Meridian Solar Farm

EN010169

Volume 6

Environmental Statement

6.1 ES Chapter 9: Ecology and Biodiversity

APFP Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

March 2026

Table of Contents

Tables

9. Ecology and Biodiversity

9.1. Introduction

9.1.1. This chapter of the Environmental Statement (ES) presents the findings of an assessment of the likely significant effects on Ecology and Biodiversity as a result of the Scheme.

9.1.2. This chapter identifies and proposes measures to address the potential impacts and likely significant effects of the Scheme on Ecology and Biodiversity, during the construction, operation and decommissioning phases of the Scheme.

9.1.3. The assessment covers: (i) four Solar Development Area (SDA) parcels (A–D); (ii) Inter-array Connections (IAC) (overhead between parcels C–D and underground between parcels A–B); and (iii) a predominantly overhead ~13 km 400 kV Grid Connection Route (GCR) to the National Grid Weston Marsh B Substation, including one short underground section to cross an existing 132 kV line.

9.1.4. Detailed construction and design parameters (e.g., structure heights/spacing, trench dimensions, HDD platform sizes, working widths) are set out in **ES Chapter 2: The Scheme** (Doc Ref. 6.1) and the **Design Parameters** (Doc Ref. 7.4). They are not repeated here; the ecology assessment relies on those parameters to define impact pathways and Zones of Influence.

9.1.5. The following aspects of Ecology and Biodiversity have been scoped in and are presented within this chapter.

- Statutory and non-statutory designated sites;
- Habitats; and
- Protected species.

9.1.6. This chapter is supported by the following figures (Doc Ref. 6.2):

- **ES Figure 9-1: Internationally Important Wildlife Sites within 20km;**
- **ES Figure 9-2: Nationally designated and non-statutory sites within 2km;**
- **ES Figure 9-3: UKHab Habitat map;**
- **ES Figure 9-4: Grid Connection Route vantage point locations and viewsheds (diurnal/ nocturnal);**
- **ES Figure 9-5: Collision Risk Zone spans along GCR;**
- **ES Figure 9-6: Proposed line-marker spans (targeted marking);**

- **ES Figure 9-7: Potential Roost Features tree locations (Ground Level Tree Assessment summary); and**
- **ES Figure 2-3: Watercourse Crossings Locations.**

9.1.7. This chapter is supported by the following technical appendices (Doc Ref 6.3):

- **ES Appendix 9-1: Ecology and Biodiversity Legislation, Policy and Guidance;**
- **ES Appendix 9-2: Preliminary Ecological Appraisal Report;**
- **ES Appendix 9-3: Breeding Bird Survey Report;**
- **ES Appendix 9-4: Wintering Bird Survey Report 2022-2023;**
- **ES Appendix 9-5: Wintering Bird Survey Report 2023-2024;**
- **ES Appendix 9-6: Grid Connection Route Wintering Bird Survey Report 2023-2024;**
- **ES Appendix 9-7: Otter and Water Vole Report;**
- **ES Appendix 9-8: Badger Report (Confidential);**
- **ES Appendix 9-9: Great Crested Newt Survey Report;**
- **ES Appendix 9-10: Vantage Point Survey Report;**
- **ES Appendix 9-11: Bat Activity Survey Report 2024;**
- **ES Appendix 9-12: Bat Ground Level Tree Assessment Survey Report Technical Note 2025;**
- **ES Appendix 9-13: Summer 2025 Vantage Point Survey Report;**
- **ES Appendix 9-14: Habitats Regulations Assessment Report; and**
- **ES Appendix 9-15 : Aviation Collision Risk Technical Note.**

9.1.8. In addition, a **Biodiversity Net Gain Report** (Doc Ref. 7.9) has been prepared as a standalone report with DCO Application.

9.1.9. Common names of species, in accordance with the Natural History Museum Species Dictionary[1] are used throughout this chapter with scientific names given at first mention only for fauna.

[1] Natural History Museum (2024) *UK Species Inventory*. Available at: www.nhm.ac.uk/our-science/data/uk-species/index [Accessed 25/11/2025]

9.2. Legislation, Policy and Guidance

9.2.1. Full details of the legislation, policy, and guidance of relevance to the assessment of Ecology and Biodiversity are provided in **ES Appendix 9-1: Ecology and Biodiversity Legislation, Policy and Guidance** (Doc Ref 6.3).

9.3. Stakeholder Engagement

9.3.1. A request for an EIA Scoping Opinion, provided in **ES Appendix 1-1: EIA Scoping Report** (Doc Ref. 6.3), was sought from the Secretary of State through the Planning Inspectorate in 2024 as part of the EIA Scoping Process. A summary of consultation responses in relation to Ecology and Biodiversity are presented in Table 9-1.

Table 9-1: Scoping Opinion responses in relation to Ecology and Biodiversity

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
Planning Inspectorate	Habitats sensitive to dust or air pollution – construction and decommissioning Page 78 of the Scoping Report states that the habitats on the PV areas comprise arable farmland, ditches, isolated areas of plantation woodland, a small number of hedgerows and small parcels of scrub. Habitats along the grid corridor and cable connection corridors have not been identified at this stage, therefore the Inspectorate is unable to agree that there are no habitats sensitive to dust or air pollution; this matter cannot be scoped out at this stage. The ES should include an assessment of effects on habitats from dust deposition, or information demonstrating agreement	The Scheme has aimed to avoid negative effects[2] on habitats and species as far as practicable through embedding the mitigation hierarchy into design iterations. In line with current best practice, where habitats sensitive to dust deposition (as defined by the DMRB guidance[3]) have been identified within the Site, likely effects from the construction and decommissioning phases have been assessed. Opportunities to incorporate biodiversity have been taken where practical but where impacts cannot be avoided and species/groups scoped out, surveys have been undertaken across the Site, including within the GCR and Inter-Array Connections, to inform the assessment of effects and the proposed mitigation measures presented within this chapter.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1) Sections 9.6 Baseline Conditions, 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects.

[2] Consistent with CIEEM guidance, the terminology of 'positive/negative' has been adopted for ecological impacts and effects; however, these terms are respectively analogous with 'beneficial/adverse', as used elsewhere in this Environmental Statement.

[3] Highways England (2019) Withdrawn: *Design Manual for Roads and Bridges: LA105 Air Quality*. Available at: https://www.standardsforhighways.co.uk/tses/attachments/10191621-07df-44a3-892e-c1d5c7a28d90?inline=true.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	with the relevant consultation bodies that there would not be a likely significant effect.		
Planning Inspectorate	Collision risk to birds from tall cranes – construction and decommissioning The Inspectorate notes that the use of tall cranes would be short term and localised during construction and decommissioning. The Inspectorate agrees that significant effects are not likely and that this matter can be scoped out.	No further action required.	N/A
Planning Inspectorate	Hydrology or water pollution effects – operation Page 85 of the Scoping Report states that the Proposed Development is not anticipated to result in any hydrology or water pollution effects during operation. This is contrary to page 94 (Table 4.4 Hydrology, Flood Risk and WFD) which identifies potential effects on drainage patterns, surface water flows, flooding and the potential for pollution from flushing of silts and hydrocarbons from	**ES Chapter 11: Hydrology and Flood Risk** (Doc Ref. 6.1) considers impacts on surface water quality associated with run-off from the Site, the potential for accidental spillages during maintenance activities, and potential impacts on surface water quality as a result of the use of firewater in the event of a fire in the BESS Compound. It is concluded that with mitigation embedded within **ES Appendix 11-4: Outline Drainage Strategy** (Doc Ref. 6.3) and the **Outline Operational Environmental Management Plan** (OOEMP) (Doc Ref. 7.11), the effects on	**ES Chapter 11: Hydrology and Flood Risk** (Doc Ref. 6.1). **ES Appendix 11-4: Outline Drainage Strategy** (Doc Ref. 6.3) **Outline Operational Environmental Management Plan** (Doc Ref. 7.11),

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	areas of hardstanding. As such, the Inspectorate does not agree that this matter can be scoped out. The potential effects from such events on ecological receptors should be assessed within the ES, where significant effects are likely.	hydrology or water pollution once operational are not significant. As such, it is also considered that impacts on ecological receptors are not significant.	
Planning Inspectorate	Pages 85-86 of the Scoping Report propose to scope out assessment of these species/groups due to a lack of suitable habitat, not being in the known geographical range and/or the site not considered to be able to support important populations. As noted below, the baseline presented in the ES appears to relate only to the PV area. The baseline for the grid connection and cable connection corridors has not been provided. The Inspectorate is therefore unable to agree that any species/groups can be scoped out at this stage with the exception of pine marten and red squirrel; this is on the basis that the Inspectorate acknowledges their geographical ranges do not overlap with the application site. The ES should	It is noted that the Planning Inspectorate was unable to scope out some species groups on the basis that baselines for the GCR and Inter-Array Connections had not been provided at this stage. Updated baseline assessments, incorporating desk-study and survey results have now been presented within Section 9.6 Baseline Condition of this chapter, covering the entire extent of the Order Limits, including the GCR and the Inter-Array Connections. The baseline assessment has been used to identify the appropriate protected species / groups for further assessment within Section 9.8 Assessment of Potential Impacts and Likely Significant Effects of this chapter. The assessment of which species / groups to scope into the assessment has been consulted on with statutory stakeholders as part of the statutory consultation for the Scheme.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1) Sections 9.6 Baseline Conditions and 9.8 Assessment of Potential Impacts and Likely Significant Effects.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	present an assessment of effects on these species, or evidence of agreement with relevant consultation bodies that they can be scoped out.	As a result of this, further surveys for common crane and badger were undertaken and reptiles were taken forward into the assessment of potential impacts and likely significant effects. No objections by the Planning Inspectorate were provided for the remaining species groups that were scoped out: aquatic invertebrates; white clawed crayfish; terrestrial invertebrates, hazel dormouse; red squirrel, and pine marten.	
Planning Inspectorate	Study area The Scoping Report proposes a 15km study area for internationally designated sites and a 2km study area for non-statutory designated sites. The study areas should reflect the Scheme's Zone of Influence (ZoI) rather than being based on a fixed radii; for example, a fixed radii may not be appropriate for sites supporting mobile/migratory bird species. The selection of sites should be informed by Natural England's Impact Risk Zones.	The approach taken to define the study areas, as set out within Section 0 of this chapter, follows established best practice in combination with professional judgement to ensure that the appropriate ZoI for all receptors is applied to the collection of baseline data and assessment of impacts and effects. This includes consideration of Natural England's Impact Risk Zones (IRZ), where relevant. The ES has used a study area of 15km for internationally designated sites, and 2km for non-statutory. However, the study area was increased to 20km for internationally designated sites for the Habitat Regulations Assessment for the Scheme, in agreement with Natural England.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1) Section 0 Assessment Methodology **ES Appendix 9-14: Habitats Regulations Assessment Report** (Doc Ref. 6.3)

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
Planning Inspectorate	Baseline conditions – internationally designated sites The Wash Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar site lie within the 15km study area for internationally designated sites but have been omitted from Table 4.3.1. The ES should assess the potential impacts on these sites.	Section 9.8 of this chapter includes an assessment of likely significant effects on The Wash SPA/SAC/Ramsar. An assessment on the conservation objectives of these internationally designated sites is also presented within **ES Appendix 9-14: Habitats Regulations Assessment Report** (Doc Ref. 6.3).	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.8 Assessment of Potential Impacts and Likely Significant Effects, and **ES Appendix 9-14: Habitats Regulations Assessment (HRA) Report** (Doc Ref. 6.3).
Planning Inspectorate	Baseline conditions – nationally designated sites SSSI have not been included in the baseline. The chapter should confirm the presence/absence of any SSSI potentially impacted by the Scheme.	Any SSSI and associated IRZs likely affected by the Scheme have been reported in the baseline and any likely impacts considered in the assessment.	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.6 Baseline Conditions and 9.8 Assessment of Potential Impacts and Likely Significant Effects.
Planning Inspectorate	Baseline conditions – geographical coverage For a number of species/groups, baseline conditions are specifically identified for the PV area only. For some species/groups it is not clearly specified, although there is no indication that the	The information presented at the time of the Scoping Report related to the SDA as the area for the GCR and Inter-Array Connections had not been suitably defined. However, subsequent baseline data have been gathered for the GCR and Inter-Array Connections assessment, and this is presented in this chapter.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	desk study or survey effort has extended beyond the PV area. The ES should detail the baseline environment for the entire application site, and surrounding areas as relevant, and the assessment of effects should also reflect this.		
Planning Inspectorate	Baseline conditions - Grimsby to Walpole project Page 80 of the Scoping Report refers to National Grid's proposed Grimsby to Walpole project, for which a DCO application is currently being prepared. It states that for the purpose of scoping, it will be assumed that this project will be constructed. The Inspectorate is unclear what is meant by this statement. For clarity, the ES should assess impacts against the existing baseline and cumulative effects with other projects should be assessed accordingly.	An assessment of cumulative effects has been presented in Section 9.11 of this chapter, including an assessment of cumulative effects with the Grimsby to Walpole project.	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.11 Cumulative Effects.
Planning Inspectorate	Invasive plants The ES should assess the potential for the Scheme to spread invasive non-	In line with best practice and as set out within the **Outline Construction Environmental Management Plan (OCEMP)** (Doc Ref. 7.10), the	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.6 Baseline

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	native species (INNS), report on any likely significant effects and identify relevant mitigation measures.	**Outline Landscape and Ecology Management Plan (OLEMP)** (Doc Ref. 7.16) and the **Outline Decommissioning Environmental Management Plan (ODEMP)** (Doc Ref. 7.12), the presence of INNS would inform the approach to construction, operation and decommissioning to ensure these species are not spread. The presence of these species has been addressed in the baseline and informed the assessment set out in this chapter, considering the embedded mitigation specified within the **OCEMP** (Doc Ref. 7.10), **OLEMP** (Doc Ref. 7.16) and **ODEMP** (Doc Ref. 7.12).	Conditions, 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects. **OCEMP** (Doc Ref. 7.10), **OLEMP** (Doc Ref. 7.16) and **ODEMP** (Doc Ref. 7.12).
Planning Inspectorate	Bird surveys The Scoping Report states that wintering bird surveys and breeding bird surveys of the PV area were designed 'using a landscape sampling approach' using six predefined transects. The Applicant is advised to seek agreement on the sufficiency of survey effort with relevant consultation bodies including Natural England, South Holland District Council and Lincolnshire County Council.	The scope and nature of the bird surveys have been discussed and agreed with Natural England, and consulted on as part of the statutory consultation process. Bird survey results are presented within the ES appendices. South Holland District Council and Lincolnshire County Council were also consulted on birds with regards to collision risk.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 0 Assessment Methodology and 9.6 Baseline Conditions. **ES Appendix 9-3: Breeding Bird Survey Report** (Doc Ref. 6.3). **ES Appendix 9-4: Wintering Bird Survey Report 2022-2023** (Doc Ref. 6.3).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	Page 81 states that Vantage Point surveys have been undertaken in the grid connection corridor. The results of these surveys have not been presented within the Scoping Report; these should be included in the ES.		**ES Appendix 9-5: Wintering Bird Survey Report 2023-2024** (Doc Ref. 6.3). **ES Appendix 9-6: GCR Wintering Bird Survey Report 2023-2024** (Doc Ref. 6.3). **ES Appendix 9-10: Vantage Point Survey Report** (Doc Ref. 6.3). **ES Appendix 9-13: Summer 2025 Vantage Point Survey Report** (Doc Ref. 6.3).
Planning Inspectorate	Potential impacts – collision risk from overhead lines Collision risk to birds during operation is mentioned on pages 81 and 85 of the Scoping Report but not identified as a potential impact on page 83, nor in Table 5.1 Proposed Scope of ES. For clarity, the Inspectorate expects this matter to be assessed, where significant effects are likely.	A collision risk assessment has been undertaken and has informed the assessments presented within Section 9.8 of this chapter and **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3). The assessment results have been shared and discussed with Natural England. The collision risk assessment is presented within **ES Appendix 9-15: Aviation Collision Risk Technical Note** (Doc Ref. 6.3).	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.8 Assessment of Potential Impacts and Likely Significant Effects. **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3). **ES Appendix 9-15: Aviation Collision Risk Technical Note** (Doc Ref. 6.3).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
Planning Inspectorate	Mitigation - operation Page 84 of the Scoping Report identifies the potential creation of "*grassland around the PV Area to improve carrying capacity to support ground nesting bird populations to compensate for loss and degradation of habitat*". The ES should demonstrate that all efforts have been made to mitigate potential effects as far as practicable prior to the proposal for compensation measures, taking into account the mitigation hierarchy detailed on page 84.	As set out within the **Design Approach Document** (Doc Ref. 7.3) and the **OLEMP** (Doc Ref. 7.16), the principal aim in the development of the Scheme has been to avoid impacts through the design process, where practicable. Unavoidable habitat loss has focused on the areas considered least damaging and has been informed through surveys. Negative effects associated with the loss of habitat through construction would be reduced through landscape mitigation, as described within Section 9.7 of this chapter.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.7 Embedded Mitigation. **Design Approach Document** (Doc Ref. 7.3) and the **OLEMP** (Doc Ref. 7.16)
Planning Inspectorate	Mitigation – decommissioning The Scoping Report states that habitats created as part of the Scheme could be lost during decommissioning. It further states that any created habitats should be compensated through the creation of higher value habitats at decommissioning. Given that the Applicant proposes to return the land to the relevant landowners after decommissioning, the Inspectorate	Following the decommissioning of the Scheme, land within the Order Limits would be returned to the relevant landowners. Post-decommissioning, the landowner will decide upon the use of the land and as such, for the purposes of this chapter, it has been assumed that the habitat areas created as part of the Scheme would be returned to their present (i.e. agricultural) use.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.8 Assessment of Potential Impacts and Likely Significant Effects.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	queries the practicalities of this suggestion. The ES should clearly identify any such limitations in the assessment of decommissioning.		
Planning Inspectorate	Assumptions and limitations Page 85 of the Scoping Report assumes that hedgerows and trees, watercourses and mixed scrub habitats will be retained as part of the Scheme. Page 109 refers to the potential for the removal of some small areas of vegetation. The Applicant should ascertain the need for vegetation removal whilst preparing the application and the ES should assess the effects of any removal accordingly.	As set out within the **Design Approach Document** (Doc Ref. 7.3) and the **OLEMP** (Doc Ref. 7.16), the principal aim has been to avoid impacts through the design process, where practicable. Unavoidable habitat loss has focused on the areas considered least ecologically important and has been informed through surveys. Negative effects associated with the loss of habitat through construction of the Scheme would be reduced through landscape mitigation, as described within Section 9.7 of this chapter. In line with the Chartered Institute of Ecology and Environmental Management (CIEEM) Ecological Impact Assessment (EcIA) guidelines[4], the effects associated with vegetation clearance considered to be	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects. **Design Approach Document** (Doc Ref. 7.3) and the **OLEMP** (Doc Ref. 7.16)

[4] CIEEM 2018, Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, Version 1.3 (updated September 2024), Chartered Institute of Ecology and Environmental Management, Winchester. Available at: https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/ (Accessed 26 January 2026).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		unavoidable are reported in Section 9.8 of this chapter.	
Planning Inspectorate	Proposed surveys Page 85 of the Scoping Report states that surveys are proposed for birds; great crested newt; bats; otter; and water vole. The potential presence of other species is identified in the baseline section (pages 75-80), including rare and notable plant species brown hare and hedgehog. No further mention is made of these species. The ES should assess effects on these species, where significant effects are likely...	In line with the CIEEM EcIA guidelines, assessment of the effects on all receptors identified in the baseline, where significant effects are likely, are reported in this ES chapter. The principal aim is to avoid impacts through the Scheme design process, where practicable. Where losses are unavoidable, targeted surveys have informed assessments. Negative effects associated with the loss of habitat through construction would be reduced through strategic mitigation. With regards to other protected or notable species, for which further surveys were scoped out, including white-clawed crayfish, brown hare, hedgehog, dormouse, invasive plants, schedule 8 plants and terrestrial invertebrates, these are discussed in Section 9.6 of the ES chapter, with regards to local records and ecological importance.	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions
Planning Inspectorate	Trees and woodlands Trees, hedgerows and woodlands within the application site should be mapped	This ES chapter and supporting appendices and figures map woodlands and hedgerows within the Site and identify specific trees of ecological	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.6 Baseline

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	and their proposed losses should be quantified within the ES. Effects on this resource should be assessed where significant effects are likely. In particular, the Forestry Commission has noted the presence of a small area of lowland mixed deciduous woodland within the application site. The ES should assess the potential for the loss or fragmentation of, or damage to, this Priority Habitat.	importance. **ES Appendix 12-8: Arboricultural Impact Assessment Report** (AIA) (Doc Ref. 6.3) considers the arboricultural importance and impacts on existing trees. The ES has comprehensively assessed the impact on these resources where significant effects could arise. This includes evaluating the potential loss, fragmentation, or damage to the small area of lowland mixed deciduous woodland, identified as Priority Habitat by the Forestry Commission. The findings from the AIA inform the assessment presented within this chapter, ensuring that all potential ecological impacts are thoroughly considered and appropriate mitigation measures are proposed to preserve the ecological integrity of the Site.	Conditions and 9.8 Assessment of Potential Impacts and Likely Significant Effects. **ES Appendix 12-8: Arboricultural Impact Assessment Report** (Doc Ref. 6.3)
Planning Inspectorate	Nationally significant population of Crane Natural England has identified the presence of a nationally significant population of crane near the Scheme. Potential for impacts should be assessed in the ES, where significant effects are likely.	The Applicant is committed to impact avoidance through design. Surveys have informed the design, with unavoidable habitat loss focused in those areas considered least damaging to bird species including common crane. Negative effects, where unavoidable, would be reduced through strategic mitigation. Vantage point surveys have been carried out to supplement those data collected to date and collision risk	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.8 Assessment of Potential Impacts and Likely Significant Effects.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		modelling undertaken for those species at risk (including common crane). The results have been discussed with Natural England and mitigation or design amendments agreed to mitigate identified risk. Impacts have been assessed and likely significant effects reported in this ES chapter.	
Planning Inspectorate	Confidential Annexes Public bodies have a responsibility to avoid releasing environmental information that could bring about harm to sensitive or vulnerable ecological features. Specific survey and assessment data relating to the presence and locations of species such as badgers, rare birds and plants that could be subject to disturbance, damage, persecution, or commercial exploitation resulting from publication of the information, should be provided in the ES as a confidential annex. All other assessment information should be included in an ES chapter, as normal, with a placeholder explaining that a confidential annex has been	Badgers and their sett locations are not specifically detailed within the ES baseline assessment; specifics are provided within **ES Appendix 9-8: Badger Survey Report (Confidential)** (Doc Ref. 6.3). No other species considered vulnerable to persecution were noted.	**ES Chapter 9 Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions. **ES Appendix 9-8: Badger Survey Report (Confidential)** (Doc Ref. 6.3).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	submitted to the Inspectorate and may be made available subject to request.		

9.3.2. Further pre-application engagement was undertaken through the publication of the Preliminary Environmental Information Report (PEIR) as part of the statutory consultation; has continued throughout to date; and, informed survey approach and scope throughout. Table 9-2 outlines the main matters raised by prescribed or statutory consultees during the statutory and targeted consultations relating to Ecology and Biodiversity and how these have been addressed through the ES.

Table 9-2: Key matters raised by prescribed or statutory consultees in relation to Ecology and Biodiversity

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
Natural England	Functionally Linked Land (FLL) in relation to The Wash Special Protection Area (SPA) and Ramsar sites: Expectation to evaluate loss/disturbance of habitats used by SPA birds during construction and operational phases and provide detailed assessment.	Both construction and operational impacts on Functionally Linked Land (FLL) have been considered. Detailed assessment and mitigation measures to avoid disturbance and loss of key areas for species have been included within this chapter and **ES Appendix 9-14 HRA Report** (Doc Ref. 6.3).	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.7 Embedded Mitigation 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Collision risk to birds due to overhead power lines: Concerns about bird strikes from pylons and overhead lines during both construction and operational phases, requesting detailed assessment and effective mitigation strategies.	Detailed collision risk modelling and validation have been undertaken. Mitigation measures include bird diverters and are assessed in the HRA, with a summary provided within this chapter.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.7 Embedded Mitigation 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3); **ES Appendix 9-15: Aviation Collision Risk Technical Note** (Doc Ref. 6.3).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
Natural England	Impact of construction on species like cranes: Concerns regarding the impact on cranes; habitat and migration routes, requesting surveys and consideration in construction planning and mitigation strategies.	Survey data has formed the basis of the assessment presented within this ES chapter and mitigation measures have been incorporated into the final design to avoid impacts. Further surveys have been undertaken to evaluate crane activity and risk of collision, informing the implementation of mitigation as needed.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.6 Baseline Conditions, 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix 9-13: Summer 2025 Vantage Point Survey Report** (Doc Ref. 6.3); **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Study Area – recommendation for a 20km radius for internationally designated sites: Recommendation to increase study area for evaluating impacts on migratory birds and other species associated with nearby SPAs and Ramsar sites.	Study area has been increased to 20km for the HRA for the consideration of impacts on species such as geese, swans, and lapwings, associated with IIWS.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.6 Baseline Conditions and 9.8 9.8 Assessment of Potential Impacts and Likely Significant

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
			Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Bird strike risk during construction and operation: Concerns about the risk of birds striking infrastructure during both construction and operation phases, requesting detailed assessment and effective mitigation strategies.	Detailed collision risk modelling and use of bird diverters as mitigation has been included in the operational phase assessment to mitigate collision risk, in order to avoid significant adverse effects on bird populations using the area.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3); **ES Appendix 9-15: Aviation Collision Risk Technical Note** (Doc Ref. 6.3).
Natural England	Assessment of impacts on SPA birds (Waterbird Assemblage) including lapwing and whooper swan: Request to consider multiple key bird species part of overall waterbird assemblage and assess potential impacts and mitigation strategies.	All relevant waterfowl, including Lapwing and Whooper Swan have been assessed as part of SPA waterbird assemblage. Mitigation measures have been designed to reduce impacts and are reported within the ES and the HRA.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref 6.1), Sections 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix**

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
			9-14: HRA Report (Doc Ref. 6.3)
Natural England	Nocturnal surveys for breeding birds such as owls and snipe: Concern about the absence of nocturnal surveys for certain bird species, recommending it to be noted as a limitation of the survey effort.	Nocturnal bird surveys (e.g. for owl, quail or snipe) are not routinely required under current guidance and are only considered necessary where habitats within a site are suitable and where there is a realistic potential for significant adverse effects. The habitats within the Order Limits are not considered optimal for nocturnal or nocturnally displaying species, with limited availability of key features such as extensive rough grassland, marshy habitats or mature woodland edge typically associated with these species. As such, it is considered unlikely that there would be a significant adverse effect. As such, it is considered that nocturnal bird surveys would be disproportionate. The approach was subsequently discussed and agreed with Natural England.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.5 Assessment Assumptions and Limitations and 9.6 Baseline Conditions; **ES Appendix 9-3: Breeding Bird Survey Report** (Doc Ref. 6.3)
Natural England	Record of Common Crane: Noting the importance of crane presence within surveyed areas, considering any observations important for national	Crane surveys have been undertaken, which have subsequently informed the development of the design of the GCR,	**ES Appendix 9-13: Summer 2025 Vantage Point Survey Report** (Doc Ref. 6.3);

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	implications and integral to final assessments and planning.	with bird diverters specified on sections of the overhead line.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.6 Baseline Conditions, 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects. **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Impact assessment for breeding birds at Crowland Wash: Highlighting the sensitivity of breeding birds like Avocet at specific locations and requesting thorough assessment and mitigation planning for disturbance during the work phases.	Disturbance to all sensitive breeding birds, including avocet, has been assessed. Survey data and the assessment have informed final mitigation measures proposed as part of this DCO Application.	**ES Chapter 9: Ecology and Biodiversity**, Sections 9.6 Baseline Conditions, 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3); **ES Appendix 9-3:**

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
			Breeding Bird Survey Report (Doc Ref. 6.3).
Natural England	Loss/disturbance of Functionally Linked Land (FLL) during operational phase due to predator shadows from pylons: Concerns that overhead infrastructure could disrupt use of surrounding habitats by SPA birds due to fear of predators.	Disturbance and predator shadow effect have been considered in the assessment, taking account of the Scheme design, which avoids areas of importance for roosting and foraging, thereby minimising impacts throughout the operational phase.	**ES Chapter 9: Ecology and Biodiversity**, Section 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Assessment of efficacy of proposed mitigation measures regarding collision risks: Request for detailed evaluation of mitigation measures like bird diverters used to avoid bird collisions with infrastructure and their perceived effectiveness.	Efficacy of bird diverters has been taken into account, including a review of various line marker options. Worst-case efficacy assumptions have been used within collision risk modelling reported within **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3).	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Detailed habitat survey for important habitats and priority species: Request for a comprehensive overview of habitat surveys targeting priority	Comprehensive habitat surveys have been conducted to inform the identification of important habitats and priority species, impact assessment, and mitigation	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	species within the site to identify, categorize and mitigate negative impacts on key ecological factors.	measures detailed in ES. Targeted habitat management and enhancements have been specified to achieve Biodiversity Net Gain (BNG).	and supporting technical appendices
Natural England	BNG target to meet a minimum of 10% gain across habitat units, river units, and hedgerow units: Expectation that BNG commitments exceed the statutory minimum, achieving comprehensive habitat regeneration and sustainable biodiversity enhancement.	The **Draft DCO** (Doc Ref. 3.1) Schedule 2 Requirement 8 includes a commitment to achieve BNG in accordance with the **BNG Report** (Doc Ref. 7.9) and the **OLEMP** (Doc Ref. 7.16).	**BNG Report** (Doc Ref. 7.9) **Draft DCO** (Doc Ref. 3.1)
Natural England	Potential cumulative impacts with other projects on Functionally Linked Land (FLL): Concerns regarding combined effects of multiple development projects in vicinity on significant SPA habitats, requesting detailed scope and mitigation measures.	A cumulative impact assessment is included within this chapter and **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3), considering overlapping timelines of construction and operational phases with cumulative schemes. Survey-informed mitigations and strategies have been considered to manage the combined effects effectively.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.11 Cumulative Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Management of pollution impacts during construction: Request for comprehensive pollution management	The **OCEMP** (Doc Ref. 7.10) includes robust pollution management measures to prevent pollution events impacting	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.7

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	plans addressing potential water and soil contamination from construction activities, securing sensitive habitats from enduring adverse impacts.	sensitive habitats. Embedded measures ensure strict control over potential impact pathways.	Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **OCEMP** (Doc Ref. 7.10); **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Noise pollution during construction due to Horizontal Directional Drilling (HDD) requirements for underground sections: Concerns that HDD, used for minimising habitat disturbance, might generate excessive noise that requires assessment and mitigation strategies.	Potential noise and vibration impacts on ecological receptors from any undergrounding of cabling have been assessed within Section 9.8 of this chapter. Mitigation measures are set out within the **OCEMP** (Doc Ref. 7.10) which will reduce disturbance to protected species and sensitive habitats.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **OCEMP** (Doc Ref. 7.10); **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Natural England	Construction Remediation and Reinstatement Scheme: Expectation for detailed outline of habitat restoration and ecological improvements post construction activities to ensure environmental	The **OLEMP** (Doc Ref. 7.16) sets out the habitat creation and ecological enhancement proposals to be implemented post-construction, including requirements for post-construction monitoring.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.7 Embedded Mitigation;

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	regeneration and avoidance of long-term degradation.		**OLEMP** (Doc Ref. 7.16)
Natural England	Justification should be provided that the Ornithology Survey scope remains relevant to the extended GCR area to inform assessment of impacts to SPA birds. Where it is not, either additional survey effort should be undertaken, or other data such as driven transects, habitat mapping data and habitat suitability could be used as a proxy - with suitable justification. Impacts to SPA birds from this area may be relevant from: • Loss, damage or disturbance to FLL during both construction and operation; and • Collision risk during operation.	NGET data have been used, alongside review of habitat suitability and extrapolation from survey data to inform assessment for birds in determining likely FLL and collision risk. The collision risk model parameters have taken account of the additional length of OHL.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3) and **ES Appendix 9-15: Aviation Collison Risk Technical Note** (Doc Ref. 6.3)
Natural England	Further surveys with regard to protected species may be required where they have not already been undertaken in this area. The approach for species licencing in the extended area should be confirmed in the ES.	NGET data have been used, alongside review of habitat suitability and extrapolation from survey data, to inform the assessment of baseline conditions within the extended section of the GCR.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions; **OCEMP** (Doc Ref. 7.10). **OOEMP** (Doc

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	Where surveys indicate the need for any licences from NE, a draft application could be submitted to NE in advance of submission (The process for this is set out in PINS Advice Note 11 Annex C). Otherwise, NE refer to the standing advice in the meantime.	The Applicant considers that baseline survey coverage is sufficient across the SDA, GCR and Inter-Array Connections, with targeted protected species surveys undertaken proportionately (including badger, bats/PRF trees, otter and water vole, and great crested newt), and a commitment to pre-construction update checks included within the **OCEMP** (Doc Ref. 7.10). **OOEMP** (Doc Ref. 7.11). **ODEMP** (Doc Ref. 7.12), where survey validity would be exceeded. The ES confirms that, where works could give rise to impacts on protected species that cannot be avoided, the Applicant will secure the necessary licences from Natural England (e.g., water vole CL31 displacement licence for unavoidable bank works; bat licensing if roost impacts are confirmed; badger licensing if sett disturbance is unavoidable). Where a licence is required, the Applicant will prepare draft applications with NE in line with PINS Advice Note 11 Annex C. Natural England has confirmed that a draft water vole licence application is not	Ref. 7.11). **ODEMP** (Doc Ref. 7.12)

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		required to accompany the DCO submission. These commitments are secured through the **OCEMP** (Doc Ref. 7.10) for construction, with relevant operational and decommissioning controls in the **OOEMP** (Doc Ref. 7.11) and **ODEMP** (Doc Ref. 7.12) respectively	
South Holland District Council	Concerns about bird collisions and impacts on the Wash, an internationally recognized wildfowl site. Suggest bird markers on overhead cables to reduce collisions.	Bird diverters are proposed to mitigate collision risk for wildfowl. Detailed assessment of impacts on migratory flight paths is included within **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3), considering proximity to gravel pits and the Wash SPA/Ramsar site.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.8 Assessment of Potential Impacts and likely Significant Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3).
South Holland District Council	Importance of achieving a biodiversity net gain (BNG) for the development in line with The Environment Act 2021.	The **Draft DCO** (Doc Ref. 3.1) Schedule 2 Requirement 8 includes a commitment for the Scheme to achieve BNG in accordance with the **BNG Report** (Doc Ref. 7.9) and the **OLEMP** (Doc Ref. 7.16). Habitat management measures aimed at improving biodiversity through optimal plant species	**BNG Report** (Doc Ref. 7.9); **OLEMP** (Doc Ref. 7.16); and **Draft DCO** (Doc Ref. 3.1)

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		selection and management practices are detailed in the **OLEMP** (Doc Ref. 7.16).	
South Holland District Council	Impacts of temporary construction works on habitats and implementation of remediation and reinstatement schemes post construction.	Mitigation measures presented within the DCO Application during construction ensure that impacts are avoided on important habitats where practicable. For instance, the **OCEMP** (Doc Ref. 7.10) outlines measures for the protection of habitats, including avoidance of spills, silting, and containment of invasive non-native species. Proposals for habitat creation and enhancement post-construction are set out within the **OLEMP** (Doc Ref. 7.16).	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.7 Embedded Mitigation **OCEMP** (Doc Ref. 7.10); **OLEMP** (Doc Ref. 7.16).
South Holland District Council	Impact of construction and operational noise on breeding birds and nearby bird populations.	Effects on breeding birds during construction and operation of the Scheme from noise are mitigated through standard control measures, outlined within the **OCEMP** (Doc Ref. 7.10) and **OOEMP** (Doc Ref. 7.11). With these measures in place, no likely significant effects have been identified within Section 9.8 of this chapter and **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3).	**ES Chapter 9: Ecology and Biodiversity**, Sections 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3); **OCEMP** (Doc Ref.

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
			7.10) and **OOEMP** (Doc Ref. 7.11).
South Holland District Council	Risks of collision for waterfowl with large solar panels in conditions that make them believe panels are waterbodies.	All relevant waterfowl have been assessed as part of SPA waterbird assemblage. There is no evidence to indicate that there is a credible risk in relation to birds perceiving solar installations as bodies of water in the UK. This has therefore not been scoped into assessment, but monitoring of the Scheme during operation would identify if any such incidents were to occur.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
South Holland District Council	Construction management to mitigate dust and air quality impacts particularly for sensitive areas nearby.	Standard dust control measures are included as part of this DCO Application within the **OCEMP** (Doc Ref. 7.10). Detailed dust management strategies will be included in the detailed CEMP. As set out within the **OCEMP** (Doc Ref. 7.10), dust monitoring will be undertaken to ensure that no significant effects on ecological receptors from dust or air emissions during the construction phase will occur.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.7 Embedded Mitigation; **OCEMP** (Doc Ref. 7.10)
South Holland District Council	Concerns about long-term impacts on bird populations due to the presence	Bird surveys and collision risk assessments have informed the design of the	**ES Chapter 9: Ecology and Biodiversity**,

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	and operation of BESS and substation infrastructure within close proximity.	infrastructure locations to minimize impacts. Bird sensitive lighting and management practices have been incorporated into the **OOEMP** (Doc Ref. 7.11) and **OLEMP** (Doc Ref. 7.16). Bird diverters are proposed for sections of overhead lines where higher risk of collision is identified in the **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3). An assessment of likely effects with these embedded mitigation measures in place is presented within Section 9.8 of this chapter and **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3).	Section 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **OOEMP** (Doc Ref. 7.11), **OLEMP** (Doc Ref. 7.16).**ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)
Environment Agency	Impacts on fish habitats during construction and operation phases: Concerns regarding assessment and surveys required for fish species in various water bodies connected to the development.	Surveys for fish have been scoped out but assessment of potential impacts during all phases is included within the ES and HRA. The **OCEMP** (Doc Ref. 7.10) includes standard construction control measures to mitigate potential adverse effects on fish. Detailed CEMP(s) will address avoidance of impacts on watercourses ensuring the habitat integrity for notable fish species such as European eel and river lamprey.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **OCEMP** (Doc Ref. 7.10); **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
Environment Agency	Effects on watercourses due to trenching, culverting, and crossing methods used during construction and operation, highlighting potential hydrological and ecological impacts.	As set out within the **Design Parameters** (Doc Ref. 7.4) and the **OCEMP** (Doc Ref. 7.10), where new watercourse crossings in the form of culverts or upgrades to existing culverts are required, the least impacting design that is reasonably practicable is proposed (e.g. arch rather than box culverts, and box culverts in preference to pipes etc.). The crossings will be sized at detailed design in order to not impact on flow conveyance and be sized to ensure capacity for the peak flow rate. **ES Chapter 11: Hydrology and Flood Risk** (Doc Ref. 6.1) presents the assessment of hydrological receptors, whilst the assessment on ecological receptors is presented within this chapter.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.7 Embedded Mitigation and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **ES Chapter 11: Hydrology and Flood Risk** (Doc Ref. 6.1); **Design Parameters** (Doc Ref. 7.4); **OCEMP** (Doc Ref. 7.10)
Environment Agency	Seasonal wetness of ditch habitats for potential water vole presence not assessed during surveys, which may lead to under recording of habitat suitability.	Otter and water vole habitat suitability assessment is included within **ES Appendix 9-7: Otter and Water Vole Survey Report** (Doc Ref. 6.3). The outcomes of the assessment of ditch habitats including seasonal wetness and consideration of potential water vole habitats are summarised within this ES chapter. The	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Sections 9.6 Baseline Conditions and 9.8 Assessment of Potential Impacts and Likely Significant Effects; **OCEMP** (Doc

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		OCEMP (Doc Ref. 7.10) outlines measures to ensure effective mitigation and reduce disturbance to water voles, ensuring compliance and successful implementation.	Ref. 7.10); **ES Appendix 9-7: Otter and Water Vole Survey Report** (Doc Ref. 6.3).
Environment Agency	Inconsistent references to watercourse stand-off distances in mitigation strategies, required clarification to maintain effective riparian buffers and free movement of riparian mammals.	The **OCEMP** (Doc Ref. 7.10) includes the commitment that an offset of 10m from drains and agricultural drainage ditches would be maintained, where reasonably practicable. No permanent infrastructure is located within 10m of a watercourse, other than where the watercourses are crossed (by access or cabling) or have drainage outfalls. Furthermore, the **OCEMP** (Doc Ref. 7.10) includes standard control measures to ensure any potential effects on watercourse quality or riparian mammals are mitigated.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.7 Embedded Mitigation; **OCEMP** (Doc Ref. 7.10)
Environment Agency	Lack of detail regarding specific enhancement measures proposed for watercourses, need for information to ensure alignment with ecological strategies and achievement of Good Ecological Potential.	As set out within the **OCEMP** (Doc Ref. 7.10), a Water Framework Directive (WFD) Mitigation and Enhancement Strategy will be produced to accompany the detailed CEMP. This will be informed by a pre-works hydromorphological and riparian corridor survey to be undertaken pre-	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.7 Embedded Mitigation; **OCEMP** (Doc Ref. 7.10)

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		construction to record channel features/ habitats and provide the baseline against which reinstatement will be designed. Any reinstatement would be undertaken between 5 and 15m upstream and downstream of the watercourse crossings, subject to agreement with the Internal Drainage Boards.	
Lincolnshire County Council	• The Council welcomes the Applicant's commitment to the development mitigation and enhancement measures to various species and species groups but advises that the applicant should ensure clarity around which measures are mitigation and which are genuine enhancement. • Little information is currently presented about the potential design and layout of ecological mitigation and enhancement including opportunities for delivering BNG, but the Council notes the Applicant's intention to develop this area as the environmental assessment work	Mitigation and enhancement measures embedded within the Scheme are summarised within Section 9.7 of **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1). Furthermore, Section 9.8 of the chapter identifies where the measures embedded within the Scheme would result in net beneficial effects to ecological receptors, and, therefore, provide an enhancement. Ecological mitigation and enhancement areas to be provided by the Scheme are secured through the **OLEMP** (Doc Ref. 7.16), which sets out the ecological strategy for the Scheme, including proposals for the provision of new planting, habitat boxes, habitat piles and hibernacula. The **OLEMP** (Doc Ref. 7.16)	Section 9.7 of **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1). **OLEMP** (Doc Ref. 7.16). **Biodiversity Net Gain (BNG) Report** (Doc Ref. 7.9).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	progresses. The Council would welcome the opportunity to provide further input to the detailed design of new habitats to be established on site at the appropriate stage. • The Council notes the Applicant's intention to produce a Biodiversity Net Gain (BNG) Assessment (Volume III Appendix 7-1, Para 2.13). Whilst the delivery of a minimum of 10% BNG is not currently mandatory for NSIPs it is good practice. The Council would encourage the Applicant to maximise opportunities for the delivery of BNG and to seek to deliver significantly in excess of 10% given the scale and nature of the proposed development. The Council notes that the Applicant states that "…these measures would deliver a significant net gain, well above the mandatory 10% currently in place through the Environment Act 2021…"(Volume 1 Chapter 7,	also specifies management and monitoring requirements for these measures provided by the Scheme. A biodiversity net gain assessment undertaken using Defra's statutory biodiversity metric is provided within the **Biodiversity Net Gain (BNG) Report** (Doc Ref. 7.9). The **Draft DCO** (Doc Ref. 3.1) Schedule 2 Requirement 8 includes a commitment for the Scheme to achieve BNG in accordance with the **BNG Report** (Doc Ref. 7.9) and the **OLEMP** (Doc Ref. 7.16). Habitat management measures aimed at improving biodiversity through optimal plant species selection and management practices, considering the Biodiversity Action Plan priorities of Lincolnshire, are detailed in the **OLEMP** (Doc Ref. 7.16).	

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	Para 7.9.4) and welcomes this. The Council advises that the delivery of BNG should be quantified by employing Defra's Statutory Biodiversity Metric. • Any commitments to the delivery of BNG submitted alongside the DCO application should be sufficiently detailed to give certainty as to the level of BNG that will be delivered if the applicant is seeking weight to be applied to this matter by the Examining Authority. Any gains in biodiversity and their monitoring and management will need to be appropriately secured in the DCO. • The Council advises that Biodiversity Opportunity Mapping has been produced by the Greater Lincolnshire Nature Partnership and a Local Nature Recovery Strategy for Greater Lincolnshire is currently being developed. These documents will provide useful guidance when		

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	considering opportunities to deliver BNG and the establishment of new habitats. Additional detail can be found within **ES Appendix 9-16 Biodiversity Net** Gain (Doc Ref. 7.9).		
Lincolnshire County Council	**Botanical interest:** The Council notes that data from any detailed botanical surveys is not included in the PEIR. The applicant should ensure that they have undertaken sufficiently detailed and appropriately timed botanical survey work to be confident that the presence of any scarce arable plant species occurring on the site are detected and to inform the calculation of the baseline biodiversity values.	Species of botanical interest were noted as part of the habitat surveys and are reported within **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3). The need for a detailed botanical survey was scoped out, on the basis of the results of the preliminary ecological appraisal.	**ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3).
Lincolnshire County Council	**Ancient woodland:** The Council advises that ancient woodland data for the county has recently been updated by the Greater Lincolnshire Nature Partnership. The Applicant may already have access to	Updated data searches of the Greater Lincolnshire Nature Partnership (the local biodiversity record centre) were completed in 2025 and early 2026, and incorporated within **ES Chapter 9: Ecology and**	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions; **ES Appendix 9-2: Preliminary**

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	this data but should ensure that the most up to date information including from field surveys is being used to assess impacts.	**Biodiversity** (Doc Ref. 6.1) and the associated appendices.	**Ecological Appraisal** (Doc Ref. 6.3).
Lincolnshire County Council	**Bats** The Council notes that further surveys are planned to determine the level of bat activity and the presence of any roosts within the proposed boundary. Recent studies have shown a decrease in levels of bat activity associated with the presence of solar developments though reasons for this are not yet clearly understood. The applicant should ensure that bat surveys are appropriately timed and detailed to ensure that impacts on bats can be properly assessed in the ES.	Bat activity surveys were completed from April to October 2024 and ground level tree assessments were completed in August 2025. The surveys were completed in accordance with good practice guidelines, such as Bat Conservation Trust's guidelines and BS 42020 during the optimal survey seasons. The results of the surveys are presented within **ES Appendix 9-11: Bat Activity Survey Report** (Doc Ref. 6.3) and **ES Appendix 9-12: Bat Ground Level Tree Assessment Survey Report Technical Note 2025** (Doc Ref. 6.3). An assessment of impacts on bats is presented within Section 9.8 of **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1).	Section 9.8 of **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1). **ES Appendix 9-11: Bat Activity Survey Report** (Doc Ref. 6.3) and **ES Appendix 9-12: Bat Ground Level Tree Assessment Survey Report Technical Note 2025** (Doc Ref. 6.3).
Lincolnshire County Council	**Breeding birds** The Council advises that the applicant should ensure that adequate information is available to ensure that	Breeding bird surveys were completed in 2023 and are reported in **ES Appendix 9-3: Breeding Bird Survey Report** (Doc Ref. 6.3). In addition, summer vantage point	Section 9.8 of **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1). **ES Appendix**

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	the impacts on breeding birds and in particular, ground nesting species such as skylark can be properly assessed in the ES. The Council notes that surveys have detected the presence of populations of species listed on Schedule 1 of the Wildlife and Countryside Act. The presence of these species should be taken into account during construction to avoid offences potentially being committed. Common Crane are known to be present in the area and the applicant should ensure that sufficient data is available to understand the potential for impacts on the species including via collision with any overhead lines The Council advises that Lincolnshire Wildlife Trust is working to develop some best practice guidance for solar developments in Lincolnshire which seeks to identify strategic opportunities for ecological mitigation and enhancement linked to solar	surveys were completed in 2025 to identify and categorise notable bird species, including common crane, using the survey area and to map their flight paths and heights (see **ES Appendix 9-13** (Doc Ref. 6.3)). Disturbance to all sensitive breeding birds has been assessed in Section 9.8 of **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), with survey data and the assessment informing the mitigation measures embedded within the DCO Application. Information on common crane was also requested from Lincolnshire Wildlife Trust and the outcomes of the engagement have been used to inform the assessment presented within **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1).	**9-3: Breeding Bird Survey Report** (Doc Ref. 6.3). **ES Appendix 9-13: Summer 2025 Vantage Point Survey Report** (Doc Ref. 6.3)).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	development including for ground nesting bird species.		
Lincolnshire County Council	**Wintering Birds** The Council notes that surveys have detected the presence of a range of wintering bird species, some of which are likely to be associated with nearby designated sites. This includes a population of whooper swan which is likely to be of national significance. The applicant should ensure that sufficient data is available to understand the potential for impacts on wintering bird species including via collision with any overhead lines and disturbance.	Wintering bird surveys were completed between 2022 and 2025 and the survey results are presented within the following ES appendices: • **ES Appendix 9-4: Wintering Birds Survey Report 2022-2023** (Doc Ref. 6.3); • **ES Appendix 9-5: Wintering Birds Survey Report 2023-2024** (Doc Ref. 6.3); • **ES Appendix 9-6: GCR Wintering Bird Survey Report 2023-2024** (Doc Ref. 6.3); and • **ES Appendix 9-10: Vantage Point Survey Report** (Doc Ref. 6.3). Natural England were engaged in determining the scope of the wintering bird surveys. Outputs of these surveys include flight durations by species and height bands which have been used to inform the collision risk assessment for the GCR presented within **ES Appendix 9-14: HRA**	**ES Appendix 9-4: Wintering Birds Survey Report 2022-2023** (Doc Ref. 6.3); **ES Appendix 9-5: Wintering Birds Survey Report 2023-2024** (Doc Ref. 6.3); **ES Appendix 9-6: GCR Wintering Bird Survey Report 2023-2024** (Doc Ref. 6.3); and **ES Appendix 9-10: Vantage Point Survey Report** (Doc Ref. 6.3). **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3); **ES Appendix 9-15: Aviation Collision Risk Technical Note** (Doc Ref. 6.3).

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
		Report (Doc Ref. 6.3) and **ES Appendix 9-15: Aviation Collision Risk Technical Note** (Doc Ref. 6.3).	
Lincolnshire County Council	**Terrestrial invertebrates** The Council notes that terrestrial invertebrates have been scoped out of surveys. The Council advises that records obtained via desktop may be useful in aiding the design of ecological mitigation and enhancement measures to cater for the needs of any less common species.	Updated data searches of the Greater Lincolnshire Nature Partnership (the local biodiversity record centre) were completed in 2025 and early 2026, and incorporated within **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1) and the associated appendices.	**ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1), Section 9.6 Baseline Conditions; **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3).
Lincolnshire County Council	**Invasive non-native species (INNS)** The Council notes that INNS have been identified within the study area. Measures, appropriate controls and working methods aimed at preventing the spread of INNS should be set out in the CEMP.	Appropriate controls and measures aimed at preventing the spread of INNS have been set out within the **OCEMP** (Doc Ref. 7.10).	**OCEMP** (Doc Ref. 7.10).
Lincolnshire County Council	**Habitats Regulations Assessment (HRA)**	Information to undertake an appropriate assessment has been presented within **ES Appendix 9-14: Habitats Regulations Assessment Report** (Doc Ref. 6.3). The	**ES Appendix 9-14: Habitats Regulations**

Consultee	Summary of main matters raised	How has the matter been addressed?	Location of response in the ES
	Given the presence of several statutorily designated sites in the vicinity of the proposal, the Applicant will need to ensure that sufficient information has been submitted to allow HRAs to be undertaken.	Applicant has engaged with Natural England throughout the pre-application period to determine the level of detail and information to be submitted as part of **ES Appendix 9-14: Habitats Regulations Assessment Report** (Doc Ref. 6.3).	**Assessment Report** (Doc Ref. 6.3).
Lincolnshire County Council	**Cumulative effects** There are several development proposals of varying scales in the vicinity of this proposal including other solar developments. A detailed assessment of the cumulative impacts of these proposals on sensitive ecological receptors in the area should be undertaken in the ES. This should include habitat change, as well as the magnitude of change, that would result from conversion of arable farmland to a solar farm, alongside other solar NSIP projects in the area.	A cumulative effects assessment, including with other NSIPs within the Zone of Influence of the Scheme, is presented within Section 9.11 of **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1).	Section 9.11 of **ES Chapter 9: Ecology and Biodiversity** (Doc Ref. 6.1).

9.3.3. Table 9-3 provides a summary of further meetings held and key correspondence with relevant stakeholders for Ecology and Biodiversity.

Table 9-3: Direct Stakeholder engagement relating to Ecology and Biodiversity

Engagement date	Organisation	Summary of discussion
08/04/2024	Natural England	Consultation with Natural England commenced via the Discretionary Advice Service (DAS). Discussed scope of the ornithological surveys. Natural England expressed concern about the potential of the Scheme to affect functionally linked land associated with Internationally Important Wildlife Sites and/or Species of Conservation Concern. Natural England also raised concerns about impacts on nearby population of cranes. Surveys to target cranes and further information to be sought from Lincolnshire Wildlife Trust on crane behaviour e.g. flight routes, heights etc.
16/05/2024	Natural England	Overhead lines were identified as a concern in relation to collision risk. Cranes are resident nearby and at risk of collision and should be considered within the survey scope.
04/09/2024; 17/10/2024	Natural England	Further discussion around scope of ornithological surveys, including desk study and engagement with stakeholders regarding common crane; diurnal vantage point surveys 2024/2025 and nocturnal vantage point surveys 2024/2025.
03/03/2025	Royal Society for Protection of Birds (RSPB)	Contacted via email to request available date held on common crane and other key species of concern. 20/03/2025 confirmation received that they do not hold the information requested therefore, no information available.

Engagement date	Organisation	Summary of discussion
03/05/2025	British Trust for Ornithology (BTO)	Contacted via email to request available date held on common crane and other key species of concern. No response received from BTO.
03/03/2025	Lincolnshire Wildlife Trust (LWT)	Contacted via email to request available date held on common crane and other key species of concern. Provision of data was provided in November and comprised a summary of common crane locations/uses.
20/03/2025	RSPB	Follow up email requesting any details on overhead lines and RSPB Frampton Marsh. No response received from RSPB to the request.
09/05/2025	RSPB	Further email to request any available date held on overhead lines and RSPB Frampton Marsh. No response received from RSPB to the request.
09/05/2025	BTO	Further email to request any available date held on common crane and other key species of concern. No response received from BTO.
09/05/2025	LWT	Further email to request any available date held on overhead lines and RSPB Frampton Marsh. Response received 13/05/2025 from LWT confirming they are following up with applicable warden. Emails shared between 14/05/2025 - summary details provided by LWT.
18/06/2025	LWT	Email to LWT requesting clarification and additional information on common crane and key species of concern. No response received.
03/07/2025	National Grid Electricity	Ecology survey dataset received from NGET.

Engagement date	Organisation	Summary of discussion
	Transmission (NGET)	
05/08/2025	Natural England	Meeting held with Natural England to discuss Applicant's proposed approach to address comments received as part of statutory consultation and to provide an update on ecology survey results. The approach to collision risk assessment for the GCR was also discussed.
30/10/2025	Natural England	Meeting held with Natural England to close out comments from statutory consultation and to present the approach to collision risk assessment for the GCR. Subsequently detailed feedback from Natural England was received via email on the collision risk assessment, which has been considered within **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3).
10/11/2025	LWT	Email to LWT requesting clarification and additional information on common crane and key species of concern. Response received 17/11/2025 summarising additional common crane foraging distances.
20/11/2025	Natural England	Meeting held with Natural England to present water vole survey results and proposed approach to licensing. Subsequently, Natural England confirmed that a draft water vole license application is not required for submission with the DCO Application.
18/12/2025	Natural England	Further information received from Natural England on SSSI IRZs within the ZoI of the Scheme.

Engagement date	Organisation	Summary of discussion
12/01/2026	National Grid Electricity Transmission (NGET)	Meeting with NGET. The Meridian Project Team presented to NGET the collision risk modelling approach for the HRA. Approach to in-combination effects assessment was discussed. NGET also confirmed survey results indicate minimal waterbird use of the Weston Marsh Substation B site and no evidence of functionally linked land in this location.
29/01/2026 03/02/2026	NGET	Ecology survey datasets received from NGET.
12/02/2026	Natural England	Email to Natural England to summarise the meeting held with NGET regarding coordinating the HRA in-combination effects assessments.

9.4. Assessment Methodology

Study Area

9.4.1. Zones of Influence (ZoI) are defined using current good practice and professional judgement:

- Internationally Important Wildlife Sites (IIWS: SPA/SAC/Ramsar) within 15km of the Site (extended to 20km for the HRA);
- Nationally designated and non-statutory sites within 2km;
- Habitats of Principal Importance (HPI) and notable habitats within 2km;
- Protected/notable species records within 2km.

9.4.2. In practice, 15km was used for internationally designated sites in the ES. In response to consultation feedback with Natural England, the HRA uses a 20km study area for internationally designated sites relevant to birds and otter.

9.4.3. Vantage Point (VP) survey viewsheds for the GCR (GCR) were selected to provide comprehensive visibility of flight activity relevant to collision risk (diurnal and nocturnal). The Collision Risk Zone was determined based on the length of the GCR, with the at-risk flight height being the range from the lower to upper cables of the proposed overhead lines.

Baseline Methodology

9.4.4. Desk study used ecological records from Greater Lincolnshire Nature Partnership (GLNP), and MAGIC map, Ordnance Survey mapping and aerial photography for additional information on statutory sites, habitats and species records.

9.4.5. Field surveys comprised a Preliminary Ecological Appraisal (PEA) using UKHab mapping, together with targeted species and habitat surveys for birds, bats, otters, water voles, badgers and great crested newts (GCN), and Ground Level Tree Assessments to identify Potential Roost Features (PRFs).

9.4.6. Methods follow CIEEM guidelines on Ecological Impact Assessment[5], Preliminary Ecological Appraisal[6] and British Standard 42020[7] and species-specific guidance, applying proportionality to the fenland context and agreed scope with consultees where applicable.

9.4.7. Full methods, dates, equipment and outputs are reported in the relevant ES appendices.

Survey Methodologies

9.4.8. A summary description of the methodologies adopted for the relevant surveys is provided below. Detailed methodology descriptions are provided in each of the relevant ES appendices, as listed in section 9.1.

Preliminary Ecological Appraisal (PEA)

9.4.9. The purpose and scope of the PEA was to map habitats using UK Habitat Classification (UKHab) and identify Habitats of Principal Importance[8] (HPI) and features with potential to support protected and notable species across the SDA (SDA), the GCR (GCR), and the Inter-Array Connections (IAC).

9.4.10. Surveys were conducted in the SDA from August to September 2023 and again in February and August 2024. The GCR and IAC surveys took place from May to July 2025. The standards and proportionality followed UKHab[9] version 2 and HPI guidance from the Joint Nature Conservation Committee[10] (JNCC), aiming for full coverage where access was available.

9.4.11. The outputs from this survey included habitat maps, target notes, and features identified for further surveys. For more details, refer to **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3).

---

[5] Chartered Institute of Ecology and Environmental Management (CIEEM) (2018, updated 2022). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.* Winchester: CIEEM.

[6] CIEEM (2017, updated 2018). *Guidelines for Preliminary Ecological Appraisal (2nd ed.).* Chartered Institute of Ecology and Environmental Management.

[7] British Standards Institution (BSI) (2013). *BS 42020:2013 Biodiversity – Code of Practice for Planning and Development.* London: BSI.

[8] UK Government (2006). *Natural Environment and Rural Communities Act 2006 (Section 41): Habitats and Species of Principal Importance in England.* Available at: https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england (Accessed 6 March 2026).

[9] Butcher, B., Carey, P., Edmonds, R., Norton, L. & Treweek, J. (2020). *The UK Habitat Classification User Manual Version 2.0.* UK Habitat Classification Working Group.

[10] Joint Nature Conservation Committee (JNCC) (2023). *Priority Habitat Inventory (England).* Available at: https://jncc.gov.uk/our-work/priority-habitats/ (accessed 27/02/2026).

Badger Survey

9.4.12. The purpose and scope of the badger survey were to detect the presence and status of badger setts and field signs across accessible areas of the SDA, GCR, and IAC. Efforts were aligned with the PEA walkovers and conducted in accordance with best practices[11].

9.4.13. The standards and proportionality involved Site-wide walkovers and sett classifications (main, annexe, subsidiary, and outlier).

9.4.14. Outputs from this survey included confidential locations of setts and evidence of activity. More details are available in **ES Appendix 9-8: Badger Report (Confidential)** (Doc Ref. 6.3).

Bat Activity Surveys (SDA)

9.4.15. The purpose and scope of the bat activity surveys were to characterize the bat foraging and commuting assemblage across the SDA, using transects and static detectors.

9.4.16. Surveys were conducted during nighttime from April to October 2024. Standards and proportionality followed BCT Good Practice[12], acknowledging that activity does not equate to abundance, and included a multi-method dataset.

9.4.17. The outputs included species assemblages and activity gradients by habitat. For further details, refer to **ES Appendix 9-11: Bat Activity Survey Report** (Doc Ref. 6.3).

Ground Level Tree Assessment (GLTA) – PRFs (SDA, GCR, IAC)

9.4.18. The Ground Level Tree Assessment (GLTA) aimed to audit trees for Potential Roost Features (PRFs) and classify their suitability as (Potential Roost Feature for Individual bats (PRF-I), Potential Roost Feature for Multiple bats (PRF-M), or Further Assessment Required (FAR).

9.4.19. Surveys were conducted in August 2025 across the SDA and, where accessible, across the GCR and IAC. Standards and proportionality followed

[11] Harris, S., Cresswell, P. & Jefferies, D. (1989). *Surveying Badgers.* Occasional Publication No. 9. Peterborough: Mammal Society.

[12] Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th ed.).* London: Bat Conservation Trust.

Bat Conservation Trust (BCT) Good Practice guidelines and BS 42020[13], with further aerial/emergence surveys specified for FAR/PRF trees if affected by works.

9.4.20. The outputs included a PRF inventory and recommendations for follow-up surveys or licensing if required. Detailed information is provided in **ES Appendix 9-12: Bat GLTA Survey Report Technical Note 2025** (Doc Ref. 6.3).

Breeding Bird Surveys (SDA)

9.4.21. The purpose and scope of the Breeding Bird Surveys (BBS) were to map the breeding assemblage across the SDA and a visible buffer of up to approximately 100m. The buffer zone was based on assessed zone of influence and discussions with Natural England on the scope of the surveys being conducted.

9.4.22. Surveys were conducted using six pre-defined transects and six visits between March and July 2023, following standard British Trust for Ornithology (BTO) methods[14]. Standards and proportionality were based on current guidance, with transects designed for visibility in open fenland and consultation with Natural England on survey scope.

9.4.23. Outputs included species lists with their status (possible, probable, confirmed) and territory distribution. Further details can be found in **ES Appendix 9-3; Breeding Bird Survey Report** (Doc Ref. 6.3).

Wintering Bird Surveys (SDA)

9.4.24. The purpose and scope of Wintering Bird Surveys (WBS) were to characterize the wintering assemblage across the SDA and within a buffer of up to 100 meters.

9.4.25. Monthly surveys were conducted from October to March in the periods of 2022–2023 and 2023–2024, utilizing six and five transects respectively. Standards and proportionality involved alternating start directions, standard BTO methods, ad hoc stops to enumerate flocks, and consideration of the open, homogeneous fenland context.

---

[13] British Standards Institution (BSI) (2013). *BS 42020:2013 Biodiversity – Code of Practice for Planning and Development*. London: BSI.

[14] Harris, S.J., Massimino, D., Gillings, S., Eaton, M.A., Noble, D.G., Balmer, D.E., Procter, D.A., Pearce-Higgins, J.W. & Woodcock, P. (2023). *The Breeding Bird Survey 2022*. BTO Research Report. Thetford: British Trust for Ornithology.

9.4.26. Outputs included species and flock data, with distribution by habitat. Refer to **ES Appendix 9-4: Wintering Birds Survey Report 2022-2023** (Doc Ref. 6.3) and **ES Appendix 9-5: Wintering Birds Survey Report 2023-2024** (Doc Ref. 6.3) for more information.

Wintering Bird Surveys (GCR & IAC)

9.4.27. The purpose and scope of these WBS were to quantify flight activity, height bands, and movement corridors along the GCR, including the IAC, to inform the collision risk with overhead lines.

9.4.28. Surveys included seven vantage points and five monthly diurnal watches conducted from November 2023 to March 2024, followed by five vantage points with diurnal and nocturnal watches from October 2024 to March 2025. Standards and proportionality adapted the NatureScot wind farm assessment methods[15] for use with overhead lines (OHL), offering extensive lines of sight from public rights of way (PRoW) and highway margins in open fenland.

9.4.29. Outputs were flight durations by species and height bands and inputs for collision risk assessments. More details can be found in **ES Appendix 9-6: GCR Wintering Bird Survey Report 2023-2024** (Doc Ref. 6.3) and **ES Appendix 9-10: Vantage Point Survey Report** (Doc Ref. 6.3).

Common Crane / Summer Vantage Point Surveys (GCR)

9.4.30. The purpose and scope of these surveys were to target post-breeding dispersal movements and the use of the GCR by common crane and focal species.

9.4.31. Surveys involved three vantage points with nine visits between July and September 2025, conducted diurnally and nocturnally by paired surveyors. Standards and proportionality followed the same vantage point methods, including nocturnal thermal imaging and open fenland viewsheds.

9.4.32. Outputs included flight activity by species and height band, though no crane observations were recorded during the survey period. For more information, refer to **ES Appendix 9-13: Summer 2025 Vantage Point Survey Report** (Doc Ref. 6.3).

[15] NatureScot (2017). *Recommended bird survey methods to inform impact assessment of onshore wind farms.* Inverness: NatureScot.

Great Crested Newt Surveys

9.4.33. The purpose and scope of these surveys were to assess breeding habitat suitability and the presence or likely absence within the Site and up to 500m.

9.4.34. Surveys involved Habitat Suitability Index (HSI) assessments and environmental DNA (eDNA) sampling from May to June 2025, following the protocol by Biggs et al.[16] and Natural England[17]. Standards and proportionality prioritised accessible waterbodies, included contamination controls, and used accredited laboratory analysis.

9.4.35. Outputs consisted of HSI scores, eDNA results indicating negative findings at tested waterbodies, and conclusions of likely absence. Refer to **ES Appendix 9-9: Great Crested Newt Survey Report** (Doc Ref. 6.3) for further details.

Otter and Water Vole Surveys

9.4.36. The purpose and scope of these surveys were to confirm the presence or likely absence and suitability at crossing points and main drains, updating with design refinements.

9.4.37. Surveys were conducted in June and September 2024, with updates in September 2025, covering approximately 100m upstream and downstream per indicative watercourse crossing, where accessible. Standards and proportionality followed best practice (Dean et al.[18]) and included signs such as holts, laying/resting sites, latrines, burrows, spraints, feeding signs, and tracks, with repeat coverage of key locations.

9.4.38. Outputs included confirmed water vole presence at multiple drains, otter spraint and usage along main drains, and connectivity notes. More information is available in **ES Appendix 9-7: Otter and Water Vole Report** (Doc Ref. 6.3).

---

[16] Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Griffiths, R.A., Foster, J., Wilkinson, J.W., Arnell, A., Brotherton, P., Williams, P. & Dunn, F. (2015). *Using eDNA to develop a national citizen science-based monitoring programme for the great crested newt (Triturus cristatus).* **Biological Conservation**, 183, pp.19–28.

[17] Natural England (2015). *Great Crested Newts: Surveys and Mitigation for Development Projects.* Natural England Standing Advice.

[18] Dean, M., Strachan, R., Gow, D. & Andrews, R. (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).* Exeter: Pelagic Publishing.

Assessment Methodology

Assessment of Value (Assessment of Importance of Ecological Features)

9.4.39. In line with CIEEM guidelines[19], features likely to be important in terms of biodiversity have been identified and evaluated on a geographical scale of importance as set out below in Table 9-4. Features of less than 'Local level' of importance are classified as being 'Site level' importance where they have ecological importance within their immediate vicinity, or otherwise as being of negligible importance.

Table 9-4: Definition of Scale of Importance

Scale of Importance	Examples of Definitions
International	• An internationally important wildlife site e.g. SPA, SAC, Ramsar Site, or considered worthy of such designation; • A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller area of such habitat which are essential to maintain the viability of a larger whole; or • A regularly occurring, substantial population of an internationally rare species.
National (UK)	• A nationally designated site, e.g. SSSI, or a site considered worthy of such designation. • A viable area of habitat identified as a HPI (also known as Section 41 habitat) or of smaller areas of such habitat, which are essential to maintain the viability of a larger whole; or • A regularly occurring, substantial population of a nationally scarce species, including Species of Principal Importance (SPI) or Bird of Conservation Concern (BoCC).

[19] Chartered Institute of Ecology and Environmental Management (CIEEM) (2018, updated 2022). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Winchester: CIEEM.

Scale of Importance	Examples of Definitions
Regional (East Midlands)	• Areas of Internationally or Nationally important habitats, which are degraded but are considered readily restored; or • A regularly occurring, substantial population of a regionally scarce species.
Metropolitan, County, Vice County (Lincolnshire)	• A site designated as a County Wildlife Site (CWS), including Sites of Metropolitan Importance for Nature Conservation (SMINC), Sites of Borough Importance for Nature Conservation (SBINC) and Sites of Local Importance for Nature Conservation (SLINC), collectively referred to as SINCs and Local Wildlife Sites (LWS); or • A regularly occurring, substantial population of a species scarce in the county.
Local, Borough, District or Parish (South Holland)	• Viable areas of Local BAP Priority Habitat, or small areas of such habitat which are essential to maintain the viability of a larger whole; or • A regularly occurring population of a species scarce in the District /Parish, including Local BAP Priority Species.
Site	• A regularly occurring population within the Site itself or the immediate vicinity of the development.
Negligible	• A habitat which offers little value for nature conservation, e.g. hardstanding.

Importance Based on Biodiversity Attributes

9.4.40. The ecological importance of areas of habitat and plant communities has been assessed against published selection criteria, where available. Local BAPs, where they remain relevant, have been searched to identify whether action has been taken to protect all areas of a particular habitat and to identify current factors causing loss and decline. The presence of legally controlled invasive, non-native species has also been taken into account.

9.4.41. When assigning level of importance to a species, its distribution and status, including a consideration of trends based on available historic records, has been taken into account. Other factors influencing the importance of a species are legal protection, rarity and Species Action Plans (SAP). Guidance, where available, for the identification of populations of sufficient size for them to be considered of National or International importance has also been considered.

9.4.42. Factors taken into consideration in determination of importance of ecological features include:

- Designations and nature conservation status;
- Statutory and non-statutory designated sites for nature conservation;
- Habitats and species of principal importance for nature conservation in England (Natural Environment and Rural Communities Act, s.41[20]);
- Local BAP priority habitats and species;
- Red Data Book (RDB) species of conservation concern[21];
- Birds of conservation concern[22];
- Nationally rare and nationally scarce species;
- Legally protected species;
- Naturalness;
- Animal or plant species, sub-species or varieties that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
- Ecosystems and their component parts, which provide the habitat required by important species, populations and assemblages;
- Endemic species or locally distinct sub-populations of a species;
- Habitat diversity;
- Habitat connectivity and/or synergistic associations;

---

[20] Natural Environment and Rural Communities Act 2006, Section 41 – *Habitats and Species of Principal Importance in England.* Lists published by the Secretary of State and maintained by Natural England and Joint Nature Conservation Committee.
[21] JNCC (2023) *Consolidated list of Red listed species*. Available at: https://hub.jncc.gov.uk/assets/478f7160-967b-4366-acdf-8941fd33850b#consolidated-red-list-extract-20231206.xlsx
[22] Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. and Win, I. (2021) *Birds of Conservation Concern 5*. British Birds Volume 114.

- Habitats and species in decline;
- Rich assemblages of plants and animals;
- Large populations of species or concentrations of species considered uncommon or threatened in a wider context;
- Plant communities (and their associated animals) that are considered to be typical of importance natural/semi-natural vegetation types, including examples of naturally species-poor communities;
- Species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change; and
- Ecosystem service/natural capital.

Receptor Sensitivity

9.4.43. Sensitivity is determined using professional judgement, informed by up-to-date survey data and published evidence, considering habitats, species and ecosystem functions/processes. Features likely to be affected by the Scheme are taken forward for detailed assessment; features that are sufficiently widespread, unthreatened and resilient, with no risk to their viability, are scoped out[4].

9.4.44. In evaluating sensitivity, the assessment considers whether potential effects could undermine the integrity of designated habitats sites or the conservation status of habitats or species, as defined below and applied at the appropriate geographic scale [38].

9.4.45. Assessments have been based on available literature and professional judgement as to whether the integrity (of a site or ecosystem) or the conservation status (of a habitat or species) is likely to be affected.

9.4.46. 'Integrity' in relation to land lacking a designation or objectives for nature conservation is a long-term concept defined as follows:

9.4.47. '*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*.'[23]

[23] Department for Levelling Up, Housing and Communities 2019, Habitats Regulations Assessment: Appropriate assessment, Planning Practice Guidance, Paragraph 003 Reference ID: 65-003-20190722, 22 July. Available at: https://www.gov.uk/guidance/habitats-regulations-assessment (Accessed 26 January 2026).

9.4.48. For habitats, conservation status:

9.4.49. *'…conservation status of a natural habitat' means the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within the territory referred to…'*[24]

9.4.50. For species, conservation status:

9.4.51. '*…conservation status of a species' means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to…'*[39]

Evaluation of Impacts and Effects

9.4.52. This ecology assessment has been prepared in accordance with the CIEEM Guidelines for Ecological Impact Assessment[4], adopting their definitions of "impact" and "effect" and the staged process of scoping, baseline, impact identification/characterisation, effect prediction and evaluation, mitigation/compensation and enhancement, and reporting of significant residual and cumulative effects.

9.4.53. As part of an Environmental Impact Assessment, it follows the EIA Regulations framework for identifying, describing and assessing likely significant effects on biodiversity[25], and applies the national mitigation hierarchy set out in planning policy and associated[26,27]. The structure and level of detail align with CIEEM's expectations for EcIA reports within an Environmental Statement.

9.4.54. For the purposes of this assessment, impacts are the Scheme actions/biophysical changes (e.g., habitat removal, disturbance), and effects are the ecological outcomes on features arising from those impacts (e.g. changes in population, distribution, or habitat structure/function).

9.4.55. In summary the ecological impact assessment has considered the following:

---

[24] Council of the European Communities 1992, Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), Official Journal of the European Communities, L 206, 22 July, pp. 7–50. Available at: https://eur-lex.europa.eu/eli/dir/1992/43/oj (Accessed 26 January 2026).
[25] UK Government (2017). *The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)*, SI 2017/572. Available at: https://www.legislation.gov.uk/uksi/2017/572/contents (Accessed 26 January 2026).
[26] Department for Levelling Up, Housing and Communities 2019, Planning Practice Guidance: Natural environment, Paragraph 016 (Reference ID: 8-016-20190721), 21 July. Available at: https://www.gov.uk/guidance/natural-environment (Accessed 26 January 2026).
[27] Natural England (undated), Protected species: how to review planning applications, GOV.UK Guidance. Available at: https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications (Accessed 26 January 2026).

- Impact characterisation: For each Important Ecological Feature (IEF), Scheme impacts are identified and characterised with reference to baseline conditions and the zone(s) of influence, considering direct, indirect, secondary and cumulative pathways across construction, operation and decommissioning. Characterisation uses the parameters positive/negative, extent, magnitude (quantified where practicable), duration, timing/frequency and reversibility.
- Effect prediction and significance: The ecological effects expected to result from the characterised impacts are predicted in the context of the predicted baseline and evaluated for significance at the appropriate geographic scale. Consistent with the overarching EIA methodology, the assessment focuses on significant effects (including cumulative) and reports residual significant effects after mitigation. Where evidence is limited, assumptions are made on a proportionate, precautionary basis and uncertainties are stated.
- Information sources and phases: Activities likely to generate impacts were identified from the Scheme design, desk study and field survey information, and relevant EIA experience/publications, and are grouped by Scheme phase (construction, operation, decommissioning) to ensure complete coverage.
- Embedded measures: Measures integral to the Scheme and secured in the DCO Application documents (e.g., design parameters, standard construction methods, timing restrictions) are incorporated into the initial prediction of impacts and the evaluation of effects.
- Additional mitigation, compensation and residual effects: Where embedded measures do not avoid significant effects, additional mitigation and, where necessary, compensation are identified and secured. Effects are then reassessed to determine and report residual effects. Where effectiveness is uncertain or to demonstrate the importance of securing measures, the assessment presents both likely significant effects without mitigation and the residual significant effects following mitigation.

Significance of Effect

9.4.56. The significance of effect in relation to Ecology and Biodiversity has been assessed in accordance with the CIEEM Guidelines[28] which state that an effect should be determined as being significant when it '*either supports or undermines biodiversity conservation objectives for important ecological features or for biodiversity in general*'. Significance is a concept related to the weight that should be afforded to effects when decisions are made, and to the consequences, in terms of legislation, policy and/or development control. If a proposal would cause significant harm to a feature of importance, the mitigation hierarchy in NPPF paragraph 186 should be applied. Where development is permissible, necessary measures may be secured by DCO Requirements.

9.4.57. An effect on an important ecological feature may be significant at the same geographic scale at which the feature is determined to be important, or at a lesser geographical scale, depending upon the characterisation of the impact. By way of example, limited impacts on a woodland of county importance might be assessed as being significant at a Local level of importance. This methodology supports an evidence-based approach, which supersedes previous matrix-based assessment methodologies.

9.4.58. This assessment uses generic criteria, based on an expression of severity and their importance to the decision-making process, to describe the significance of environmental effects. In this chapter, as established in **ES Appendix 1-1: EIA Scoping Report** (Doc Ref. 6.3), in each case the significance of the effect has been expressed in accordance with CIEEM's geographical frame of reference[28].

9.4.59. Using the guidance described above and taking into consideration the receptor sensitivity and impact magnitude, this criterion has been translated to a scale level of Negligible, Minor, Moderate, Major and Severe. Effects that are negative or positive with Severe, Major and Moderate effects are considered to be **'Significant'** while Minor and Negligible effects (positive or negative) are considered to be '**Not significant**'.

9.4.60. The ecology chapter uses a judgement-led narrative (negligible–severe) rather than a matrix because the CIEEM guidelines explicitly avoid and discourage the

[28] Chartered Institute of Ecology and Environmental Management (CIEEM) (2018, updated 2022). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.* Winchester: CIEEM.

use of matrix approaches and "spurious quantification," recommending that significance is determined through transparent, evidence-based professional judgement focused on whether effects support or undermine conservation objectives and the conservation status of features; matrices should only be used where ES-wide consistency specifically requires categorisation[4].

9.4.61. For ease of reference, Table 9-5 below provides a means of relating the two approaches and is provided in order to allow the ecology assessment to be integrated into the wider EIA without compromising the CIEEM best practice approach. However, it should be noted that the two criteria do not precisely align, and professional judgement is undertaken in translating CIEEM's geographical criteria into EIA significance.

9.4.62. Sensitivity is considered during impact characterisation (extent, magnitude, duration, timing/frequency, reversibility) and influences the assessed magnitude of impact; significance is then judged at the appropriate geographic scale for each Important Ecological Feature (IEF), consistent with CIEEM's approach[4]. This reflects the EcIA process of characterising impacts, predicting effects, and evaluating significance at a geographic scale.

Table 9-5: Ecological Significance Criteria

Scale of Effect		Generic Environmental Criteria	CIEEM geographical criteria
Significant	Major	These effects are likely to be key considerations at a local or district scale but, if adverse, are potential concerns to the development and may become key factors in the decision-making process.	Ecological impacts assessed as being significant at the borough (district) or county scales and that would be anticipated to trigger a response in development control terms are considered to represent impacts that, overall, within this assessment, are of major significance.

Scale of Effect		Generic Environmental Criteria	CIEEM geographical criteria
	Moderate	These effects, if adverse, while notable at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.	Ecological impacts assessed as being significant at the local scale and that would be anticipated to trigger a response in development control terms will be considered to represent impacts that, overall, within this assessment, are of moderate significance.
Not significant	Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless, they are of relevance in enhancing the subsequent design of the development and consideration of mitigation or compensation measures.	Ecological impacts that have been assessed as being significant within the Site and are anticipated to be unlikely to trigger a response in development control terms are considered to represent impacts that, overall, within this assessment, are of minor significance.
	Negligible	No effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error.	Ecological impacts that have been assessed at below Site level of importance or as being negligible are assessed as not being significant at any geographical level.

9.4.63. For each important ecological feature, Scheme impacts (the actions/biophysical changes) are first identified and characterised using extent, magnitude, duration, timing/frequency and reversibility; the resulting ecological effects (outcomes on the feature, such as changes in population, distribution, or structure/function) are then predicted and their significance

evaluated against CIEEM's definition, reporting residual effects after embedded and additional mitigation[29].

Assessing Cumulative Effects

9.4.64. The cumulative assessment follows the CIEEM EcIA Guidelines and the EIA Regulations framework[30]. It identifies other developments within the zone(s) of influence (ZoI) of each IEF where a credible impact pathway and temporal overlap exist.

9.4.65. The short-list of other developments was compiled from planning records and agreed with local authorities (refer to **ES Chapter 4: Overview of the EIA Process** (Doc Ref. 6.1)), limited to projects that are consented, under construction or submitted/awaiting determination (and, where relevant, plan-led proposals in the public domain)[31].

9.4.66. Each shortlisted project was screened in/out for each IEF based on: location within the ZoI; overlap in construction and/or operational phases; and the presence of shared pathways for direct, indirect, secondary or associated effects.

9.4.67. For in-scope combinations, effects are characterised using the CIEEM parameters (magnitude/extent, duration, frequency/timing, and reversibility), taking account of baseline conditions and avoiding double-counting where effects are already present in the baseline. Where information was available and secured (e.g. by condition/obligation) for other developments, embedded/committed mitigation was included in predictions; assumptions and uncertainties are stated.

9.4.68. Significance of in-combination residual effects are then judged for each IEF against CIEEM's definition (i.e. whether effects support or undermine relevant conservation objectives) at the appropriate geographic scale.

---

[29] Chartered Institute of Ecology and Environmental Management (CIEEM) (2018, updated 2022). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine.* Winchester: CIEEM.

[30] UK Government (2017). *The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)*, SI 2017/572. Available at: https://www.legislation.gov.uk/uksi/2017/572/contents (Accessed 26 January 2026).

[31] Department for Levelling Up, Housing and Communities 2017, Planning Practice Guidance: Environmental Impact Assessment, Paragraphs 023–024 (Reference IDs: 4-023-20170728 and 4-024-20170728), 28 July. Available at: https://www.gov.uk/guidance/environmental-impact-assessment (Accessed 26 January 2026).

9.5. Assessment Assumptions and Limitations

9.5.1. The assessment is based on **ES Chapter 2: The Scheme** (Doc Ref. 6.1) and the design parameters secured through the **Design Parameters** (Doc Ref. 7.4). A reasonable worst-case (Rochdale Envelope) has been applied by defining limits of deviation for those parameters and, for each ecological receptor, assessing the design variant within those limits that would give the greatest adverse effect after embedded measures, without combining mutually exclusive options. This approach accords with CIEEM guidance to scope against best and worst-case operating conditions and to include associated infrastructure in the project description4.

9.5.2. Embedded measures (Section 9.7) will be implemented; receptor-specific effects are evaluated with these in place (Section 9.8).

9.5.3. Survey and data limitations applied in the interpretation of the results included the below:

- Access: Some GCR (GCR) and Inter-Array Connection (IAC) locations could not be accessed at certain times (due to land access or health & safety constraints). Surveyors used PRoW/highway margins and optics to assess features in open fenland, reducing fine-scale resolution locally.
- Seasonality/conditions: Many ditches/drains were dry or recently managed during surveys, influencing hydrological condition and detectability (e.g., for otter and water vole). Exceptionally windy or disturbed days (including shooting) reduced bird activity at some sessions; constraints were logged and considered. Surveys of the Solar Development Area were carried out in February, late August and early September. The survey undertaken in February 2024 was outside of the optimal survey season for many flowering plants. Despite this, dominant grass species, late flowering plants and remnants of early species were identifiable, and accurate identification and condition assessment of habitats was achievable, and the data are therefore considered as suitably robust for the purposes of this appraisal.
- Proportional scope (GCR/IAC): Following consultation and agreement with Natural England, breeding bird and bat activity transects were not duplicated across the full GCR/IAC due to the homogeneous fenland landscape and the focus on overhead line collision pathways. Collision risk was addressed via diurnal and nocturnal VP surveys; GLTA covered trees for bat roost features. Location-specific checks will be reviewed at detailed

design where residual risk remains. Nocturnal surveys for breeding birds were not undertaken, as agreed with Natural England, on the basis of proportionality, given the limited extent and suitability of habitats for these species within the development footprint.

- Desk study precision: Sensitive species records (e.g., badger) were supplied at four-figure or 1km resolution; precise locations are held in a confidential annex for safeguarding.
- Equipment/data: A small number of static bat detector deployments experienced equipment failure/data corruption; acoustic "passes" were considered to indicate activity, not abundance; it was noted that quiet-calling taxa (e.g., *Plecotus*) may be under-recorded.
- eDNA/HSI (GCN): Some ponds were dry or inaccessible at the time of eDNA sampling; HSI was considered to indicate potential only; all accessible waterbodies were sampled to protocol.
- GLTA constraints: Dense ivy, livestock or access restrictions prevented full inspection of some trees at ground level; these were classified as Further Assessment Required (FAR). Whilst it is understood these trees will not be directly impacted, climb and inspect surveys will be needed to determine the bat potential of FAR trees and/or presence of a bat roosts in PRFs, prior to any works that could adversely impact a bat roost if present in any of these trees.
- Validity: Ecology survey data are typically valid for 12–18 months; for actively managed riparian systems a 12-month validity is applied. Update checks/surveys will precede works where programming falls outside these windows. For the purpose of the impact assessment provided here, it is considered that surveys undertaken remain valid, but may need to be updated prior to construction.

9.5.4. With regards to how the above limitations affect the assessment, it was noted that:

- Methods follow CIEEM/BS 42020 and species-specific guidance, with proportionality to the fenland context and survey scope agreed with Natural England, where applicable.
- The constraints above have been transparently documented and do not materially affect Scheme-level conclusions. Precautionary professional judgement has been applied, where appropriate.

9.5.5. Two cumulative assessment scenarios are set out in **ES Chapter 4: Overview of the EIA Process** (Doc Ref. 6.1) which are considered to capture the worst-case cumulative effects. For this chapter, the below scenarios are considered to result in a worst-case assessment in relation to the cumulative schemes assessment:

- Scenario 1: Construction periods and the peak construction of the Scheme and the Grimsby to Walpole DCO, Outer Dowsing Offshore Wind Farm DCO, the Weston Marsh to East Leicestershire Project (WMEL) DCO and Ossian Wind Farm DCO overlap in 2031.
- Scenario 2: The projects are built out sequentially, with no overlap in peak construction periods but a longer overall cumulative construction period between, estimated, 2028 and 2038.

9.5.6. Given the variability in sensitivity and response across ecological receptors, a single cumulative construction scenario cannot robustly represent the worst case for all impact pathways. For some receptors, a short, coincident peak in construction activity (Scenario 1) is likely to maximise disturbance or displacement during sensitive periods; for others, a longer sequential build-out (Scenario 2) represents the greater risk due to extended duration, repeated exposure or prolonged barrier and habitat pressures. In certain locations, partial overlaps could combine higher peak magnitudes with longer durations, resulting in effects greater than either scenario alone. Accordingly, this chapter considers both scenarios (and reasonable combinations thereof) and, for each receptor and pathway, identifies and reports the more adverse outcome as the worst-case effect, applying a precautionary and receptor-specific approach to cumulative assessment within the defined zone(s) of influence and predicted baseline conditions.

9.5.7. Assumptions reflect current information on third party construction programmes and seasonal constraints; while programme details may evolve, this does not affect the robustness of the receptor specific worst case conclusions, which will be refined should more certain timetables become available.

9.6. Baseline Conditions

9.6.1. This section describes the baseline environmental characteristics for the Scheme and surrounding areas with specific reference to Ecology and Biodiversity.

Designated Sites

9.6.2. The Site is not subject to any statutory nature conservation designations and there are no statutory designations within 2km. The closest designated sites of national importance are the Surfleet Lows SSSI and Cowbit Wash SSSI, located approximately 3.5km north-west and 3.6km west of the Site respectively. Table 9-6 details the IIWS located within 15km of the Site. IIWS are shown on **ES Figure 9-1: Internationally Designated Sites** (Doc Ref. 6.2). Nationally designated sites are shown in **ES Figure 9-2: Nationally Designated Sites** (Doc Ref. 6.2).

9.6.3. Functional linkage and collision pathways to SPA/Ramsar qualifying features are addressed proportionately within the HRA using a 20km study area for bird and otter features; to avoid duplication, detailed linkage assessment is reported in **ES Appendix 9-14 HRA Report** (Doc Ref. 6.3).

9.6.4. The parcels referenced below, and elsewhere within this chapter, are illustrated in **ES Figure 1-1: Scheme Location** (Doc Ref. 6.2) and **ES Figure 1-2: Solar Development Area Field Numbers** (Doc Ref. 6.2).

Table 9-6: Internationally Designated Sites

Site Name	Approx. Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
The Wash Ramsar site	8.4km north-east of GCR	International	The site qualifies under Ramsar criterion 1: comprising extensive salt marsh and intertidal banks of sand and mud; criterion 3: saltmarshes and plankton contribute to the high productivity of the estuary; criterion 5: supports an internationally important wintering bird population; criterion 6: supports internationally important populations of oystercatcher *Haematopus ostralegus*, grey plover *Pluvialis squatarola*, red knot *Calidris canutus islandica*, sanderling *Calidris alba*, curlew *Numenius arquata*, redshank *Tringa totanus*, turnstone *Arenaria interpres*, pink-footed goose *Anser brachyrhynchus*, brent goose *Branta bernicla*, shelduck *Tadorna tadorna*, pintail *Anas acuta*, dunlin *Calidris alpina* and bar-tailed godwit Limosa lapponica.	Disturbance or displacement of wintering/migratory waterbirds using functionally linked land (supporting habitats) in the wider landscape (e.g., River Welland floodplain west of Parcel A; Fleet Drain near Parcel D; open arable fields west of Delgate Bank) during construction and operation. Predator shadow/functional habitat displacement associated with new pylons, particularly for species preferring large open fields (e.g., golden plover), affecting landing/roosting/foraging behaviour. Collision risk with the proposed overhead line during operation for qualifying/non-breeding waterbirds moving through/within the wider area; HRA identifies this as a pathway requiring Appropriate Assessment. Construction-phase water quality pathway via the connected drain

Site Name	Approx. Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
			Populations of ringed plover *Charadrius hiaticula*, black-tailed godwit *Limosa limosa*, golden plover *Pluvialis apricaria* and lapwing *Vanellus vanellus* have been identified subsequent to designation for possible future consideration as qualifying species.	network. Construction traffic air-quality pathway (deposition/NOx) on the Ramsar/underpinning SSSI; considered at Stage 1.
The Wash and North Norfolk Coast SAC	8.4km north-east of GCR	International (underpinned by The Wash SSSI)	The site qualifies due to the presence of the following Annex I habitats: sandbanks, mudflats and sandflats, large shallow inlets and bays, reefs, salicornia and other annuals colonising mud and sand, Atlantic salt meadows and Mediterranean and thermo-Atlantic *halophilous* scrubs. Coastal lagoon, which is also an Annex I habitat, is present as a qualifying feature but not a primary reason for selection. The Annex II species harbour seal *Phoca vitulina* is present and a primary reason for selection. Otter is present	Construction-phase water quality pathway via hydrological connectivity to the wider drain network (accidental pollution) with potential implications for Annex I habitats and qualifying Annex II species. Construction traffic air-quality pathway (deposition/NOx) on the underpinning SSSI and SAC habitats. Disturbance or functional effects on otter (use of local drain network linked to the SAC population) including temporary displacement, risk at crossings/culverts/bridges, and very low-likelihood direct harm during works. Operational disturbance risk to

Site Name	Approx. Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
			as a qualifying feature but not a primary reason for selection[32].	otter (lighting, human presence) at drains functionally linked to movements between the site and the wider catchment.
The Wash SPA	8.4km north-east of the GCR	International (underpinned by The Wash SSSI)	The Wash qualifies under Article 4(1) because it supports 30 breeding pairs of little tern *Sternus albifrons* (2% of the British population) and 220 pairs of common tern *Sterna hirundo* (2%). It also supports 130 Bewick's swan Cygnus *columbianus bewickii* in winter (3%). It qualifies under Article 4(2) as an internationally important wetland and also because it supports internationally important numbers of brent goose, pink-footed goose, shelduck, pintail, oystercatcher, grey plover, sanderling, knot, dunlin, bar-	Potential impacts on foraging and roosting for wintering wildfowl and waders that may use the SPA. May also impact on predator evasion with reduction in landing sites. Overhead infrastructure may pose a collision risk.

[32] Otters using drains within or adjacent to the Site could be linked to populations associated with the Wash & North Norfolk Coast SAC; and will be considered further under species assessment.

Site Name	Approx. Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
			tailed godwit, curlew, redshank and turnstone.	
Baston Fen SAC	10km west of Land Parcel A	International (underpinned by Baston and Thurlby Fens SSSI)	A large flowing drainage channel supporting a large community of aquatic and emergent plants, freshwater invertebrates and a variety of fish species including the Annex II species spined loach *Cobitis taenia*.	Construction-phase water quality pathway (accidental pollution) via any plausible hydrological connection to the Counter Drain supporting spined loach (to be considered at Stage 1; HRA screening indicates no LSE based on nature/scale/location and high-level hydrological review). Construction traffic air-quality pathway (deposition/NOx) on the SAC/underpinning SSSI; considered at Stage 1; HRA screening indicates no LSE at this distance and with forecast traffic changes.
Nene Washes Ramsar Site	12km south of Land Parcel D	International	The site qualifies under Ramsar criterion 2: supporting an important assemblage of nationally rare birds; and Ramsar criterion 6: internationally important populations of Bewick's swan. Populations of black-tailed godwit and northern pintail have been	Disturbance or displacement of wintering/migratory waterbirds using functionally linked land during construction/operation. Predator shadow/functional habitat displacement from pylons reducing landing/roosting opportunities in open fields.

Site Name	Approx. Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
			identified subsequent to listing for possible future consideration under criterion 6. The site also lists nationally scarce plants, British RDB invertebrates and a breeding bird assemblage.	Collision risk with the proposed overhead line for movement of wintering/migratory waterbirds associated with the Ramsar; HRA indicates this pathway may give rise to potential LSE to be assessed at Appropriate Assessment. Construction-phase water quality pathway (hydrological pollution) and construction traffic air-quality pathway; considered at Stage 1.
Nene Washes SPA	12km south of Land Parcel D	International (underpinned by Nene Washes SSSI)	Article 4.1 of the EC Birds Directive by regularly supporting, in winter, an internationally important wintering population of Bewick's swan. Article 4.2 by supporting, in winter, nationally important wintering populations of wigeon *Anas penelope*, teal *Anas crecca*, gadwall *Mareca strepera* and shoveler *Anas clypeata*.	Disturbance or displacement of non-breeding/wintering SPA birds using functionally linked land during construction/operation. Predator shadow/functional habitat displacement associated with pylons. Collision risk with the proposed overhead line for wintering/migratory SPA species; HRA identifies potential for LSE to be taken to Appropriate Assessment.

Site Name	Approx. Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
				Construction phase water quality and construction traffic air quality pathways; considered at Stage 1.
Nene Washes SAC	12km south of Land Parcel D	International (underpinned by Nene Washes SSSI)	Moreton's Leam, a large drainage channel running along the southern flank of the Nene Washes contains the highest recorded density of spined loach, an Annex II species and the primary reason for selection, in the UK.	Construction phase water quality pathway (accidental pollution) via hydrological connections to Moreton's Leam (spined loach receptor); considered at Stage 1; HRA screening indicates no LSE (due to nature/scale/location of the Scheme and hydrological context). Construction traffic air quality pathway (deposition/NOx) on the SAC/underpinning SSSI; considered at Stage 1; screened as no LSE at this distance with forecast traffic change.
Orton Pit SAC	19.8km SW of the Solar Development Area	International (underpinned by Orton Pit SSSI)	Annex I habitats that are a primary reason for qualifying the site include hard oligo-mesotrophic waters with benthic vegetation of Chara spp. Annex II species that are a primary reason for qualifying the site include great crested newt.	Not designated for birds or otter and beyond 15km, therefore not considered further.

Site Name	Approx. Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
Barnack Hills and Holes SAC	19.2km SW of the Solar Development Area	International (underpinned by Barnack Hills & Holes SSSI)	Annex I habitats that are a primary reason for qualifying the site include semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (important orchid sites). There are no Annex II species that a primary reason for qualifying the site.	Not designated for birds or otter and beyond 15km, therefore not considered further.

9.6.5. SSSI Impact Risk Zones (IRZs) have been reviewed across the Order Limits. The Solar Development Area falls partially (Parcels A and B) within the IRZ for Deeping Gravel Pits SSSI, located 9km south-west of the Site. Parcel A also falls partially within the IRZ for Cowbit Wash SSSI. One other zone of unknown origin affects land parcel D. The IRZ development descriptions for the Deeping Gravel Pits SSSI do not match the proposals for the Scheme and is therefore unlikely to be of relevance to this application. The Cowbit Wash SSSI affecting parcel A (Centroid Grid Ref: TF24181301), and the unnamed zone affecting sub-parcels D1, D-2 and D-3 (Centroid Grid Ref: TF34991700) does however include the description - Wind and Solar: Solar schemes with a footprint > 0.5ha - and mean that Natural England should be consulted regarding the Scheme's impact on the designated site associated.

9.6.6. Although the Scheme exceeds 0.5 ha and is a solar development, SSSI IRZ consultation is only triggered where the Order Limits intersect a SSSI's IRZ and the listed development sensitivities for that SSSI apply at the proposal's location. The separate non-SSSI IRZ polygon (centroid TF 3499 1700) is an advisory layer indicating potential functional linkage. Any such linkage is assessed proportionately in the **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3), rather than via SSSI IRZ consultation.

9.6.7. The Grid Connection Route falls partially within the IRZs for Surfleet Lows SSSI, The Wash SSSI, and Cowbit Wash SSSI. For the Scheme's development types and locations, these IRZs do not trigger consultation with Natural England. The IRZ overlay is shown on **ES Figure 9-2** (Doc Ref. 6.2).

9.6.8. The Order Limits intersect or lie immediately adjacent to four Local Wildlife Sites: Slys Connection LWS (parcels D 2/D 3), South Holland Main Drain (West) LWS (parcel B 5), and Wheatmere Drain LWS (within the GCR). The highway works south of Parcel D also cross the Lambert Drain to Highstock Drain Connection LWS. **ES Appendix 9-2: Preliminary Ecological Appraisal** (PEA) (Doc Ref. 6.3) identified 23 LWSs within 2km of the Scheme in total. Table 9-7 below details the non-statutory designated sites relevant to the Scheme. These are shown on **ES Figure 9-2** (Doc Ref. 6.2).

Table 9-7: Non-Statutory Designated Sites

Site Name	Approximate Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
Slys Connection LWS	Within Site Boundary Land Parcels D-2 and D-3	County	Canalised drain with rank grassland and ruderal vegetation. Contains diverse aquatic flora and abundance of invertebrates.	Potential for direct habitat loss and/or damage as well as disturbance through noise. Dust deposition, light pollution, leaching of spills and pollutants.
South Holland Main Drain, West LWS	Within Site Boundary Land Parcel B-5	County	Artificial watercourse with rank grassland. It supports an abundance of aquatic vegetation but also contains the INNS Nuttall's waterweed. Two species of dragonfly and water vole are present along the watercourse.	Potential for direct habitat loss and/or damage as well as disturbance through noise. Dust deposition, light pollution, leaching of spills and pollutants.
Wheatmere Drain LWS	Within GCR	County	Canalised drain with rank grassland and linear reedbed. It links with South Holland Main Drain and contained diverse aquatic flora which supports birds and insects.	Potential for direct habitat loss and/or damage as well as disturbance through noise. Dust deposition, light pollution, leaching of spills and pollutants.
Crowland Falls Pit LWS	Approx. 40m south of Land Parcel A-1	County	Two waterbodies supporting a good range of wetland plants, used by anglers.	Disturbance through noise, dust deposition, light pollution, leaching of spills and pollutants.
New River LWS	Approx. 80m to the west and	County	A drain which forms the edge of the River Welland floodplain. Habitats	Disturbance through noise, dust deposition, light pollution,

Site Name	Approximate Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
	north boundaries of A-1 and partially 80m to the north boundary of B-4		along its route include rank grassland, scattered scrub, linear reedbed, native plantation and semi-improved grassland. There are steep south-facing slopes providing niches for a variety of invertebrates.	leaching of spills and pollutants.
River Welland Corridor LWS	Approx. 90m to the northwest corner of Land Parcel A-1	County	Large river surrounded by semi-improved neutral grassland, ponds, coarse vegetation with steep south facing slopes. It contains diverse aquatic and marginal vegetation. Four-spotted moth has been recorded. Also present are grass snake *Natrix helvetica*, common tern and sand martin *Riparia riparia*.	Disturbance through noise, dust deposition, light pollution, leaching of spills and pollutants.
Fred's Pit, Crowland LWS	Approx. 110m southwest of Land Parcel A-1	County	Actively managed rich mosaic of shallow ponds, grassland and woody vegetation. Variety of wetland plants and neutral grassland.	Disturbance through noise, dust deposition, light pollution, leaching of spills and pollutants.
High Bank Gull LWS	200m northwest from Land Parcel A-1	County	A small area of woodland, neutral grassland, and open water. The pond is used for fishing but has aquatic and marginal plants present.	Disturbance through noise, dust deposition, light pollution, leaching of spills and pollutants.

Site Name	Approximate Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
Lambert Drain to Highstock Drain Connection LWS	Within highway works footprint south of parcel D.	County	Steeply banked drain that contained diverse aquatic and bank vegetation. The INNS Nuttall's waterweed is present. Supports an array of invertebrates and birds.	Potential for direct habitat loss and/or damage as well as disturbance through noise. Dust deposition, light pollution, leaching of spills and pollutants.
Crowland Ponds LWS	370m west of Land Parcel A-1	County	3km linear wetland area located between arable land, grassland and River Welland Corridor. Dominated by coarse vegetation with a variety of aquatic plants.	Disturbance through noise, dust deposition, light pollution, leaching of spills and pollutants.
Lambert Drain LWS	390m south of Land Parcel D-6	County	This is 2.9km of the canalised Lambert Drain. Most of the channel is 5m wide, but this reduces to 2m near the county boundary. A good range of wetland plants have been recorded throughout, while the banks support an abundance of black mustard and common reed.	Disturbance through noise, dust deposition, light pollution, leaching of spills and pollutants.
Pinchbeck Marsh LWS	620m west of GCR	Local	Original LWS here is now a large area of arable land between the Vernatt's Drain and the River Welland. Welland bank is open and true grassland while banksides have limited rank vegetation being mostly	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.

Site Name	Approximate Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
			grassland.	
Vernatt's Drain LWS	830m west of GCR	County	Man-made watercourse. Parts of banksides are coarse/weedy vegetation but with substantial stretched of rich grassland flora. Supports good range of fauna including breeding birds.	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.
Coronation Channel LWS	1km directly southwest from GCR	County	50m wide, 4km long watercourse. Mixed diversity of aquatic plants although multiple non-native species are present. Drier areas of bankside are botanically poor although neutral grassland species are present.	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.
Blue Gowt Drain West Marsh Road LWS	1.1km directly west from GCR	County	3-6m wide, 1.1km long section of drain. Dominated in areas by common reed but with areas of open water with a variety of aquatic and riparian plants. Drier banks dominated by coarse grassland and woody vegetation but more species adjacent A16 crossing.	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.
Blue Gowt Drain, North	1.1km north of GCR	County	Approximately 1.1 km long section of drainage channel within the River Glen catchment. The site consists of	None predicted given the distance from the Site and the lack of functional connectivity /

Site Name	Approximate Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
			open water with well-developed marginal and emergent vegetation. The site is of particular ecological importance due to records of ribbon-leaved water-plantain.	habitat linkages.
River Welland in Spalding LWS	1.3km west of GCR	County	3.5km stretch of the River Welland. Not rich in aquatic plants; however, does support mixed aquatic and riparian species. Banksides comprise sparse grassland swards. Variety of tree species present.	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.
Moulton Park & River LWS	1.3km east of GCR	County	Comprises two sections; 9.3ha Moulton Park and 1.6km stretch of 2-3m wide River Moulton. Moulton Park is an area of semi-improved neutral grassland with scattered young and mature trees, planted singly and in groups. Wooded strip on the eastern edge. Multiple native species present on banksides although several non-native species are present. Evidence of herbicide application.	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.
Surfleet Seas End	1.4km north of	County	Adjacent to tidal River Welland	None predicted given the

Site Name	Approximate Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
Saltmarsh LWS	GCR		forming part of the floodplain. Habitats include tidal mudflat, tidal saltmarsh and calcareous grassland. Known to be valuable for birdlife.	distance from the Site and the lack of functional connectivity / habitat linkages.
A16 East Verge South of the River Glen	1.6km west of GCR	County	Linear A16 road verge, characterised by semi-natural grassland alongside the carriageway. Habitats include species-rich neutral and coarse grassland with occasional ruderal and tall-herb communities, together with scattered scrub and ditch features typical of intensively managed fenland landscapes.	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.
South Drove Drain LWS	1.7km west of Land Parcel A-1	County	Major artificial watercourse that flows 14km through south Lincolnshire Fens. Banksides are a variety of unmanaged grassland North of Lucks Bridge. Watercourse supports a diverse variety of aquatic and riparian plants.	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.
Little South Holland Drain LWS	1.8km east of Grid Connection	County	Artificial 9km watercourse flowing through the South Lincolnshire Fens. Diverse aquatic flora mix. Banksides are dominated by coarse and	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.

Site Name	Approximate Distance from Scheme	Ecological Importance	Qualifying Features	Impacts to be Considered
			competitive species.	
Crowland Wash Lake LWS	1.9km directly south from Land Parcel A-1	County	Linear and former Internal Drainage Board drainage site. Two former flooded former drains form area of 1,248ha of open water. Banksides show a variety of species.	None predicted given the distance from the Site and the lack of functional connectivity / habitat linkages.

Ancient woodland, ancient and veteran trees

9.6.9. There are no areas of ancient woodland within a 2km radius of the Site that appear on the Ancient Woodland Inventory, nor identified within the Site during surveys. Further, the **ES Appendix 12-8: Arboricultural Impact Assessment (AIA)** (Doc Ref. 6.3) found that the closest ancient woodland was 11km away.

9.6.10. Ancient/veteran individual trees were identified within or adjacent to the Site during arboricultural surveys specifically, seven veteran and four ancient trees within the Order Limits. See **ES Appendix 12-8: AIA** (Doc Ref. 6.3) for further information. These trees were assessed during the arboricultural and ecological surveys and were not considered to provide bat roost potential. In the absence of confirmed roost features or other notable protected species interest, the trees are considered to be of **Local importance**.

Habitats of Principal Importance

9.6.11. HPI listed on the priority habitats inventory (MAGIC[33]) include approximately 55 areas of coastal and floodplain grazing marsh, 19 areas of deciduous woodland and two traditional orchards within 2km of the Site. These are largely scattered across the wider area, though there are areas of: coastal and floodplain grazing marsh centred on the land between parcels C and D, partially within the Overhead Inter-Array Connection, and the GCR near Wool Hall Farm; and deciduous woodland within the most northerly section of the GCR.

9.6.12. Coastal and floodplain grazing marsh is the most frequent HPI within 2km of the Site and areas centred on the land between parcels C and D, partially within the Inter-Array Connections. However, surveys noted that habitats within these areas were not indicative of coastal or floodplain grazing marsh, nor contained: a mosaic of wet features (shallow pools/scrapes), varied sward structure with tussocky and damp areas, high ditch botanical quality, or sustained water levels through the bird breeding season.

9.6.13. During surveys of the Site, the following HPI were identified: species-rich hedgerows and arable field margins, these are discussed below under Habitats.

---

[33] MAGIC Map Application. (2026). *Multi-Agency Geographic Information for the Countryside.* Available at: https://magic.defra.gov.uk (Accessed 4 March 2026).

Habitats

9.6.14. The habitats present within the Site are summarised below. These are described in full in **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3) and shown in **ES Figure 9-3 UKHab map** (Doc Ref. 6.2).

c1 – Arable and horticulture

9.6.15. Across the Scheme the prevailing land use is arable farmland, including ploughed fields, cereal crops (wheat and barley) and other non-cereal crops (e.g., beans, onions, silage/haylage). Fields are large and open, separated by a dense network of drainage ditches and occasional hedgerows or lines of trees, typical of the Fenland landscape. Arable land is assessed as being of **Site importance** and has been **scoped out** of further assessment. This reflects its very wide extent, low botanical diversity and limited ecological function in isolation, with value primarily arising at field edges and interfaces captured under species assessments.

c1a – Arable field margins

9.6.16. Field margins and headlands with common arable forbs occur along many field edges, providing structural variation and seasonal nectar resources at the arable interface. Arable margins are assessed as being of **Site importance** and have been **scoped out** of further assessment. The assignment reflects their small, fragmented extent and generally species poor nature, with their ecological role addressed through species/group assessments.

g3 – Neutral grassland

9.6.17. Neutral grassland occurs as small fields, verges and headlands, generally species poor but locally more diverse where grazing or mowing is light, with tussocky patches and damp reflecting ditch proximity. Neutral grassland is assessed as being of **Site importance** and has been **scoped out** of further assessment. This status reflects the limited extent, variable condition and common occurrence of this habitat across the Scheme.

g4 – Modified grassland

9.6.18. Modified grassland is present as regularly mown road verges, grazed field corners and small paddocks; sward height and diversity vary with management intensity, but these areas are generally species poor within an intensively farmed context. Modified grassland is assessed as being of **Site importance** and has been **scoped out** of further assessment; it is widespread and of low

ecological quality and provides limited contribution to habitat networks beyond local foraging.

h3 – Dense scrub

9.6.19. Scrub occurs in scattered patches along field boundaries, ditch edges and beneath pylons, comprising bramble dominated stands, mixed scrub mosaics and willow scrub where damp ground persists. Defunct and remnant hedgerows and boundary lines with hawthorn dominance provide intermittent woody cover and shelter along some field edges. Scrub is assessed as being of **Site importance** and has been **scoped out** of further assessment, except where specific patches interface with protected species features (e.g., nesting birds, reptiles). This reflects its small, discrete parcels and commonness within the local landscape, with protected species value addressed elsewhere.

h2a - Native hedgerows

9.6.20. Native hedgerows of varying quality occur along ditches and boundaries; many are species poor, with local sections of species rich hedgerow offering greater structure and connectivity. Hedgerows, including species rich sections, are assessed as being of Local importance and are scoped in for further assessment due to their role in bat commuting/foraging, breeding bird habitat and ecological connectivity. The Local assignment reflects their function as linear corridors and, for species rich stretches, their status as a Habitat of Principal Importance.

9.6.21. Important hedgerows under the Hedgerow Regulations[34] were identified in Land Parcel D. These are shown on **Hedgerow Regulations and Tree Preservation Order Plans** (Doc Ref. 2.12).

w1g – Other broadleaf woodland

9.6.22. Lines of deciduous trees and small plantation/other broadleaved woodland blocks are scattered across the Scheme, often associated with farmsteads bordering the Order Limits, ditch corridors and boundary features; they provide roosting/nesting opportunities and enhance linear connectivity. Lines of trees and broadleaved woodland are assessed as being of **Local importance** and are **scoped in** for further assessment, including their function for bats and

[34] The Hedgerows Regulations 1997 (SI 1997/1160), made 24 March 1997; in force 1 June 1997. Available at: https://www.legislation.gov.uk/uksi/1997/1160/contents Accessed 26/02/2026

birds. This reflects their structural value, potential for protected species use and contribution to habitat connectivity despite modest extent.

w2c – Other coniferous woodland

9.6.23. Small parcels of other coniferous woodland are present, typically as plantations away from watercourses. Conifer woodland is assessed as being of **Site importance** and has been **scoped out** of further assessment. The rationale is limited ecological diversity, small area and lower connectivity value compared to native woodland features.

w1f – Lowland mixed deciduous woodland

9.6.24. Small blocks of lowland mixed deciduous woodland occur within the Scheme, typically as agricultural plantation woodlands of uniform age with frequent field maple, oak, ash and Norway maple; one block is predominantly white willow with occasional ash, oak, sycamore and hazel coppice, and includes standing deadwood. These woodlands provide nesting opportunities, shelter and foraging for birds and bats and contribute to linear connectivity where associated with hedgerows and drains. Lowland mixed deciduous woodland is assessed as being of **Local importance** and is **scoped in** for further assessment, reflecting its status as a Habitat of Principal Importance and its role in supporting protected species and ecological networks

f2d – Aquatic marginal vegetation

9.6.25. Marginal/emergent vegetation occurs along larger drains and some ditches, notably extensive common reed stands along South Holland Main Drain within parcel D; similar vegetation fringes smaller ditches at a finer scale. Aquatic marginal vegetation is assessed as being of **Local importance** and is **scoped in** for further assessment given its role for water vole, amphibians, invertebrates and foraging bats/birds. The Local assignment reflects high functional value at water edges and potential to support protected species.

r1g – Other standing water

9.6.26. Drainage ditches are ubiquitous, ranging from permanently wet IDB drains to seasonally wet field ditches; they support aquatic plants and provide movement corridors and habitat for water vole, otter, amphibians and foraging bats. Ditches are assessed as being of **Local importance** and are **scoped in** for further assessment. This reflects their extensive linear connectivity and multi-species ecological function.

r2b – Other rivers and streams

9.6.27. Large, engineered watercourses (e.g., South Holland Main Drain) form prominent linear features with managed banks and hydrology, contributing to catchment scale connectivity and wetland function. These main drains are assessed as being of **Local importance** (potentially higher where protected species are present) and are **scoped in** for further assessment. The Local assignment reflects their scale, hydrological role and potential to support notable fauna.

u1b/e – Developed land, sealed surface/built linear feature

9.6.28. Roads, pavements and other sealed/developed surfaces occur along transport corridors, providing negligible biodiversity value within the Scheme. Developed land/sealed surfaces are assessed as being of **Negligible importance** and have been **scoped out** of further assessment. This reflects their very low ecological value.

u1b5 – Buildings

9.6.29. Farm and commercial buildings are scattered across the landscape, typically outside field interiors. These buildings are outwith and adjacent to the Order Limits. While the habitat value is low, some structures may offer potential bat or barn owl roost/nest sites; which if present have the potential for indirect impacts from works within the Order Limits. Buildings are assessed as being of **Site importance** as habitats and have been **scoped out** at habitat level, but retained within protected species assessments. The importance reflects low habitat value in isolation, with species use addressed under relevant species sections below.

u1c – Artificial unvegetated unsealed surface

9.6.30. Farm tracks and bare-earth access routes are present across the arable matrix, contributing little in terms of botanical diversity. These surfaces are assessed as being of **Site importance** and have been **scoped out** of further assessment. The assignment reflects minimal habitat structure and function beyond local access.

Protected and Notable Species

Badger

9.6.31. Status and relevance: Badgers and their setts are protected under the Protection of Badgers Act 1992[35]; Natural England's standing advice is a material planning consideration for assessing development effects and proportional survey needs[36].

9.6.32. Zone of influence and data sources: Baseline information comprises badger field signs recorded during the Preliminary Ecological Appraisal (PEA) walkovers across the SDAs, GCR and Inter-Array Connections, refer to **ES Appendix 9-8 Badger Report (Confidential)** (Doc Ref. 6.3).

9.6.33. Baseline distribution and Site use: Any badger activity identified across the Scheme is provided in **ES Appendix 9-8 Badger Report (Confidential)** (Doc Ref. 6.3).

9.6.34. Evaluation of importance: The badger resource is assessed as being of **Sitel importance**. This reflects a widespread, legally protected species with a distribution and level of activity typical for the intensive arable context. Refer to **ES Appendix 9-8 Badger Report (Confidential)** (Doc Ref. 6.3) for more details.

9.6.35. Confidence and material limitations: Earlier constraints reported for parts of the GCR/InterArray Connections (desk study precision to 1km squares) have been addressed through the PEA survey coverage; any remaining limitations relate to seasonal detectability and the need to keep precise locations confidential. Ecological survey data are typically valid for 12–18 months; update checks will be undertaken pre-construction in accordance with the **OCEMP** (Doc Ref. 7.10).

9.6.36. Features taken forward to assessment:

- Considering the presence of badger in the general area, field signs identified during surveys, and likely use of ditch and hedge networks for commuting and foraging, the Site is considered to be of **Local importance** for badgers.

[35] UK Government (1992). *Protection of Badgers Act 1992*. London: HMSO. Available at: https://www.legislation.gov.uk/ukpga/1992/51/contents (Accessed 4 March 2026).
[36] Natural England (2022) *Badgers: advice for making planning decisions*. GOV.UK. Published 14 January 2022, last updated 7 April 2025. Available at: https://www.gov.uk/guidance/badgers-advice-for-making-planning-decisions [Accessed: 13/02/2026]

Refer to **ES Appendix 9-8 Badger Report (Confidential)** (Doc Ref. 6.3) for more details.

Bats

9.6.37. Status and relevance: All British bats and their roosts are protected under the Wildlife and Countryside Act 1981[37] (as amended) and the Conservation of Habitats and Species Regulations 2017[38] (as amended). Several species recorded on Site are also Species of Principal Importance under Section 41 of the NERC Act[39]. Survey design and interpretation followed Bat Conservation Trust (BCT) Good Practice Guidelines[40] (4th edition).

9.6.38. Zone of influence and data sources: The bat baseline draws on a desk study and field surveys across the SDAs (land parcels A–D). Desk data (biological records) were reviewed within 2km of the Site. Field datasets comprise: nighttime activity surveys (walked transects and static detectors) across the SDA (April–October 2024), and Ground Level Tree Assessments (GLTA) for roost features within the SDAs, the GCR and Inter-Array Connections during August 2025.

9.6.39. Zones of influence for bats reflect species specific sustenance ranges; in particular, rarer woodland edge/commuting species can use habitats at several kilometres' scale, reinforcing the importance of hedgerow and drain corridors as functional networks.

9.6.40. Roosting resource: Ground Level Tree Assessments (GLTA) were undertaken in August 2025 across all trees identified during the PEA within the SDAs, the GCR and the Inter-Array Connections, following current bat survey guidance. Trees were assessed from ground level and classified as PRF-I (features suitable for individual or very small numbers of bats), PRF-M (features suitable for multiple bats/potential maternity use), or FAR (Further Assessment Required) where visibility or access prevented confident classification. A total of 9 PRF-I, 7 PRK-M and 15 FAR trees were identified across the Scheme. Where PRF/ FAR trees are impacted by the works, aerial (climbing) inspections

[37] UK Government, 1981. *Wildlife and Countryside Act 1981 (as amended).* Available at: https://www.legislation.gov.uk/ukpga/1981/69 (Accessed 5 March 2026).
[38] UK Government, 2017. *The Conservation of Habitats and Species Regulations 2017 (as amended), SI 2017/1012.* Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents (Accessed 5 March 2026).
[39] UK Government, 2006. *Natural Environment and Rural Communities Act 2006 – Section 41: Habitats and Species of Principal Importance in England.* Available at: https://www.legislation.gov.uk/ukpga/2006/16/section/41 (Accessed 5 March 2026).
[40] Bat Conservation Trust, 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th ed.).* London: Bat Conservation Trust.

would be required, including repeat winter checks for hibernation features; where climbing is not feasible, targeted emergence/re-entry surveys would be undertaken. If proposals change and any PRF/FAR trees are affected by works (e.g., pylons, access, haul roads), further survey and, if necessary, licensing would be required to address any roost impacts pre-construction, as set out within the **OCEMP** (Doc Ref. 7.10).

9.6.41. Foraging and commuting baseline: Activity surveys across the SDA recorded an 11 species assemblage: common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, brown long-eared bat, Daubenton's bat, Natterer's bat, whiskered bat, noctule, serotine, Leisler's bat and barbastelle (an Annex II[41] species) which is considered rare in the east of England (Bat mitigation guidelines[42]). Use was concentrated along watercourses, hedgerows, tree lines and woodland edges. Seasonal patterns included high autumn activity (e.g., pipistrelles and barbastelle in September), and summer peaks for aerial and riparian foragers (e.g., noctule, Daubenton's). On the basis of assemblage diversity and habitat function, the SDA bat resource is assessed in the annexed reporting as important at the **National level**. As the habitats within the GCR/IAA are largely contiguous and the same, the whole Site is considered to be important at the National level in this regard. **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3) corroborates the high commuting/foraging value of linear features (ditches, drains, hedgerows, lines of trees) across the wider Scheme.

9.6.42. Evaluation of importance:

- Bat assemblage using the SDA for foraging and commuting was considered to be of **National importance**, reflecting the diversity (11 species including rarer taxa[43]), breadth of habitat use, and strong functional connectivity along hedgerows and drainage features;
- Tree roost feature resource within the SDAs: due to lack of climb and inspect surveys, on a precautionary basis, these are assessed as **County importance** at baseline, rising where PRF-M features are confirmed by aerial/emergence survey. The final GCR and Inter-Array Connection

[41] European Commission 1992, *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).* Annex II: Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation. Available at: https://eur-lex.europa.eu/legal-content/ (Accessed 5 March 2026).
[42] Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th ed.).* London: Bat Conservation Trust.
[43] Mathews, F. and Harrower, C. (2020) *IUCN-compliant Red List for Britain's terrestrial mammals*. The Mammal Society, London.

routing chosen at detailed design may add to the overall roost resource once trees along the route are assessed;

- All trees to be impacted directly or indirectly by construction activities will be re-assessed to determine their current roost status, any trees identified as having suitability will then be climbed and inspected/emergence surveys carried out to determine roost presence. Subject to climb and inspect surveys, if no or few roosts are found to be present, this would be bought down to Local or Site level; and,
- Building roosts: **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3) notes historic farm buildings with potential, but no confirmed building roosts are reported. Buildings are therefore considered at habitat level only, with species use to be addressed through targeted survey if works could affect suitable structures.

9.6.43. Confidence and material limitations: The dataset is subject to the following constraints:

- Surveys covered the SDA only (the GCR and Inter-Array Connections are excluded for reasons provided in Section 9.5). However, for the purpose of this assessment, the precautionary principle44 has been applied and the identified National-level importance is assumed to apply across the whole Site, ensuring the assessment remains robust and appropriately conservative.
- Some static deployments experienced equipment failure/data corruption, but the dataset is judged sufficiently robust for baseline evaluation at Scheme level.
- Proportionate, location specific bat surveys along the refined GCR and Inter-Array Connection alignment will be reviewed at detailed design where residual risk remains. Refer to section 9.5 above for more details.

9.6.44. Features taken forward to assessment:

- Bat assemblage (foraging and commuting) within the Scheme (**National importance**);

[44] European Commission 2000, *Communication from the Commission on the Precautionary Principle.* Brussels: European Commission. Available at: https://eur-lex.europa.eu/legal-content/ (Accessed 5 March 2026).

- Hedgerow, tree-line and drainage corridor network as bat commuting/foraging habitat (**Local importance**); and,
- Tree roost feature resource (PRF-I/PRF-M/FAR) within Scheme (**County importance**, subject to confirmation by aerial/emergence survey).

Breeding Birds

9.6.45. Status and relevance: Breeding birds are protected under the Wildlife and Countryside Act 1981[45] (as amended), with many recorded species also listed as BoCC and Species of Principal Importance (S41[46]). The Scheme's breeding assemblage is associated with open arable, hedgerows, tree lines, small woodland parcels and ditch margins typical of the Fenland landscape.

9.6.46. Zone of influence and data sources: The baseline draws on desk study for notable birds within 2km, National Grid Electricity Transmission (NGET) survey data (available at time of writing), Lincolnshire Wildlife Trust (LWT) data provided in November 2025, and data from transect surveys across the SDA, with coverage extended, where visible and accessible, up to approximately 100m beyond the SDA boundary (including parts of the IAC). Habitats within the GCR are similar in character to those in the SDA and IAC, while the operational land-take in the GCR will be limited to pylon footings, Cable Sealing End Compounds and operational phase maintenance tracks. The effects of habitat loss in this element of the Scheme can be predicted to be non-significant without the need for additional breeding bird surveys, so on the basis of a proportional approach, it was discussed and agreed with Natural England, that breeding bird surveys were focused on the SDA. Six pre-defined routes were surveyed on six visits between March and July 2023, recording species and breeding behaviours using standard BTO codes[47]; survey details and figures are provided in the **ES Appendix 9-3 Breeding Bird Survey Report** (Doc Ref. 6.3). A targeted summer VP programme (July–September 2025) focused on post breeding movements of common crane and focal species along the GCR, with details provided in **ES Appendix 9-13: Summer 2025 Vantage Point Survey Report** (Doc Ref. 6.3). Site-scale habitat context is taken

[45] UK Government, 1981. *Wildlife and Countryside Act 1981 (as amended).* Available at: https://www.legislation.gov.uk/ukpga/1981/69 (Accessed 5 March 2026).
[46] UK Government, 2006. *Natural Environment and Rural Communities Act 2006 – Section 41: Habitats and Species of Principal Importance in England.* Available at: https://www.legislation.gov.uk/ukpga/2006/16/section/41 (Accessed 5 March 2026).
[47] British Trust for Ornithology 2023, *Breeding Evidence Codes.* Available at: https://www.bto.org/our-science/projects/breeding-bird-survey/methodology/breeding-evidence (Accessed 5 March 2026).

from the **ES Appendix 9-2 Preliminary Ecological Appraisal Report** (Doc Ref. 6.3).

9.6.47. Baseline distribution and Site use: A total of 71 species were recorded during the 2023 breeding season, including 42 notable species: five Schedule 1[48] breeding bird species, 18 BoCC[49] Red-list species, 22 BoCC Amber-list species and 15 Species of Principal Importance[50]. Of the notable species, nine were recorded as possible breeders, 13 as probable breeders and one as confirmed breeder (mallard). The assemblage is typical of the habitat mosaic, with farmland specialists such as skylark, yellow wagtail, corn bunting, grey partridge and yellowhammer, alongside hedgerow/scrub and ditch-associated species including dunnock, linnet, reed bunting and song thrush. Targeted checks and transect data also recorded breeding activity for notable raptors (e.g., confirmed and potential red kite nests; kestrel probable; peregrine possible). Nesting and foraging activity was focussed along hedgerows, tree lines, scrub edges, ditch margins and around small woodland parcels and buildings; water features provided additional resources in localised areas.

9.6.48. Skylark (BoCC Red / S41) breed in open arable fields across the SDA and were recorded during the 2023 breeding bird surveys. Territories are concentrated in larger, unbroken field parcels with limited boundary features. The species relies on open, low swards and uninterrupted sightlines for nesting and predator avoidance.

9.6.49. A list of notable bird species that were recorded as possible, probable or confirmed breeders is contained in Table 9-8.

Table 9-8: Notable Bird Species recorded as breeding during the breeding bird surveys

Species	Sch 1 Species	Qualifying feature of IIWS	BoCC*	SPI / LBAP**	Peak Count
Corn bunting	No	No	Red	Yes	13

[48] UK Government 1981, *Wildlife and Countryside Act 1981 (as amended), Schedule 1: Birds which are protected by special penalties.* Available at: https://www.legislation.gov.uk/ukpga/1981/69/schedule/1 (Accessed 5 March 2026).
[49] British Trust for Ornithology, Royal Society for the Protection of Birds and Joint Nature Conservation Committee 2021. *Birds of Conservation Concern 5: the population status of birds in the United Kingdom, Channel Islands and Isle of Man.* British Birds, 114, pp. 723–747.
[50] UK Government 2006, *Natural Environment and Rural Communities Act 2006, Section 41: Habitats and Species of Principal Importance in England.* Available at: https://www.legislation.gov.uk/ukpga/2006/16/section/41 (Accessed 5 March 2026).

Species	Sch 1 Species	Qualifying feature of IIWS	BoCC*	SPI / LBAP**	Peak Count
Cuckoo	No	No	Red	Yes	2
Dunnock	No	No	Amber	Yes	10
Greenfinch	No	No	Red	No	2
Hobby	Yes	No	n/a	No	1
Kestrel	No	No	Amber	No	1
Lapwing	No	No	Red	Yes	4
Linnet	No	No	Red	Yes	3
Mallard	No	No	Amber	No	3
Mistle thrush	No	No	Red	No	1
Moorhen	No	No	Amber	No	4
Reed bunting	No	No	Amber	Yes	17
Sedge warbler	No	No	Amber	No	32
Skylark	No	No	Red	Yes	29
Song thrush	No	No	Amber	Yes	4
Sparrowhawk	No	No	Amber	No	1
Spotted flycatcher	No	No	Red	Yes	1
Turtle dove	No	No	Red	Yes	1
Whitethroat	No	No	Amber	No	13
Woodpigeon	No	No	Amber	No	7
Wren	No	No	Amber	No	9
Yellow wagtail	No	No	Red	No	12
Yellowhammer	No	No	Red	Yes	3
* Birds of Conservation Concern ** Local Biodiversity Action Plan					

9.6.50. No common cranes were observed during the summer VP programme; flocks of up to 300 golden plover were recorded in the Collision Risk Zone (CRZ) during September only. Occasional mallard and snipe were the only other focal species recorded in the CRZ during the summer, and most activity remained below the height of the proposed 400kV overhead line lower cables.

9.6.51. Designated sites and functional linkages: Breeding features of nearby internationally designated sites (e.g., Nene Washes SPA/Ramsar breeding assemblage) were noted at low numbers within the SDA and in limited suitable habitat; the SDA is not considered functionally linked to those breeding features. Any potential pathways are addressed in **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3) to avoid duplication here.

9.6.52. Evaluation of importance: Based on assemblage composition (including BoCC/S41 species), abundance typical of the landscape, and the role of hedgerows, tree lines and ditch networks in providing nesting/foraging structure and connectivity, the breeding bird assemblage within the SDA is assessed as of **Local importance** and is taken forward to assessment. Breeding raptors recorded (e.g., kestrel; peregrine possible) are considered within the assemblage and carried forward due to legal protection and sensitivity at nests.

9.6.53. Confidence and material limitations: No material disturbances or physical constraints were recorded that would limit interpretation; any access/seasonal influences noted in **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3) have been taken into account.

9.6.54. Features taken forward to assessment:

- Breeding bird assemblage within the SDA (Local importance), with focus on farmland specialists (e.g., skylark, yellow wagtail, corn bunting, grey partridge, yellowhammer) and hedgerow/scrub.

Wintering Birds

9.6.55. Status and relevance: Wintering birds are protected under the Wildlife and Countryside Act 1981 (as amended), with many species of conservation concern listed on the Birds of Conservation Concern (BoCC) Red and Amber lists and as Species of Principal Importance (S41). The Scheme's wintering resource is associated with open arable land, floodplain grazing marsh, ditches and main drains typical of the Fenland landscape.

9.6.56. Zone of influence and data sources: Baseline survey information comprises desk study data NGET survey data (available at time of writing), LWT data provided in November 2025, and monthly transect surveys across the wider

SDA and IAC areas in 2022–2023 (six routed) and targeted transects in the SDA 2023–2024 (five routes), and monthly vantage point (VP) watches across the GCR in 2023–2024 and along the GCR and IAC in 2024-2025. Surveys recorded species and flock activity using standard methods; detailed dates, weather and personnel are provided in the ES appendices. Due to the limited permanent land-take for the GCR, and the comparability of habitats to those surveyed in the SDA, as discussed with Natural England, it was not necessary or proportional to undertake transect surveys along the GCR as all potential receptors for significant effects on birds would be captured during the VP surveys. Similarly, given the small land-take and temporary nature of works within the IAC, the data from initial transect surveys is considered appropriate to inform assessment of effects in these areas.

9.6.57. Baseline distribution and Site use: Within the SDA, the wintering assemblage is typical of the fenland mosaic, with farmland passerines, gulls, waders and wildfowl using arable fields, ditch margins and flooded ground. The highest concentrations were recorded on flooded fields to the east of the River Welland and along watercourses on the eastern side of the Site. Across the 2023–2024 SDA transects, notable species included skylark, linnet, lapwing, yellowhammer, reed bunting, fieldfare and redwing, together with low numbers of wintering wildfowl and waders in suitable areas. The 2022–2023 SDA transects similarly recorded a broad suite of common and notable wintering species, with ad hoc stops used to enumerate flocks and minimise double counting.

9.6.58. A list of notable bird species that were recorded during the winter surveys are listed in Table 9-9 below.

Table 9-9: Notable Bird Species Recorded during the Winter Bird Surveys

Species	BOCC	Qualifying feature of IIWS	SPI / LBAP	Peak Count
Barn owl	n/a	No	Yes	2
Black-headed gull	Amber	No	No	269
Common gull	Amber	No	No	120
Corn bunting	Red	No	Yes	78
Crane	Amber	No	No	4
Dunlin	Red	No	Yes	9
Dunnock	Amber	No	Yes	4

Species	BOCC	Qualifying feature of IIWS	SPI / LBAP	Peak Count
Fieldfare	Red	No	No	400
Gadwall	Amber	Yes	No	45
Great black-backed gull	Amber	No	No	1
Greenfinch	Red	No	No	20
Grey partridge	Red	No	Yes	4
Grey wagtail	Amber	No	No	1
Greylag goose	Amber	No	No	24
Herring gull	Red	No	Yes	40
House sparrow	Red	No	Yes	19
Kestrel	Amber	No	No	6
Knot	Amber	No	No	1
Lapwing	Red	No	Yes	500
Lesser black-backed gull	Amber	No	No	37
Lesser redpoll	Red	No	Yes	4
Linnet	Red	No	Yes	430
Mallard	Amber	No	No	160
Marsh harrier	Amber	No	No	1
Meadow pipit	Amber	No	No	28
Mistle thrush	Red	No	No	1
Moorhen	Amber	No	No	5
Oystercatcher	Amber	No	No	2
Pink-footed goose	Amber	No	No	400
Pintail	Amber	Yes	No	150
Redshank	Amber	No	Yes	8
Redwing	Amber	No	No	60

Species	BOCC	Qualifying feature of IIWS	SPI / LBAP	Peak Count
Reed bunting	Amber	No	Yes	160
Rook	Amber	No	No	266
Shelduck	Amber	No	No	2
Short-eared owl	Amber	No	No	1
Skylark	Red	No	Yes	70
Snipe	Amber	No	Yes	26
Song thrush	Amber	No	Yes	10
Sparrowhawk	Amber	No	No	2
Starling	Red	No	Yes	1500
Stock dove	Amber	No	No	26
Teal	Amber	Yes	No	300
Wheatear	Amber	No	No	1
Whooper swan	Amber	No	No	250
Wigeon	Amber	Yes	No	800
Woodcock	Red	No	No	4
Woodpigeon	Amber	No	No	1254
Wren	Amber	No	No	6
Yellowhammer	Red	No	Yes	30

9.6.59. Along the GCR, winter VP watches recorded 37 species including the Primary Focal Species suite, with activity concentrated over agricultural land and along drains. Flight heights were tracked in bands; most observations were below 25 m. Records in the CRZ (25–50m) were limited, notably mallard and snipe on isolated occasions, with golden plover flocks also entering the CRZ in September at some VPs.

9.6.60. Common crane were recorded at the southern end of the GCR during the wider VP programme, but all flights were below the collision risk height; the targeted summer VP programme did not record crane within the CRZ. Mallard and snipe

were the only focal species recorded in the CRZ during summer, and most activity remained below the lower cables.

9.6.61. Primary Focal Species recorded flying within the CRZ of GCR and the surrounding area (excluding those recorded in the IAC) during VP surveys are shown in Table 9-10 below.

Table 9-10: Primary Focal Species and Flight Duration (Birds x Seconds) within the CRZ

Species	Flight Duration (bird-seconds)	
	Winter 2023-2024*	Winter 2024-2025**
Golden Plover	817,755	395,475
Dunlin	Nil	135
Lapwing	Nil	115,950
Mallard	Nil	3,000
Mute Swan	480	Nil
Pink-footed Goose	Nil	32,670
Red Kite	390	75
Ruff	Nil	135
Shelduck	Nil	45
Snipe	Nil	Nil
Teal	Nil	Nil
Whooper Swan	3,700	1,530

* Within the wider area considered for Grid Connection options (see **ES Appendix 9-6: GCR Wintering Bird Survey Report 2023-2024** (Doc Ref. 6.3): Figure 1)

** Within GCR

9.6.62. The results of collision risk analysis are presented in Table 9-11, which shows the predicted change in mortality rate as a result of collision risk in relation to species associated with The Wash and Nene Washes SPA and Ramsar sites (including comparison to the latest BTO WeBS population counts). This indicates that only golden plover has a potentially appreciable (>1%) change in mortality rate.

Table 9-11: Notable Bird Species Recorded during the Winter Bird Surveys

Species	Total Bird Transits for All	Total predicted per collisions	The Wash % Ramsar	The Wash SPA % change mortality	The Wash WeBS % change	Nene Washes % Ramsar	Nene Washes SPA % change	Nene Washes WeBS % change
Red Kite	1	0.035	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Lapwing	1150	12.00	0.09%	0.00%	0.14%	0.00%	0.00%	0.39%
Common Gull	23	0.124	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pink-footed Goose	259	0.529	0.01%	0.04%	0.02%	0.00%	0.00%	0.00%
Black-headed Gull	110	0.505	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
Whooper Swan	18	0.127	0.00%	0.00%	0.14%	0.79%	0.00%	0.03%
Golden Plover	1485	13.51	0.23%	0.00%	0.21%	1.70%	0.00%	0.83%
Mallard	50	0.516	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Shelduck	0	0.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Snipe	0	0.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dunlin	9	0.040	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Teal	0	0.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Swan sp.	4	0.028	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Species	Total Bird Transits for All	Total predicted collisions per	The Wash % Ramsar	The Wash SPA % change mortality	The Wash WeBS % change	Nene Washes % Ramsar	Nene Washes SPA % change	Nene Washes WeBS % change
Ruff	0	0.000	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Waterfowl Assemblage	3108	34.62	0.05 %	0.06 %	0.03 %	0.00 %	0.00 %	0.32 %

9.6.63. Designated sites and functional linkages: Two internationally important sites for birds lie within 15km of the Scheme: the Nene Washes (SPA/Ramsar) and The Wash (SPA/Ramsar). Survey and desk study results indicate that wintering species associated with these designations may occur within the wider landscape; however, use within the SDA was at low numbers and the extent of suitable habitat was limited. Four areas of potential functionally linked land were identified: adjacent to the River Welland, west of Parcel A; Fleet Drain to the east of Parcel D; land identified as a SSSI impact risk zone north of Parcel D; and land west of Delgate Bank to the west of the GCR. This is addressed proportionately in **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3) to avoid duplication here.

9.6.64. Evaluation of importance: SDA wintering bird assemblage is considered to be of **Local importance**, reflecting a typical fenland assemblage using arable fields, ditch margins and flooded ground, with notable species present but not meeting county thresholds. The GCR wintering birds and movement corridors are considered to be of **Local importance**, reflecting regular use of the corridor by common and notable species, generally at low flight heights and limited records within the CRZ.

9.6.65. Confidence and material limitations: For the GCR, access was largely restricted to PRoW/highway but the datasets are judged proportionate and sufficient for baseline evaluation at Scheme level.

9.6.66. Features taken forward to assessment:

- SDA wintering bird assemblage (**Local importance**), focusing on flooded fields east of the River Welland, watercourse margins and hedgerow/scrub

interfaces used by farmland passerines, gulls, waders and winter thrushes; and,

- GCR wintering birds and flight activity (**Local importance**), including movement corridors along main drains and open arable land, with collision risk appraisal focused on species recorded within the CRZ.

Great Crested Newt

9.6.67. Status and relevance: GCN is protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Survey design and interpretation followed standard HSI and eDNA approaches and Natural England standing advice[51].

9.6.68. Zone of influence and data sources: The GCN baseline considers waterbodies within and up to 500m of the Scheme, reflecting typical newt dispersal distances. Baseline data comprised HSI assessments and environmental DNA (eDNA) sampling which was undertaken between May–June 2025, along with Site context information presented within **ES Appendix 9-2 Preliminary Ecological Appraisal** (Doc ref. 6.3).

9.6.69. Baseline distribution and Site use: The Scheme lies in a fenland landscape dominated by arable fields and a dense network of drainage ditches. Four ponds/ditches were identified within the Site and a further 31 waterbodies up to 500m from the boundary. HSI surveys were used to categorise pond suitability (poor to excellent), and eDNA sampling was undertaken at accessible waterbodies following Natural England/Biggs *et al*[52]. protocols. All waterbodies tested returned negative eDNA results, indicating GCN were absent at the time of sampling. Where ponds were dry or access was restricted, HSI assessments were completed from available viewpoints; eDNA was not undertaken where unsafe or impracticable. Coverage was high (approximately 80% of identified ponds surveyed), and **ES Appendix 9-9: Great Crested Newt Survey Report** (Doc Ref. 6.3) concludes likely absence of GCN within the Site during aquatic or terrestrial phases based on the negative eDNA and intervening pond coverage between un-surveyed locations and the Site. **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3) corroborates

[51] Natural England (2022) Great crested newts: advice for making planning decisions. GOV.UK. Published 14 January 2022, last updated 7 April 2025. Available at: https://www.gov.uk/guidance/great-crested-newts-advice-for-making-planning-decisions (Accessed: 13/02/2026).
[52] Biggs, J. et al. (2014) 'Using eDNA to develop a national citizen science-based monitoring programme for the great crested newt (*Triturus cristatus*)', *Biological Conservation*, 183, pp. 19–28.

low suitability for GCN across much of the study area, with ditch networks present with few discrete ponds.

9.6.70. Designated sites and functional linkages: There are no designated sites within the immediate study area relevant to GCN breeding/terrestrial use; functional linkage to nearby designated wetlands are unlikely given the habitat context and negative eDNA results. There were however 45 records of GCN returned from the desk study between 2015 to 2025 however, these records are confirmed down to a six-figure grid reference meaning they cover an area of 100 m x 100 m, which is equivalent to 10,000 square meters.

9.6.71. Evaluation of importance: Based on habitat context (few ponds, intensive arable), HSI outcomes, and negative eDNA across accessible waterbodies, the GCN receptor is assessed as of **Negligible Importance** and, on current evidence, is **scoped out of further assessment** for likely significant effects. Any residual legal compliance requirements (e.g., precautionary working near suitable terrestrial refuges) are secured through the **OCEMP** (Doc Ref. 7.10)[51].

9.6.72. Confidence and material limitations: The dataset is subject to typical constraints: These constraints were documented and considered in interpretation; given the high proportion of ponds surveyed, negative eDNA results and intervening pond coverage, confidence in likely absence across the Site is considered high.

9.6.73. Features taken forward to assessment: Great crested newt have been **scoped out** on the basis of negative eDNA and low habitat suitability; no Important Ecological Features are carried forward for GCN.

Reptiles

9.6.74. Status and relevance: Common reptiles (grass snake, common lizard, slow worm, adder) are protected under the Wildlife and Countryside Act 1981 (as amended). Natural England's standing advice sets out proportional survey requirements where suitable habitat is present[53].

9.6.75. Zone of influence and data sources: The baseline considers suitable edge habitats (ditch banks, grassland verges, arable margins, hedgerow bases, scrub piles, rubble/deadwood) within the SDAs, Inter-Array Connections and GCR.

[53] Natural England (2022) *Reptiles: advice for making planning decisions*. GOV.UK. Published 14 January 2022, last updated 7 April 2025. Available at: https://www.gov.uk/guidance/reptiles-advice-for-making-planning-decisions (Accessed: *26/01/2026*).

Walkover and desk study information is presented within **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3) (records within 2km), with recommendations for proportionate, method led mitigation where works interface with potential refuges.

9.6.76. Baseline distribution and Site use: The Scheme lies within intensively managed arable land with a dense ditch network. **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3) recorded three grass snake historical records in the wider area (2006–2011), including one along the River Welland adjacent to Sub-parcel A1; rough grass margins, hedgerows, ditches and small woodland patches provide potential basking, foraging and shelter opportunities, but these features are supplementary and fragmented within the agricultural matrix. On that basis, the Site is unlikely to support reptiles other than grass snake, with any presence most likely confined to warmer, sheltered edge features (e.g., ditch crests with dry dredgings, hedgerow bases, brash/log piles). The Scheme in the main avoids impacts to these features, though working areas during construction may risk killing or injury of individuals, and temporary habitat loss. On this basis further surveys for reptiles were not considered proportionate with regards to an impact assessment.

9.6.77. Designated sites and functional linkages: No reptile specific designated sites are present within the immediate study area; functional linkage is not anticipated beyond local movements along linear edge habitats.

9.6.78. Evaluation of importance: Reptiles (common species) are assessed as of **Local importance** on a precautionary basis. This reflects low but plausible use of edge habitats by grass snake within a predominantly arable landscape, with limited extent and connectivity of optimal habitat.

9.6.79. Confidence and material limitations: given the habitat context and historic records, a precautionary approach assuming presence is appropriate at Scheme level.

9.6.80. Features taken forward to assessment: Common reptiles (grass snake) associated with ditch banks, hedgerow bases, arable margins and brash/log piles within working areas (**Local Importance**).

Riparian mammals

9.6.81. Status and relevance: Otter is a European protected species and fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended)

domestic legislation; water vole is fully protected under the Wildlife and Countryside Act. Both are closely associated with the Scheme's extensive network of drains and field ditches.

9.6.82. Zone of influence and data sources: The baseline considers riparian corridors within and adjacent to the SDAs, Inter-Array Connections and the GCR, with a focus on watercourses at proposed crossing points and along main drains. Data is derived from otter and water vole habitat assessments and presence/likely absence surveys undertaken in June and September 2024 and September 2025, plus incidental records during other ecology surveys, and the PEA context for riparian species.

9.6.83. Baseline distribution and Site use: Desk study returned 18 otter records in the wider area and 420 water vole records, and the Site lies within a Regional Key Area and Alert Area for water vole, reflecting strategic importance of the local network for the species. Most agricultural ditches across the Site were dry or recently managed at the time of survey, resulting in poor suitability in many locations, while permanently wet drains held higher suitability.

9.6.84. Water vole presence was confirmed at multiple locations: burrows were recorded in Wheat Mere Drain (Parcel B) and in Slys Cut (Parcel D); latrines and feeding stations were recorded near a Inter-Array access track crossing point (IA03); and confirmed sightings occurred on Lambert Drain (Parcel D) and at South Holland Main Drain (GC03) where an individual was observed crossing the channel. Location details can be seen in **ES Appendix 9-7 Otter & Water Vole Report** (Doc Ref. 6.3). These features are directly connected (e.g., Slys Cut links to Lambert Drain), indicating an occupied network with seasonal dispersal along the drain system.

9.6.85. Otter use was evidenced by identification of a spraint at a bridge on South Holland Main Drain near Parcel D (PVD13) and at GC03 at the southern end of the GCR. **ES Appendix 9-2: Preliminary Ecological Appraisal** (Doc Ref. 6.3) also recorded an offsite potential holt (later discounted following further survey) adjacent to Parcel A with old spraint nearby, together indicating a permanent presence along South Holland Main Drain and connected drains.

9.6.86. Designated sites and functional linkages: The surveyed drains (e.g., South Holland Main Drain, Wheat Mere Drain, Lambert Drain) form part of a wider lowland drainage network connected to the River Welland and other main drains. While these features are locally important movement corridors for riparian mammals, survey evidence indicates riparian use is focused within the

Site's drain network rather than direct functional linkages to nearby internationally designated sites.

9.6.87. Evaluation of importance:

- Water vole: **Local Importance.** Presence is confirmed at multiple locations (burrows, latrines, feeding stations and sightings) with connectivity across drains, indicating an occupied and dispersing local population within the Site's network.
- Otter: **Local Importance.** Repeated spraint records across the Scheme, indicate regular use of the corridor for commuting with limited poor foraging opportunities, with core resting places localised along major drains.

9.6.88. Confidence and material limitations: Constraints were documented and considered in interpretation; confidence in the local presence of both species is supported by multiple lines of evidence across 2024 and 2025 and by desk study context.

9.6.89. Features taken forward to assessment:

- Water vole: occupied reaches of Wheat Mere Drain (Parcel B), Slys Cut and Lambert Drain (Parcel D), South Holland Main Drain (e.g., GC-03), and drains near Parcel D plus the wider connected ditch network (**Local Importance**).
- Otter: South Holland Main Drain and connected main drains/ditches where spraint and potential resting places were recorded (**Local Importance**).

Invasive Non-Native Species (INNS)

9.6.90. Solar Farm Development Area – High likelihood: Desk study records include terrestrial INNS (Japanese rose, variegated yellow archangel) and aquatic INNS (water fern, New Zealand pygmyweed, Elodea spp.). Nuttall's waterweed is recorded in the Lambert Drain–Highstock Drain Connection LWS and the South Holland Main Drain adjacent to Sub-parcel D-1. Given the prevalence of permanent watercourses and suitable habitats, INNS are likely to be present.

9.6.91. GCR and Inter-array Connections – High likelihood: Aquatic INNS (including Nuttall's waterweed) are recorded in nearby watercourses. Due to rapid spread and available habitats along the route, INNS are likely in any permanently wetted watercourses.

9.6.92. Assessment scope: Potential effects from the introduction or spread of INNS are not taken forward for detailed EIA assessment. Risks will be managed

through the **OCEMP** (Doc Ref. 7.10), **OOEMP** (Doc Ref. 7.11) and **ODEMP** (Doc Ref.7.12), which will secure measures such as pre-construction INNS surveys and mapping, biosecurity protocols (plant/machinery wash-down, material and soils management), method statements to avoid spread, treatment/eradication where required, and staff training and monitoring.

Other Species

9.6.93. Other protected and notable species for which furthers surveys were scoped out and/or were considered likely absent from the Site are provided in Table 9-12 below.

Table 9-12: Protected/Notable Species

Species	Description	Ecological Importance
Brown hare	Over 100 records of brown hare were returned from the desk study. The wide grassland margins and arable fields provide suitable habitat for brown hare, which was frequently observed across the survey area during the PEA and protected species surveys. Scoped out from further assessment due to the availability of high-quality habitat surrounding the Site which will remain available to brown hare. Brown hare is a SPI and is common across Lincolnshire.	Site
Dormouse	No records of dormouse and no records of Protected Species licences issued for dormouse were returned for the study area. Though suitable habitat for dormouse is present within the Site, it is small in extent, fragmented and poorly connected and, therefore, unlikely to support dormouse. Dormouse are, therefore, assumed absent from the Site and are scoped out from further assessment. Dormouse is a Protected Species and an SPI and is considered largely absent from Lincolnshire.	None

Species	Description	Ecological Importance
Hedgehog	Habitats across the Site provide suitable opportunities for hedgehog and multiple records of this species were returned from the data search. Scoped out from further assessment due to the availability of high-quality habitat surrounding and within the Site which will remain available to hedgehogs. Hedgehog is a SPI, with numbers declining nationally.	Site
Plants Schedule 8	Records of cornflower, bluebell and tubular water-drop wort (which are all Schedule 8 species) were returned from the desk study, though no evidence of these species was recorded from within the Order Limits during the surveys undertaken. The habitat within the Site is suitable for these species; however, active management of much of the Site as arable farmland is likely to reduce opportunities for these species to establish. Schedule 8 plants are therefore scoped out from further assessment.	Site
Terrestrial invertebrates	Records of small heath, wall, large tortoiseshell and swallow tail, all of which are Species of Principal Importance, were returned from the desk study. The grassland margins across the Scheme provide several grass species as larval foodplants for butterfly species and offer flowering plants for butterflies, moths and other pollinating insects. Scoped out from further assessment due to the availability of high-quality habitat surrounding and within the Site which will remain available to terrestrial invertebrates.	Site

Species	Description	Ecological Importance
White-clawed crayfish	No records of white-clawed crayfish were returned from the desk study, and there is very limited suitable habitat for this species across the Scheme, with the majority of ditches and drains dry at the time of survey and those that did hold water being heavily silted and unsuitable for crayfish. It is therefore assumed that suitable opportunities for crayfish are absent, particularly given the absence of any naturalised watercourses. Accordingly, this species is considered absent from the Site and scoped out from further assessment. White-clawed crayfish is a SPI.	None
Fish (including European eel and river lamprey)	Targeted fish surveys were scoped out for the Scheme. Potential impacts have been addressed within embedded construction controls in the **OCEMP** (Doc Ref. 7.10), with detailed CEMP(s) to protect notable fish if present (e.g., European eel, river lamprey). The Site largely comprises a managed fenland drainage network of ditches/drains that are generally ephemeral, reducing the likelihood of supporting significant fish populations. Habitats along the GCR are comparable to the SDA, with an absence of naturalised watercourses present, further limiting suitability for fish. Embedded measures include least-impact culvert design and trenchless methods where practicable, crossings sized to maintain flow conveyance, and pollution prevention to maintain aquatic connectivity and water quality. Accordingly, fish are scoped out from further assessment.	None

Ecological receptor and scoping summary

9.6.94. A summary of the ecological receptors identified in the above baseline analysis is detailed in Table 9-13 below. Impacts to receptors classified as Local Importance or above only are considered further within this assessment.

Table 9-13: Summary of Ecological Importance

Ecological Feature	Geographic Scale of Importance	Scoped in for further assessment?	
		ES	HRA
Designated Sites – Internationally Designated Sites			
Baston Fen SAC	International	In	In
Nene Washes Ramsar Site	International	In	In
Nene Washes SAC	International	In	In
Nene Washes SPA	International	In	In
The Wash and North Norfolk Coast SAC	International	In	In
The Wash Ramsar site	International	In	In
The Wash SPA	International	In	In
Designated Sites –Statutory Designated Sites			
The Wash SSSI (underpinning The Wash SPA/SAC/Ramsar) (IRZ intersects GCR)	National	In	In
Nene Washes SSSI (underpinning Nene Washes SPA/SAC/Ramsar) (related to Unattributed IRZ see below)	National	In	In
Deeping Gravel Pits SSSI (IRZ intersects SDA)	National	Out	n/a
Cross Drain SSSI (IRZ intersects SDA)	National	Out	n/a
Cowbit Wash SSSI (IRZ intersects SDA)	National	In	n/a
Surfleet Lows SSSI (IRZ intersects GCR)	National	Out	n/a
Unattributed IRZ (centroid TF 3499 1700) (IRZ intersects SDA)	National	In	In
Designated Sites –Non-Statutory Designated Sites			
A16 East Verge South of the River Glen LWS	County	Out	n/a
Blue Gowt Drain North LWS	County	Out	n/a

Ecological Feature	Geographic Scale of Importance	Scoped in for further assessment?	
		ES	HRA
Blue Gowt Drain West Marsh Road LWS	County	Out	n/a
Coronation Channel LWS	County	Out	n/a
Crowland Falls Pit LWS	County	In	n/a
Crowland Ponds LWS	County	In	n/a
Crowland Wash Lake LWS	County	Out	n/a
Fred's Pit LWS	County	In	n/a
High Bank Gull LWS	County	In	n/a
Lambert Drain LWS	County	In	n/a
Lambert Drain to Highstock Drain Connection LWS	County	In	n/a
Little South Holland Drain LWS	County	Out	n/a
Moulton Park & River LWS	County	Out	n/a
New River LWS	County	In	n/a
Pinchbeck Marsh LWS	Local	Out	n/a
River Welland Corridor LWS	County	In	n/a
River Welland in Spalding LWS	County	Out	n/a
Slys Connection LWS	County	In	n/a
South Drove Drain LWS	County	Out	n/a
South Holland Main Drain (West) LWS	County	In	n/a
Surfleet Seas End Saltmarsh LWS	County	Out	n/a
Vernatt's Drain LWS	County	Out	n/a
Wheatmere Drain LWS	County	In	n/a
Habitats			
Aquatic marginal vegetation including invasive aquatic flora	Local	In	n/a
Arable and horticulture	Site	Out	n/a
Buildings/developed/sealed surfaces	Site	Out	n/a
Other coniferous woodland	Site	Out	n/a
Drainage ditches/main drains (other rivers and streams)	Local	In	n/a
Hedgerows (incl. species rich)	Local	In	n/a
Lines of trees & broadleaved woodland (incl. w1f Lowland mixed deciduous)	Local	In	n/a
Neutral/modified grassland	Site	Out	n/a

Ecological Feature	Geographic Scale of Importance	Scoped in for further assessment?	
		ES	HRA
Individual ancient and veteran trees	Local	In	n/a
Schedule 8 Plants	Site	Out	n/a
Species			
Badger	Local	In	n/a
Bats – foraging /commuting/ assemblage	National	In	n/a
Bats - roosts	Local	In	n/a
Breeding birds, inc. barn owl and skylark	Local	In	n/a
Great crested newt	Site	Out	n/a
Otter	Local	In	n/a
Reptiles (common species)	Local	In	n/a
Water vole	Local	In	n/a
Wintering birds	Local	In	n/a
Other protected and notable species (brown hare, hedgehog and terrestrial invertebrates)	Site	Out	n/a
Other protected and notable species (WCCF, dormouse)	None*	Out	n/a

Future Baseline

9.6.95. Under a scenario where the Scheme does not progress, it is anticipated that the composition of habitats and species within the Site, and their respective importance, is likely to remain broadly similar to the current baseline, given the heavily managed nature of the agricultural landscape. However, as reported in **ES Chapter 7: Climate Change** (Doc Ref. 6.1), any future baseline would be subject to increases in mean summer and winter temperatures, a decrease in summer rainfall, leading to drought and increases in extreme rainfall events and storms. The impact of this is likely to result in changes to the composition and growth of habitats, leading to habitat degradation, though these changes are not considered likely to result in a significant change to the current baseline.

9.7. Embedded Mitigation

9.7.1. The following measures are integrated into the design of the Scheme and secured via **Draft DCO** (Doc Ref. 3.1) Schedule 2 Requirements and certified outline plans. Section 9.8 of this chapter assesses effects with these measures in place.

Construction and Decommissioning

Good Practice Environmental Management Measures

9.7.2. Good practice environmental management measures for minimising impacts on ecological receptors have been included within the **OCEMP** (Doc Ref. 7.10), and **ODEMP** (Doc Ref. 7.12). For instance, the management plans include measures in relation dust control, pollution prevention, soils/ vegetation management, biosecurity measures, pollution prevention, habitat avoidance (i.e. buffers from key habitat features), vegetation clearance practices, security fencing, methods for watercourse crossings, minimising light spill, and measures to minimise impacts on statutory and non-statutory designated sites and protected species.

9.7.3. From the outset, the Scheme has been designed to avoid key nature conservation and ecological features present within or adjacent to the Order Limits. Accordingly, buffers from key habitat features have been applied and are detailed within the **OCEMP** (Doc Ref. 7.10). Micro-siting of infrastructure would be undertaken to avoid, where practicable, woodland blocks, hedgerows, tree lines, reedbeds and Habitats of Principal Importance (HPI) once protected species surveys have been undertaken.

9.7.4. A summary of ecological measures included within the **OCEMP** (Doc Ref. 7.10), and **ODEMP** (Doc Ref. 7.12) are included below. A detailed CEMP(s) and DEMP(s) will be prepared in substantial accordance with the **OCEMP** (Doc Ref. 7.10) and **ODEMP** (Doc Ref. 7.12) respectively and implemented on Site.

Standard control measures

- Dust and air quality would be managed through the implementation of IAQM/EPUK-led measures, including damping down, control of trackout, stockpile and surface management, haul-route speed restrictions, and site layout designed to locate dust-generating activities away from sensitive receptors. Further information is provided in **ES Chapter 6: Air Quality** (Doc Ref. 6.1).

- Measures to control construction or decommissioning phase noise are defined in Annex B of BS 5228-1[54] and measures to control construction or decommissioning phase vibration are defined in Section 8 of BS 5228-2. These embedded measures represent Best Practicable Means (BPM) (as defined in Section 72 of the Control of Pollution Act 1974). Further details are provided in **ES Chapter 13: Noise and Vibration** (Doc Ref. 6.1).
- Pollution prevention measures would include appropriate fuel and chemical storage and handling procedures, controlled refuelling practices, provision of spill kits, protected washout areas, and silt and sediment control measures. There would be no uncontrolled discharge to drains or ditches. Further details are provided in **ES Chapter 11: Hydrology and Flood Risk** (Doc Ref. 6.1).
- Soils, vegetation and general site practices would be managed through the use of method statements, phased vegetation clearance, toolbox talks, and appropriate trench management measures (including trench covers and escape ramps) to reduce entrapment and mortality risks. An Ecological Clerk of Works (ECoW) would oversee works at sensitive interfaces.
- Biosecurity measures relating to invasive non-native species (INNS) would include identification, plant and material hygiene protocols, and appropriate containment and disposal procedures.
- Traffic and routing would be managed through defined routing and traffic management measures to minimise increases on the affected road network (ARN), consistent with the IAQM/EPUK screening logic. For the construction phase this is secured through the **Outline Construction Traffic Management Plan (OCTMP)** (Doc Ref. 7.13).
- Night-time working would, where practicable, be avoided near flooded fields, drains, and sensitive wintering bird areas in order to limit disturbance.

Protected species safeguards

- Pre-construction checks/surveys will be undertaken for badger, otter, water vole, and bats. Micro-siting will be implemented informed by survey results and fenced buffers will be implemented where required.

[54] British Standards Institution (2014). *BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise.* London: BSI.

- Vegetation clearance would be scheduled outside the March to September bird nesting season where practicable; where this is not possible, nesting bird checks would be undertaken within 48 hours prior to the commencement of works.
- Mammal permeability: where fencing is required, ground-level gaps to maintain connectivity for small/medium mammals (e.g., badger) would be provided.

Watercourse crossings – method control and reinstatement

- Watercourse crossing methods would protect banks, control sediment, and maintain flow. Where open-cut or culvert installation is required, flow would be maintained throughout the works.
- Pre-works hydromorhpological surveys would be undertaken for any intrusive crossings, on the basis of which reinstatement post-removal of the crossings would aim to provide an improved channel form. Reinstatement works would be carried out (where relevant and appropriate to do so) between 10 and 15m upstream and downstream of the crossing to ensure the reinstated improved channel form merges into the existing channel form, subject to agreement with the Internal Drainage Boards.

Lighting – bat-sensitive design

- The lowest practicable lighting levels would be applied, using warm-spectrum LED luminaires with directional fittings and baffles or cowls to prevent light spill onto hedgerows, tree lines and riparian corridors.
- Night lighting at compounds near sensitive riparian spans and wintering bird areas (consistent with disturbance controls) would be minimised.

Operation

Good Practice Environmental Management Measures

9.7.5. Good practice environmental management measures for minimising impacts on ecological receptors have been included within the **OOEMP** (Doc Ref. 7.11). The OOEMP includes measures in relation to lighting, maintenance, and pollution control. It also includes measures in relation to the maintenance and post-installation monitoring of bird diverters (see further below).

Outline Drainage Strategy

9.7.6. Operational drainage design will be implemented in accordance with **ES Appendix 11-4: Outline Drainage Strategy** (Doc Ref. 6.3). The design would

ensure compliance with planning policy with runoff from the Scheme to be attenuated to ensure no increase in surface water discharge rates and to provide water quality treatment of runoff water.

Provision of Ecological Habitats

9.7.7. The **OLEMP** (Doc Ref. 7.16) sets out the ecological strategy for the Scheme, including proposals for the provision of new planting, habitat boxes, habitat piles and hibernacula. New planting would include in the order of:

- 13.8 km of proposed band of shrubs;
- 34.6 km of proposed band of shrubs and scattered trees;
- 1.6 km of strengthened band of scattered trees;
- 129.0 ha of proposed species rich grassland; and
- 650.0 ha of proposed semi-improved grassland.

9.7.8. Furthermore, where new or upgraded watercourse crossings are required, 15m habitat enhancement buffer would be provided up and downstream of the crossings (subject to review with Internal Drainage Boards).

9.7.9. The following design principles will be adopted:

- Retention of, and minimising loss of ditches, hedgerows, trees and field edge habitats, where feasible;
- Replacement of hedgerow/tree loss through planting of hedgerows or providing similar landscape features (i.e. lines of trees and shrubs) offering the same or better ecological function and value;
- A 15m wide habitat enhancement buffer up and downstream at each proposed watercourse crossing would be created, subject to agreement with the Internal Drainage Boards, and
- Provision of mitigation areas for ground-nesting birds, such as skylark. A Farmland Bird Mitigation Strategy will be developed to evidence on-site sufficiency of mitigation for ground-nesting birds.

9.7.10. **Works Plans** (Doc Ref. 2.3) secure the location and extent of dedicated Habitat Management Areas within the SDA, with further information on the purposes of each of these areas provided within the **OLEMP** (Doc Ref. 7.16). The Habitat Management Areas extend over 170ha of land, out of which over 150ha is set aside for improving habitats for ground-nesting birds, such as skylark.

9.7.11. As set out within the **OLEMP** (Doc Ref. 7.16), the Farmland Bird Mitigation Strategy would provide management principles for the establishment of

skylark plots within the allocated Habitat Management Areas, requirements for monitoring and adaptive management are also set out.

GCR - Overhead Line Bird Diverters

9.7.12. As set out within the **Design Parameters** (Doc Ref. 7.4), targeted bird flight diverters will be fitted on spans of the 400kV overhead line identified by Vantage Point surveys/collision risk analysis as elevated risk (refer to Figure 4 of **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3)). The **OOEMP** (Doc Ref. 7.11) also includes measures in relation to the maintenance and post-installation monitoring of bird diverters, and adaptive refinement to add/ adjust diverters at any verified hotspot spans.

9.8. Assessment of Potential Impacts and Likely Significant Effects

9.8.1. The Scheme as outlined in **ES Chapter 2: The Scheme** (Doc Ref. 6.1) has been considered in assessing the potential impacts and likely significant effects of the Scheme. The effects reported in this section include the embedded measures set out in Section 9.7 Embedded Mitigation. Where a likely significant effect remains, additional mitigation is presented in Section 9.9 Additional Monitoring, Mitigation and Enhancement. Residual effects are reported in Section 9.10 Residual Effects.

9.8.2. Key pathways considered are direct habitat loss or alteration, disturbance (noise, light, human presence), dust deposition, pollution to water, hydrological changes at crossings, temporary fragmentation and dispersal barriers, increased mortality risk (e.g., open trenches), and biosecurity for invasive species.

Construction Phase

9.8.3. Construction activities include vegetation clearance; hedgerow/tree works; soil stripping and reinstatement; temporary compounds/access tracks; foundations and trenching/ducting; overhead line structure erection and conductor stringing; watercourse crossings and local bank works; and temporary lighting, noise, dust and traffic.

Impact pathway screening (construction)

9.8.4. Ecologically relevant construction pathways carried forward to receptor-specific evaluation (where credible linkages exist) include:

- Habitat loss or gain – direct impacts associated with changes in land use resulting from the Scheme, for example temporary works associated with site clearance, and operational land-take (mainly arable land) associated with the installation of the Scheme;
- Disturbance including indirect lighting, noise, vibration, human presence, and traffic impacts that result in individuals or populations of species changing behaviour or range. These changes might have both positive and negative effects, such as expanding or restricting access to resources and altering the ability to move and disperse throughout the countryside. These can impact breeding/wintering birds, reptiles, bats, badger, otter, water vole and general fauna along hedgerows/tree lines/woodland edges/riparian corridors;

- Airborne emissions and dust deposition[55] – construction-generated dust (e.g. earthworks, haul routes, stockpiles) and road-traffic emissions (NOx/PM leading to nitrogen deposition) affecting adjacent habitats via soiling, nutrient enrichment and direct phytotoxic exposure; receptors include statutory/non-statutory designated sites, ancient woodland and veteran trees, hedgerows/woodland edges and roadside verges (including epiphytic lichens/bryophytes), and watercourses/ponds with riparian/marginal vegetation within screening distances of construction activities and affected road links;
- Habitat degradation – direct or indirect impacts resulting in the reduction in the condition of a habitat and its suitability for some or all of the species it supports, for example changes in chemical water quality, increased sedimentation and dust deposition, or changes in surface flow or groundwater;
- Fragmentation/barriers to dispersal - which can be direct or indirect, often result from temporary fencing, construction compounds, open trenches. These can significantly impede the movements of mammals, reptiles, and amphibians, disrupting dispersal patterns and inter-population connectivity. The consequences on metapopulations may include reduced genetic exchange, isolation, and increased vulnerability to stochastic events;
- Increased mortality risk on species populations due to construction activities, for example as a result of open trenches, construction traffic, vegetation clearance;
- Introduction of invasive species, due to the movement of personnel, equipment and plant machinery, potentially facilitating the introduction of invasive species.

9.8.5. Construction traffic emissions were screened on the Affected Road Network (ARN) in accordance with EPUK56/IAQM guidance, and any links exceeding

[55] Construction dust has been assessed using IAQM 2024 guidance and supported by a qualitative Dust Risk Assessment. The assessment considers embedded **OCEMP** controls (Doc Ref. 7.10) including damping down, surface cleaning, speed control, stockpile management, Site layout, and riparian protection. With high-risk category good practice applied, dust soiling and ecological effects are predicted to be Not significant at habitats within 50m of construction routes and within 250m of the Order Limits. See **ES Chapter 6: Air Quality** (Doc Ref. 6.1) for further details.

[56] Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM). Land-Use Planning & Development Control: Planning for Air Quality. 2017 (with 2020 updates). https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf Accessed 26/02/2026.

screening criteria were subsequently modelled using detailed dispersion modelling. Changes in annual mean concentrations (NO2, PM10, PM2.5) at modelled receptors are negligible (largest change c.1% of the air quality objective at few locations) and no exceedances predicted. Construction traffic emissions are therefore not expected to give rise to significant ecological effects with embedded controls. See **ES Chapter 6: Air Quality** (Doc Ref. 6.1) for further details.

Receptors potentially affected (taken forward from baseline)

9.8.6. Receptors scoped into the construction assessment include the following:

- Internationally designated sites and any national designations that underpin these sites,
- SSSIs where the Scheme falls within the IRZs for these sites and meets the relevant development description;
- LWS within or adjacent to work areas;
- Habitats including hedgerows (including species-rich), lines of trees, lowland mixed deciduous woodland, aquatic marginal vegetation, and drainage ditches (including main drains);
- Individual ancient and veteran trees;
- Foraging and commuting bats, and tree roost features;
- Breeding birds assemblage, wintering bird assemblage (SDA only), and wintering bird and flight activity (GCR only);
- Riparian mammals (water vole, otter);
- Badger;
- Reptiles (common species); and
- Relevant fauna groups where captured under habitats.

9.8.7. Table 9-14 below screens the ecologically relevant construction-phase impact pathways carried forward to receptor specific evaluation. For each receptor/feature, it sets out the potential impact pathway(s) during construction, the embedded controls, and the pre-residual effect (accounting for embedded measures only).

Table 9-14: Construction-phase impact pathway screening and pre residual effects

Receptor / Feature	Potential Impacts	Embedded controls	Magnitude of impact	Effect (pre-residual)
The Wash Ramsar/SPA/SSSI (International/National)	No direct impacts. Indirect construction traffic emissions (NOx/PM) and dust deposition; no works within the designated site. HRA Stage 1 screens out construction/decommissioning pathways (air quality; water pollution) for likely significant effects; collision risk is an operational pathway and addressed separately.	**OCEMP** (Doc Ref. 7.10) dust suppression and pollution prevention; **OCTMP** (Doc Ref. 7.13) traffic controls and routing to minimise sensitive links.	Negligible – short-term, reversible and highly localised indirect effect only; no FLL land-take or direct works.	Negligible (Not significant)
Nene Washes Ramsar/SPA/SSSI (International/National)	No direct impacts. Indirect construction traffic emissions (NOx/PM) and dust deposition; no works within the designated site. HRA Stage 1 screens out construction/decommissioning pathways for likely significant effects.	**OCEMP** (Doc Ref. 7.10) dust suppression and pollution prevention; **OCTMP** (Doc Ref. 7.13) traffic controls and routing to minimise sensitive links.	Negligible – short-term, reversible and highly localised indirect effect only; no FLL land-take or direct works.	Negligible (Not significant)
Baston Fen SAC / SSSI, Nene Washes SAC / SSSI / The Wash and North Norfolk Coast SAC / SSSI (International/National)	No direct impacts. Construction phase water quality pathway via hydrological connectivity to the wider drain network (accidental pollution). Indirect construction traffic emissions (NOx/PM) and dust deposition. HRA Stage 1 screens out construction/decommissioning pathways (air quality; water pollution) for likely significant effects.	**OCEMP** (Doc Ref. 7.10) dust suppression and pollution prevention; **OCTMP** (Doc Ref. 7.13) traffic controls and routing to minimise sensitive links.	Negligible – short-term, reversible and highly localised indirect effect only; no FLL land-take or direct works.	Negligible (Not significant)
SSSI IRZ (unattributed polygon; centroid TF 3499 1700; parcels D-1/D-2/D-3) (National)	No direct works within the SSSI; potential proximity disturbance and dust/air emissions from construction traffic. Potential functional linkage with SPA/Ramsar bird features considered in HRA; no construction-phase FLL loss.	Design avoidance and stand-offs; **OCEMP** (Doc Ref. 7.10) dust/pollution prevention; **OCTMP** (Doc Ref. 7.13) traffic controls.	Negligible – short-term, reversible and indirect only; no direct land-take.	Negligible (Not significant)
Cowbit Wash SSSI IRZ (parcel A) (National)	No direct impacts; no specific pathway beyond generic dust deposition and traffic emissions.	**OCEMP** (Doc Ref. 7.10) dust/pollution prevention; **OCTMP** (Doc Ref. 7.13) traffic controls.	Negligible – short-term, reversible and indirect only.	Negligible (Not significant)
Slys Connection LWS (parcels D-2/D-3); South Holland Main Drain (West) LWS (parcel B-5); Wheatmere Drain LWS (within GCR); Lambert Drain–Highstock Drain Connection LWS (highway works south of parcel D) (County)	Direct/adjacent works at crossings; disturbance; pollution/sediment risk and dust/air emissions from construction traffic.	Standoffs (typically 10 m) where practicable; fenced buffers; bank protection; sediment/pollution control; trenchless techniques at sensitive reaches; pre-works checks via the **OCEMP** (Doc Ref. 7.10). **OCEMP** dust/pollution prevention and **OCTMP** (Doc Ref. 7.13) traffic controls.	Short term, temporary habitat disturbance/loss at crossing points with reinstatement postconstruction; localised and reversible.	Minor adverse (temporary, not significant) where interfaces occur; negligible (not significant) where fully avoided (standoff)
Other nearby LWS (Crowland Falls Pit LWS, Crowland Ponds LWS, Fred's Pit LWS, High Bank Gull LWS, Lambert Drain LWS, New River LWS, River Welland Corridor LWS) (County)	No direct impacts. Proximity disturbance; pollution risk and dust/air emissions from construction traffic.	**OCEMP** (Doc Ref. 7.10) buffers and dust/pollution controls; bank protection where relevant, and **OCTMP** (Doc Ref. 7.13) traffic controls.	Negligible – indirect, short-term and reversible.	Negligible (Not significant)

Receptor / Feature	Potential Impacts	Embedded controls	Magnitude of impact	Effect (pre-residual)
Aquatic marginal vegetation; drainage ditches/main drains (Local)	Direct/adjacent works; disturbance; dust deposition; pollution/sediment; temporary flow changes at crossings; light spill; risk of spreading INNS.	**OCEMP** (Doc Ref. 7.10): stand-offs/buffers; watercourse crossing method statements (maintain flow; protect banks; sediment/pollution control); dust suppression; sensitive lighting; biosecurity measures. OCEMP dust/pollution prevention; **OCTMP** (Doc Ref. 7.13) traffic controls.	Low – short-term, localised and reversible habitat/flow disturbance at interfaces, with reinstatement.	Minor adverse (temporary, not significant) at interfaces; negligible (not significant) elsewhere
Individual ancient and veteran trees	No direct impacts anticipated; indirect risks only (e.g., compaction, accidental damage) from nearby works.	**OCEMP** (Doc Ref. 7.10) stand-offs/buffers in line with the AIA to protect root zones and tree integrity.	Negligible	Negligible (not significant)
Hedgerows (incl. species-rich); lines of trees; lowland mixed deciduous woodland (Local)	Trimming/removal for access/trenching; disturbance; generic dust deposition; lighting spill; temporary corridor fragmentation.	**OCEMP** (Doc Ref. 7.10) micrositing; fenced buffers; dust suppression; vegetation clearance outside March–September where practicable; bat-sensitive lighting. OCEMP dust/pollution prevention; **OCTMP** (Doc Ref. 7.13) traffic controls.	Low – short-term, localised habitat loss/ fragmentation with reinstatement/ planting; reversible.	Minor adverse (temporary, not significant)
Badger (Local)	Potential for direct sett damage/loss if encountered[57]; disturbance; temporary barriers to movement; trench/traffic risk.	**OCEMP** (Doc Ref. 7.10): pre-construction sett checks; fenced buffers/micro-siting; trench covers/ramps; speed control; ECoW oversight; licensing if impacts unavoidable.	Low – localised and short-term with standard controls.	Minor adverse (temporary/localised, not significant)
Bats – foraging/commuting assemblage (National)	Disturbance from lighting and construction activity along linear features and associated foraging habitat. (hedgerows/trees/shrubs/drains/treelines)	**OCEMP** (Doc Ref. 7.10): retain/buffer linear habitats where practicable; implement bat-sensitive lighting.	Low – localised disturbance with minimal functional change where buffers/lighting controls are applied.	Minor adverse (Not significant)
Bats – tree roost features (Local)	No direct loss of trees with known bat potential anticipated; indirect effects from adjacent works and lighting (disturbance); precautionary approach to newly formed PRFs between survey and construction.	**OCEMP** (Doc Ref. 7.10): pre-works PRF checks; aerial/emergence/hibernation surveys where required; low-level/sensitive lighting avoiding illumination of planted/retained trees.	Negligible–Low – indirect only; no confirmed roost loss at construction stage.	Negligible–Minor adverse (Not significant)
Breeding birds (Local), including barn owl	Disturbance and clearance at/near nests; hedgerow/tree works; dust, light and traffic disturbance; loss of foraging edge for farmland birds.	**OCEMP** (Doc Ref. 7.10): vegetation clearance outside March–September where practicable; pre-works nesting checks; stand-offs to active nests; dust suppression. **OLEMP** (Doc Ref. 7.16): planting of scrub/shrub to enhance foraging and nesting resources.	Negligible–Low – short-term, localised disturbance and minor edge loss within working areas.	Negligible to Minor adverse (temporary, not significant)

[57] It is understood that no known badger setts will be impacted by the Scheme, based on current survey data at the time of writing.

Receptor / Feature	Potential Impacts	Embedded controls	Magnitude of impact	Effect (pre-residual)
Skylark (Local)	Loss of habitat for foraging and breeding within working areas; disturbance during construction.	**OCEMP** (Doc Ref. 7.10): timing of vegetation clearance where practicable; pre-works checks; stand-offs; dust suppression.	Low – short-term, localised and reversible with reinstatement.	Minor adverse (temporary, not significant)
Otter (Local)	Disturbance at riparian works; temporary barriers to passage; pollution/sediment/dust deposition; potential impacts on resting places (holts/couches).	**OCEMP** (Doc Ref. 7.10): pre-construction checks; ECoW supervision; demarcated stand-offs to any holts/couches; watercourse works method statements (maintain flow/continuous passage; reinstate banks); targeted lighting controls.	Low – short-term, localised and reversible disturbance at interfaces with reinstatement.	Minor adverse (localised/temporary, not significant)
Reptiles (common species) (Local)	Risk of injury/mortality during vegetation/refuge clearance; trench entrapment; disturbance at warm edge habitats.	**OCEMP** (Doc Ref. 7.10): staged clearance; hand searches; trench covers/ramps; toolbox talks; avoid hibernation period where practicable.	Negligible–Low – localised, short-term risk managed through standard methods.	Negligible–Minor adverse (localised/temporary, not significant)
Water vole (Local)	Habitat loss/disturbance at crossings; bank works; pollution/sediment release; temporary barriers to movement.	**OCEMP** (Doc Ref. 7.10): pre-construction checks; buffers/stand-offs; method statements; sediment/pollution control; trenchless techniques where practicable; CL31 displacement (50 m) licence if unavoidable; riparian planting to maintain connectivity.	Low – short-term, localised disturbance of banks at crossing points with reinstatement.	Minor adverse (localised/temporary, not significant)
Wintering birds (GCR – construction)	Disturbance near flight corridors and feeding fields; dust/light/noise near drains; works in proximity to flooded fields.	**OCEMP** (Doc Ref. 7.10): standard dust and noise controls; avoid night-time works near flooded fields/drains where practicable; bat-sensitive lighting at compounds; buffers to drains; phase works to avoid peak wintering periods where feasible.	Negligible–Low – temporary and localised disturbance with standard controls.	Negligible–Minor adverse (localised/temporary, not significant)

Operational Phase

9.8.8. Operational activities include routine inspections; planned and reactive maintenance of the solar PV arrays, mounting frames, cabling, inverters/transformers, substations and BESS compound; security fencing and CCTV upkeep; vegetation management (mowing/strimming, hedge cutting and selective weed control where required); periodic panel cleaning; inspection and maintenance of overhead line structures and conductors (including installation and upkeep of bird diverters/line marking where required); maintenance of SuDS/drainage and watercourse crossings/banks; and task-specific, short-duration temporary lighting during low-light works and call-outs. Traffic will be limited to light and occasional heavy vehicles using the permanent access network.

Impact pathway screening (operation)

9.8.9. The following pathways are the same as during construction and are carried forward where credible linkages exist:

- Disturbance from people/plant and associated noise and lighting;
- Pollution/sediment risk to soils and surface waters from routine activities and vehicle movements; and
- Potential spread of invasive non-native species via personnel, equipment and water.

9.8.10. Additional operation-specific pathways carried forward to receptor-specific evaluation comprise:

- Collision risk to wintering birds crossing the GCR and interacting with overhead line spans (addressed through targeted line marking and bird flight diverters secured in the **Design Parameters** (Doc Ref. 7.4) and managed via the **OOEMP** (Doc Ref. 7.11).
- Long-term habitat change from operational land-use (arable to solar PV and associated infrastructure) and from the establishment/management of mitigation and enhancement habitats (**OLEMP** (Doc Ref. 7.16)), including effects on open-ground nesting birds (e.g. skylark) and local gains from hedgerow/woodland creation and riparian enhancements.
- Ongoing hydrological/water-quality effects associated with the operational drainage strategy (including panel-wash water and accidental leaks), with risks to aquatic marginal vegetation and main drains/ditches managed

through the **Outline Drainage Strategy** (refer to **ES Appendix 11-4** (Doc Ref. 6.3)) and **OOEMP** (Doc Ref. 7.11) controls.

- Disturbance and potential incidental mortality from periodic vegetation management during sensitive periods for protected/notable species (managed via timing restrictions, pre-works checks/ECoW, and light-sensitive working principles in the **OOEMP** (Doc Ref. 7.11)).
- Continued biosecurity requirements to prevent the introduction or spread of INNS during all inspection and maintenance activities (**OOEMP** Doc Ref. 7.11) and **OLEMP** (Doc Ref. 7.16)).

Receptors potentially affected (taken forward from baseline)

9.8.11. Receptors scoped into the operational assessment include the following

- Internationally designated bird sites and any national designations that underpin these sites (no potential impact pathways identified for SACs),
- Local wildlife sites adjacent to the operational work areas;
- Aquatic marginal vegetation, drainage ditches / main drains;
- Hedgerows, lines of trees; lowland mixed deciduous woodland;
- Protected and notable species, including badger, barn owl, bats (assemblage and roosts), breeding birds, reptiles, otter, water vole and wintering birds; and
- Skylark.

9.8.12. Table 9-15 below summarizes the potential environmental effects during the operational phase on designated sites, habitats and species. It details the identified potential impact pathways, embedded and operational controls implemented to mitigate these impacts, and the resulting pre-residual effects. The receptors and features include internationally and nationally designated sites, local wildlife sites, habitats within the Scheme and protected and notable species. Each entry outlines specific concerns, mitigation strategies, and assessments to ensure environmental integrity and compliance with relevant conservation requirements.

Table 9-15: Summary of Environmental Effects and Mitigation Measures during Operational Phase

Receptor / Feature	Potential Impacts	Embedded/Operational Controls	Effect (pre-residual with embedded controls)
The Wash Ramsar/SPA/ SSSI; Nene Washes Ramsar/SPA/SSSI.	Collision risk to wintering birds crossing the GCR corridor Potential displacement/predator evasion effects at landscape scale – no significant effect due to location of functionally linked land in relation to the Scheme.	Targeted line marking would be implemented at locations identified through the collision risk modelling, with bird flight diverters installed on elevated-risk spans. These measures would be secured through the **Design Parameters** (Doc Ref. 7.4). The **OOEMP** (Doc Ref. 7.11) sets out controls for inspection and maintenance activities, including timing restrictions, minimisation of lighting, and pollution prevention measures.	Negligible–Minor adverse (Not significant). Integrity addressed via HRA.
Unattributed IRZ (centroid TF 3499 1700) affecting parcels D1/D2/D3-1/D-2/D-3	Potential functional linkage associated with the above Ramsar/SPA/SSSI's. Loss of land within parcel D which intersects with IRZ. Collision risk to wintering birds crossing the GCR corridor - Potential displacement/predator evasion effects at landscape scale.	Targeted line marking would be implemented at locations identified through the collision risk modelling, with bird flight diverters installed on elevated-risk spans. These measures would be secured through the **Design Parameters** (Doc Ref. 7.4). The **OOEMP** (Doc Ref. 7.11) includes appropriate stand-off distances to be maintained from sensitive ecological features, where practicable. It also includes out controls for maintenance activities to minimise disturbance.	Negligible – Minor adverse (Not significant) Integrity addressed via HRA.
Slys Connection LWS (parcels D-2/D-3); South Holland Main Drain (West) LWS (parcel B-5); Wheatmere Drain LWS	Pollution risk from surface water runoff, disturbance from maintenance activities including vegetation management, and disturbance from operational lighting.	The management of surface water runoff, including for the solar PV arrays, BESS Compound, Substations and access tracks is managed through **ES Appendix 11-4: Outline Drainage Strategy** (Doc Ref. 6.3) to ensure that no significant hydrological effects occur and therefore, there are no significant effects to these LWSs. The **OOEMP** (Doc Ref. 7.11) includes maintenance protocols incorporating buffer zones, bank protection measures, pollution and sediment control, and biosecurity procedures, with operational lighting minimised to reduce ecological disturbance.	Negligible (Not significant)
Aquatic marginal vegetation; drainage ditches/main drains (Local)	Pollution risk from surface water runoff, disturbance from maintenance activities including vegetation management, INNS spread if biosecurity lapses. Provision of reinstated and enhanced habitats.	The **OOEMP** (Doc Ref. 7.11) includes maintenance protocols incorporating buffer zones, bank protection measures, pollution and sediment control, and biosecurity procedures, with operational lighting minimised to reduce ecological disturbance. The management of surface water runoff, including for the solar PV arrays, BESS Compound, Substations and access tracks is managed through **ES Appendix 11-4: Outline Drainage Strategy** (Doc Ref. 6.3) to ensure that no significant hydrological effects occur and therefore, there are no significant effects to aquatic marginal vegetation and drainage ditches. The **OLEMP** (Doc Ref. 7.16) sets out measures for riparian enhancement where feasible and biosecurity measures during the operational phase.	Negligible (Not Significant)); Minor beneficial (Not Significant) where enhancement delivered

Receptor / Feature	Potential Impacts	Embedded/Operational Controls	Effect (pre-residual with embedded controls)
Hedgerows, lines of trees; lowland mixed deciduous woodland (Local)	Disturbance from maintenance activities including vegetation management, compound lighting spill. Provision of reinstated and enhanced habitats.	The **OLEMP** (Doc Ref. 7.16) sets out the creation and subsequent management of habitats, which is determined by the characterisation of the existing baseline and post construction mitigation habitat aims. Management seeks to reduce disturbance to biodiversity. A programme of monitoring will be undertaken. The **OOEMP** (Doc Ref. 7.11) includes light sensitive principles to be implemented to reduce ecological disturbance. Any required management of vegetation within the Scheme will be undertaken in accordance with legislative requirements associated with protected and notable species likely to be present at the Site. Where required pre-start checks by an ecologist and presence of Ecological Clerk of Works (ECoW) supervision will be provided.	Negligible (not Significant)); Minor beneficial (Significant at a local scale) for hedgerows and line of trees.
Badger; barn owl; bats (assemblage and roosts); breeding birds; reptiles; otter; water vole; wintering birds	Disturbance from maintenance activities including vegetation, compound lighting spill, - Collision risk (wintering birds – addressed above) Provision of reinstated and enhanced habitats.	The **OOEMP** (Doc Ref. 7.11) includes light sensitive principles to be implemented to reduce ecological disturbance. Any required management of vegetation within the Scheme will be undertaken in accordance with legislative requirements associated with protected and notable species likely to be present at the Site. Where required pre-start checks by an ecologist and presence of Ecological Clerk of Works (ECoW) supervision will be provided. The **OLEMP** (Doc Ref. 7.16) sets out the creation and subsequent management of habitats, which is determined by the characterisation of the existing baseline and post construction mitigation habitat aims. Management seeks to maximise and reduce disturbance to biodiversity. A programme of monitoring will be undertaken.	Moderate beneficial (Significant) with embedded controls and habitat establishment[58].
Skylark (Local) – operational land-use change	The presence of the solar PV arrays would result in a long-term reduction in open arable nesting habitat, with potential displacement of ground-nesting species to retained open fields and field margins.	As set out within the **OLEMP** (Doc Ref. 7.16), the Farmland Bird Mitigation Strategy would provide management principles for the establishment of skylark plots within the allocated Habitat Management Areas to offset the loss of habitat. Requirements for monitoring and adaptive management are also set out.	Minor adverse at Local level (Not significant)

[58] Greater abundance and diversity of low-trophic prey from enhanced and created ecologically designed habitats benefits higher trophic levels.

Decommissioning Phase

9.8.13. The overall net change for ecological receptors is anticipated to be negligible, with land returned to baseline conditions. Decommissioning impacts (disturbance, vibration, traffic) are expected to be similar to or slightly reduced relative to construction. With the **ODEMP** (Doc Ref. 7.12) establishing equivalent measures to those set out within the **OCEMP** (Doc Ref. 7.10), decommissioning effects are reduced to not significant.

9.9. Additional Monitoring, Mitigation and Enhancement Measures

9.9.1. The assessment presented in Section 9.8 identified no significant effects on important ecological features. Therefore, no additional mitigation is required. Habitat enhancement measures have also been considered to be embedded within the **OLEMP** (Doc Ref. 7.16) and, therefore, have been considered within the operational assessment presented within Section 9.8.

9.9.2. Monitoring requirements during the construction and operational phases are set out within the **OCEMP** (Doc Ref. 7.10), **OOEMP** (Doc Ref. 7.11) and **OLEMP** (Doc Ref. 7.16). Nonetheless, where pre-construction surveys identify that impacts on legally protected species cannot reasonably be avoided, additional mitigation would be secured through statutory licensing with Natural England as required for badger, bats and water vole.

9.9.3. In relation to water vole, Natural England Class Licence CL31 would be applied to displace individuals from less than 50 metres of occupied bank only where unavoidable; riparian planting and soft-engineering measures would be implemented to maintain habitat connectivity, and methods would be agreed with the relevant Internal Drainage Boards where applicable. Any displacement would be undertaken in seasonally appropriate periods and in accordance with an ecologist-approved method statement, with supervision by a suitably qualified ecologist and post-works reinstatement and monitoring to confirm re-use of banks.

9.9.4. In relation to trees with bat potential, all trees with Potential Roost Features (PRFs) within working areas or buffers would be subject to pre-works checks, and where required, targeted aerial inspection and/or emergence/re-entry or hibernation surveys. Works would be micro-sited to avoid PRF trees where practicable and lighting would be designed to avoid illumination of retained and newly planted trees. If a bat roost is confirmed and cannot be avoided, a Natural England bat mitigation licence would be obtained prior to any works, with measures such as timing to avoid sensitive periods, soft-felling and sectional dismantling under supervision, retention where feasible, and provision of appropriate like-for-like or better roost compensation (e.g. bat boxes or bespoke structures) and post-installation monitoring secured through the licence and implemented under an Natural England approved method statement.

9.9.5. In relation to badgers, pre-construction surveys would be undertaken to confirm the location and status of any setts and to inform micro-siting and appropriate stand-off buffers. Where significant disturbance to a sett is

unavoidable, temporary exclusion or closure would be undertaken under a Natural England licence at an appropriate time of year, using one-way gates installed for the prescribed period and, where required, provision of artificial setts and/or enhancement of alternative territories. Site practices would include ECoW supervision at sensitive interfaces, trench protection (covers and escape ramps), speed control and permeability measures to maintain connectivity. Post-works checks would confirm reinstatement of access and continued use, in line with the commitments in the **OCEMP** (Doc Ref. 7.10).

9.10. Residual Effects

9.10.1. The residual effects of the Scheme during the construction, operational and decommissioning phases are the same as those outlined within Section 9.8 Assessment of Potential Impacts and Likely Significant Effects.

9.11. Cumulative Effects

9.11.1. Cumulative effects are the combined effects of multiple development schemes (in conjunction with the Scheme) which may, on an individual basis be insignificant but, cumulatively, have a significant effect. Cumulative effects with other development schemes are also referred to as inter-project cumulative effects. An assessment of the likely significant inter-project cumulative effects in relation to Ecology and Biodiversity is provided below.

Approach and methodology

9.11.2. The cumulative assessment considers inter project ("in combination") effects where other plans/projects could have credible spatial and temporal overlap with the Scheme. Pathways are separated by receptor:

- Overhead lines (OHL): bird collision risk along movement corridors.
- Ground mounted solar: land use change affecting farmland birds (e.g., skylark) and habitats.
- Construction-phase disturbance: cumulative disturbance where construction windows overlap spatially and temporally (noise, lighting, traffic, human presence, dust/air emissions) affecting designated sites, LWS, aquatic margins/drains, and protected/notable species. Where credible overlap exists, effects are assessed with reference to embedded controls (e.g. **OCEMP** (Doc Ref. 7.10) /**OOEMP** (Doc Ref. 7.11)) and timing/stand-off measures.

9.11.3. Screened schemes are those within the Zone of Influence (ZoI) and relevant pathway. Screening uses project information in the planning system and the HRA screening radius (15–20km for IIWS, extended where qualifying species are birds/otter).

9.11.4. It is not considered likely that the Scheme is decommissioned at the same time as the cumulative schemes and therefore, it is not considered likely that there would be significant cumulative effects with the identified schemes at the decommissioning stage.

Cumulative schemes screened

9.11.5. Cumulative schemes relevant to the overhead lines – collision pathway include:

- Grimsby to Walpole (EN020036) and Weston Marsh to East Leicestershire (EN0210007): parallel sections and local proximity to the Scheme's GCR corridor were considered.

9.11.6. With the Scheme's embedded bird diverters and refinement/monitoring established within the **OOEMP** (Doc Ref. 7.11), residual in-combination collision risk is assessed as not significant. Refer to **ES Appendix 9-14: HRA Report** (Doc Ref. 6.3) for further details.

9.11.7. Ground mounted solar – land use pathway (skylark and habitats):

- Other solar projects within the ZoI primarily contribute via land use change (loss/alteration of open arable). The Scheme's on--Site Farmland Bird Mitigation Strategy (FBMS) specified within the **OLEMP** (Doc Ref. 7.16) (including skylark plots, conservation headlands/margins, low disturbance regime, monitoring/adaptive management) reduces operational effects on skylark to minor adverse (not significant). Relevant ground mounted solar schemes taken forward for cumulative assessment for ecology are those listed in Table 9-16. Other regional NSIPs/TCPA projects not carried into Table 9-16 for ecology are screened out. Given spatial separation and the prevalence of arable land locally, no significant interproject cumulative effect is predicted at Local level.

9.11.8. Table 9-16 below screens plans/projects within the Zone of Influence, grouped by pathway (e.g. overhead line collision vs ground mounted solar land use), and indicates whether each is taken forward for assessment.

Table 9-16: Screening table (by pathway)

ID and Application Reference	Application and Description	Distance from the Site (closest point)	Status	Pathway	Scoped into assessment?
Nationally Significant Infrastructure Projects					
DCO 001 EN020036	National Grid Electricity Transmission – Grimsby to Walpole (Great Grid Upgrade). New c.140km 400 kV overhead line and 5 substations from Grimsby to Walpole	Overlapping Order Limits with the GCR	Pre-application	Collision (OHL) / Construction disturbance	Yes (collision/ construction disturbance)
DCO 002 EN010130	Outer Dowsing Offshore Wind (Generating Station). Offshore wind farm with offshore/onshore cables and substations	~640m north of the GCR	DCO Granted (Approved)	Construction disturbance	Yes (construction disturbance)
DCO 003 EN021003	National Grid – Eastern Green Link 3 and 4. Converter/switching stations (Walpole/East Lindsey)	~3.7km east of SDA	Pre-application	Construction disturbance	Yes (construction disturbance)
DCO 004 EN010110	Medworth Energy from Waste Combined Heat and Power Facility (58 MW)	~13km SE of SDA	DCO Granted (Approved)	Construction disturbance	Yes (construction disturbance)
DCO 005 WA010004	Anglian Water – Fens Reservoir and associated infrastructure	~13.7km south of SDA	Pre-application	Construction disturbance	Yes (construction disturbance)
DCO 006 EN010151	Beacon Fen Energy Park (solar PV; up to 400 kV connection)	~14.1km north of GCR	Pre-application	Land-use (skylark/habitats) / construction disturbance	Yes (land-use/ construction disturbance)
DCO 008 WA010003	Anglian Water – Lincolnshire Reservoir and associated infrastructure	~14.6km west of GCR	Pre-application	Construction disturbance	Yes (construction disturbance)

ID and Application Reference	Application and Description	Distance from the Site (closest point)	Status	Pathway	Scoped into assessment?
DCO 009 EN010123	Ecotricity – Heckington Fen Solar Park (solar PV ~500 MW)	~14.7km north of GCR	DCO Granted (Approved)	Land-use (skylark/habitats) / construction disturbance	Yes (land-use/ construction disturbance)
DCO 010 EN010095	Boston Alternative Energy Facility	~13km north-west of GCR	DCO Granted (Approved)	Land-use (skylark/habitats) / construction disturbance	Yes (land-use/ construction disturbance)
DCO 011 EN0210007	Weston Marsh to East Leicestershire	Overlapping Order Limits with the GCR	Pre-application	Collision (OHL) / construction disturbance	Yes (collision/ construction disturbance)
DCO 012 EN0210006	Ossian Wind Farm	Overlapping EIA Scoping Boundary with the GCR	Pre-application	None (no relevant OHL/landuse pathway within ZoI) / construction disturbance	Yes (construction disturbance)
Planning applications					
EIA/11/24	Land to the East of Surfleet Bank and West of Woad Farm, Spalding. Proposed anaerobic digester operation and associated infrastructure.	1km	Undecided	Construction disturbance	Yes

ID and Application Reference	Application and Description	Distance from the Site (closest point)	Status	Pathway	Scoped into assessment?
H16-0871-24	Fields South of Pilgrim's Pride Ltd, Fulney Lane, Spalding. a Solar PV Array and an onsite connection to the existing Pilgrim factory.	1km	Approved	Land-use / construction disturbance	Yes
H09-0501-23	Land off Holbeach Drove Gate Holbeach Drove Spalding. Erection of agricultural machinery assembly facility, research and training facility, ground mounted solar array and associated infrastructure.	0km	Approved	Land-use/ construction disturbance	Yes
H02-0875-22	Decoy Farm Spalding Road Crowland. King Prawn Hatchery, Grow Out and Processing Facility.	0km	Approved	Construction disturbance	Yes
H13-0190-23	Land at Moulton Bulb Co. Ltd Long Lane Moulton Spalding. Erection of a ground mounted solar array with associated infrastructure.	1km	Approved	Land-use / construction disturbance	Yes
H04-0849-22 / B/22/0356	Land West of Cowbridge Road Bicker Fen Boston. Proposed development of a solar PV array and associated infrastructure at Bicker Fen, Boston and South Holland.	12km	Approved	Land-use / construction disturbance	Yes
S24/2100	Home Farm Dyke Drove Bourne. Proposed development of a solar PV array and associated infrastructure,	14.4km	Approved	Land-use / construction disturbance	Yes

ID and Application Reference	Application and Description	Distance from the Site (closest point)	Status	Pathway	Scoped into assessment?
23/00483/OUT	Land East Of Newborough Road Newborough Road Paston Peterborough. Demolition of existing agricultural buildings and the development of a phased residential development (up to 1,130 dwellings) including green space, access and other associated infrastructure	10km	Awaiting Decision	Construction disturbance	Yes
19/00272/OUT	Land Off Newborough Road, North Of A47 And West Of A16 Paston Peterborough. Outline application for the Erection of up to 870 residential dwellings with access from Newborough Road; provision of a primary school and playing field; a local center up to 0.25ha with A1/A2/A3/A4/A5/D1 use classes; open space and landscaping; and other infrastructure and associated works including demolition of all buildings on site,	10km	Approved	Construction disturbance	Yes
B/21/0443	Land North West of Bicker, Vicarage Drove Solar Farm. Proposed construction and operation of a solar photovoltaic farm, battery storage and associated infrastructure,	14.9km	Approved	Land-use/ construction disturbance	Yes
EA 001	Spalding Power Station, West Marsh Road, Spalding. Spalding Energy Expansion	0.9km	Approved	Construction disturbance	Yes

ID and Application Reference	Application and Description	Distance from the Site (closest point)	Status	Pathway	Scoped into assessment?
	Combined cycle gas turbine Power Station / Variation of a Section 36 consent, Electricity Act 1989.				

Table 9-17: Assessment and residuals table (cumulative)

Receptor(s)	Residual effect of the Scheme alone	Assessment of cumulative effects with screened in schemes	Proposed additional mitigation applicable to the Scheme	Residual cumulative effects
Internationally designated sites (SPA/Ramsar/SAC)	Construction: Negligible (Not significant); Operation: Negligible–Minor adverse (Not significant; operational collision risk mitigated by targeted line markers)	Minimal shared construction footprints or emissions pathways. Construction phase impacts minimised through measures established within the **OCEMP** (Doc Ref. 7.10). It is assumed that cumulative schemes would be required to implement similar measures through their DCO / planning consents. Operational collision pathway assessed in **ES Appendix 9-14: HRA** (Doc Ref. 6.3). With targeted line-markers embedded, the HRA Appropriate Assessment concludes no adverse effect on site integrity (alone or in combination). **OOEMP** (Doc Ref. 7.11) includes monitoring/controls.	None	Not significant (all phases)
Local Wildlife Sites adjacent to works	Construction: Minor adverse (Not significant) at interfaces; Operation: Negligible (Not significant)	Schemes are spatially separate; no overlapping LWS works on the same reaches/windows are anticipated.	None	Not significant (all phases)
Drainage ditches/main drains	Construction: Minor adverse (Not significant) at crossings; Operation: Negligible–Minor	Limited potential overlap of bank works on the same reaches/windows at the northern end of the GCR only. Embedded drainage design,	None	Not significant (all phases)

Receptor(s)	Residual effect of the Scheme alone	Assessment of cumulative effects with screened in schemes	Proposed additional mitigation applicable to the Scheme	Residual cumulative effects
	beneficial (Not significant)	reinstatement/enhancement and **OCEMP** (Doc Ref. 7.10) / **OOEMP** (Doc Ref. 7.11) controls assumed to apply across schemes.		
Bats (foraging/commuting)	Construction: Minor adverse (Not significant); Operation: Negligible–Minor beneficial (Not significant)	Where scheme boundaries are proximate, it is assumed other projects apply standard construction lighting/pollution/dust controls through their EMPs. No pathway for significant residual in-combination effects on bats is identified.	None	Not significant (all phases)
Wintering birds (GCR)	Construction: Negligible (Not significant); Operation: Negligible–Minor adverse (Not significant)	Parallel/proximate OHL schemes considered (EN020036; EN0210007). With the Scheme's embedded targeted line-markers and operational controls (**OOEMP** (Doc Ref. 7.11)), residual in-combination collision risk is not significant. HRA addresses in-combination effects and finds no adverse effect on integrity (AEoI) with mitigation.	None	Not significant (all phases)
Skylark (operation)	Minor adverse (Not significant)	**OLEMP** (Doc Ref. 7.16) includes establishment of skylark plots and adaptive management/monitoring. Other schemes are assumed to manage operational habitats similarly via their	None	Minor adverse (Not significant)

Receptor(s)	Residual effect of the Scheme alone	Assessment of cumulative effects with screened in schemes	Proposed additional mitigation applicable to the Scheme	Residual cumulative effects
		OLEMPs. No likely significant effect in combination identified.		
Badger	Construction: Minor adverse (Not significant); Operation: Negligible (Not significant)	Low additive risk given territoriality and spatial separation of scheme footprints. Standard good practice secured via **OCEMP** (Doc Ref. 7.10) /**OOEMP** (Doc Ref. 7.11); other schemes assumed equivalent. No likely significant in-combination effects identified.	None	Not significant (all phases)
Otter and water vole	Construction: Minor adverse (Not significant) at interfaces; Operation: Negligible–Minor beneficial (Not significant)	Standard riparian method statements, buffers and reinstatement avoid significant additive effects. CL31 displacement would only apply if unavoidable at Scheme level.	None (CL31 only if unavoidable at Scheme level)	Not significant (all phases)
Reptiles (common species)	Construction: Negligible–Minor adverse (Not significant); Operation: Negligible–Minor beneficial (Not significant)	Standard controls via **OCEMP** (Doc Ref. 7.10)/ **OOEMP** (Doc Ref. 7.11) assumed across schemes; no mechanism for significant in-combination effects.	None	Not significant (all phases)

Notes on evidence and precautionary approach

9.11.9. Collision risk modelling and VP datasets identify a notable risk zone for golden plover south of Weston Hills and at the southern end of the GCR; targeted line marking (including night-visible types) is embedded on these spans. For HRA purposes, quantitative cumulative collision-risk modelling is not reported. Instead, the HRA presents a qualitative in-combination assessment, drawing on the scheme-specific evidence base (including the CRM and VP data), applying professional judgement and the precautionary principle, and concludes that the Scheme is not likely to have significant effects alone and, with embedded line-marking, in-combination effects with other plans or projects are unlikely to be significant. This approach accords with EcIA good practice on cumulative effects and the precautionary principle where data limitations exist, and with planning guidance to have regard to cumulative effects from existing or approved development.

Conclusion on cumulative effects

9.11.10. With the Scheme's embedded measures and, where required, additional receptor specific measures (FBMS for skylark), no residual significant adverse cumulative effects are predicted for ecology. The HRA AA concludes no AEoI for The Wash/Nene Washes "alone" and "in combination" with relevant OHL projects.