability to change and ecological structure. If it is a supporting habitat, consider its importance to the designated species on the site. Consider any site survey information that may provide evidence of existing impacts.

Emissions from road transport (if applicable):
Emissions from road transport may be an operational impact or be limited to the construction phase of proposals. Roads on the affected road network that lie within 200m of a designated site should be considered. If all affected roads are further than 200m from a protected site, then there is no likely significant effect (habitats sites) or no impact (SSSIs) on protected sites from air pollution

Improvements in vehicle technology and a move to further electrification of the vehicle fleet will, over time, result in lower background levels of nitrogen deposition and nitrogen oxide pollution near to roads. As most sites are currently over the relevant thresholds and have a "restore" objective, this should be noted as a "retardation" of the restore objective and expressed in months and years. Retardation of less than one year is acceptable as air quality is considered against an annual average. Please note that ammonia impacts cannot be assessed in this manner as there is no certainty of a declining trend.

Defra Emissions Factor Toolkit

[1] HYPERLINK "https://jncc.gov.uk/our-work/common-standards-monitoring/"Common Standards Monitoring | JNCC - Adviser to Government on Nature Conservation

The Defra Emission Factor Toolkit (EFT) allows for gradual introduction of electric vehicles into the fleet (cars and LGVs) up to 2050. These are the emission factors we advise that NSIPs should be using (which we advise should also consider ammonia emissions as well as NOx – using one of three sets of emission factors available). However, the User Guide to the EFT highlights that calculation tools only support assessment years 2018 up to 2030, reflecting that predictions and assumptions beyond then become less certain. Where EFT calculated emissions are to be used after 2030 to inform air quality assessments, the EFT indicates that appropriate caveats around the limitations of the analysis must be included to accompany the assessment. We therefore advise that emission factors no later than 2030 are used for HRAs– which would mean percentages of EVs are at predicted 2030 levels. A key concern is that, although EVs themselves have no tailpipe emissions, and the percentage of them will increase, the remaining combustion engine vehicles on the road may become more polluting as they age as selective catalytic reduction technology may create 'ammonia slip' over time. Ammonia slip is the unreacted ammonia (NH_3) that escapes from a selective catalytic reduction (SCR) or selective non-catalytic reduction (SNCR) system used to reduce NOx in exhaust gases.

Motorways within the affected road network

There is potentially an added complexity to the need for in-combination assessments when considering traffic on motorways, as including these roads can mean that the assessment takes account of traffic growth related to strategic factors or long range (external) trips that are independent of the specific plan or project and neighbouring plans or projects. These roads are strategically important and tend to have high volumes of traffic as well as being well represented in traffic models. The air quality assessment should therefore include traffic flows on these roads, but the external trips can be excluded from the initial screening assessment. A justification and explanation of which journeys are included and excluded in the traffic model should be provided.

The conclusions reached on the air pollution impacts of the HRA must be incorporated into the wider HRA conclusions for other impact pathways identified for the proposals.

How to Use this Advice in Decision Making

Provided you have followed the above advice and have been able to conclude there would be no adverse effects on any protected sites we would be able to agree with your decision to authorise the project.