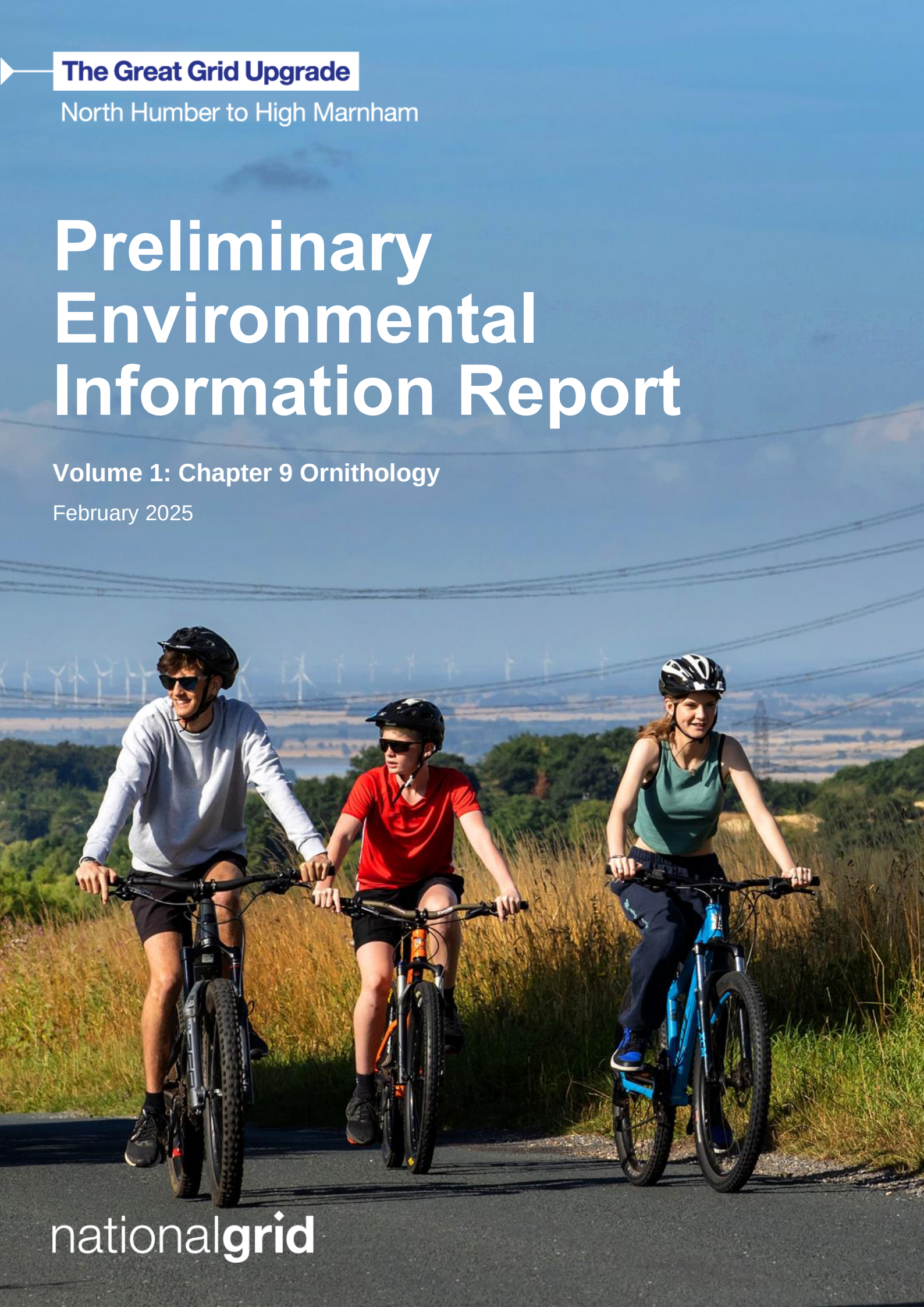
The Great Grid Upgrade

North Humber to High Marnham

Preliminary Environmental Information Report

Volume 1: Chapter 9 Ornithology

February 2025



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This report has been redacted to protect the breeding locations of birds afforded elevated levels of protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and that are vulnerable to persecution or other deliberate harm. As such this report is available for inspection by all interested parties. A separate non-redacted version has also been made available to a limited number of key stakeholders.

9. Ornithology

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9. Ornithology

9.1 Introduction

9.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents information about the preliminary environmental assessment of the likely significant ornithology effects identified to date, that could result from the Proposed Overhead Line between the proposed Birkhill Wood Substation and the proposed High Marnham Substation as described in **Chapter 4 Description of the Project**.

9.1.2 **Chapter 1 Introduction** explains that the proposed Birkhill Wood Substation and proposed High Marnham Substation are proposed to be authorised through separate consenting procedures, however, they have also been included as part of the Project. As explained in **Chapter 5 Approach to Preparing the PEIR**, the environmental effects of these two substations including their associated overhead line reconfigurations, hereafter referred to as the Proposed Substation Works, have accordingly been considered within **Chapter 20 Substations and Associated Works**. For the purpose of this chapter the Proposed Overhead Line between the proposed Birkhill Wood Substation and the proposed High Marnham Substation is hereafter referred to as the Proposed Overhead Line.

9.1.3 To ensure that the Project as a whole has been assessed a summary has been included within this preliminary assessment of the likely significant effects on Ornithology which brings together the assessment of the Proposed Overhead Line and Proposed Substation Works for Ornithology.

9.1.4 This chapter describes the methodology used, the datasets that have informed the preliminary assessment, baseline conditions, mitigation and the preliminary residual significant effects on ornithology (birds) that could result from the Proposed Overhead Line.

9.1.5 This chapter covers effects on the following during construction, operation and maintenance noting that decommissioning has been scoped out.

- habitat fragmentation/ loss and/or disturbance to Statutory and non-statutory designated sites;
- habitat loss or disturbance to protected or notable species of bird;
- barriers to barrier to species dispersal;
- mortality of breeding and non-breeding birds;
- Pollution impacts on designated sites and notable species;
- Habitat gains; and
- Increased predation effects from potential increased populations of predatory birds.

9.1.6 This chapter should be read in conjunction with:

- **Chapter 4 Description of the Project**;
- **Chapter 5 Approach to Preparing the PEIR**; and
- **Chapter 20 Substations and Associated Works.**

9.1.7 There are interrelationships related to the potential effects on birds and other environmental topics. Therefore, please also refer to the following chapters:

- **Chapter 8 Ecology**;
- **Chapter 15 Air Quality**;
- **Chapter 16 Noise and Vibration**; and

9.1.8 This chapter is supported by the following figures in Volume 2 and appendices in Volume 3:

- **Figure 9.1 Study Areas;**
- **Figure 9.2 Vantage Point Locations;**
- **Figure 9.3 Vantage Point Viewing Arcs;**
- **Figure 9.4 Field Survey Areas;**
- **Figure 9.5 Functionally Linked Land Survey Areas;**
- **Figure 9.6 Through the Tide Count Survey Areas;**
- **Figure 9.7 WeBS Count Sectors;**
- **Figure 9.8 Nightjar Survey Area;**
- **Figure 9.9 CBC Survey Areas;**
- **Figure 9.10 International Statutory Designated Sites;**
- **Figure 9.11 National and Local Statutory Designated Sites;**
- **Figure 9.12 Non-Statutory Designated Sites;**
- **Figure 9.13 BTO WeBS Core Count Sectors;**
- **Figure 9.14 BTO WeBS Low Tide Count Sectors;**
- **Figure 9.15 RSPB Monitored Sites;**
- **Figures 9.16 – 9.26 Species Distribution Maps;**
- **Appendix 9.1 Baseline Ornithology Report;** and
- **Appendix 9.2 Preliminary Assessment Tables**

9.2 Regulatory and Planning Context

9.2.1 This section sets out the legislation and planning policy that is relevant to the preliminary ornithological assessment. A full review of compliance with relevant national and local planning policy will be provided within the Planning Statement that will be submitted as part of the application for Development Consent.

9.2.2 **Chapter 2 Regulatory and Planning Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy and planning guidance relevant to the assessment of potential effects on birds associated with the construction, operation and maintenance of the Project is presented below. Details of legislation and guidance relevant specifically to ornithology are set out in full in section 2 of **Appendix 9.1 Baseline Ornithology Report**.

Legislation

9.2.3 The legislation listed below has been considered when identifying potential constraints to the Project design options and mitigation.

- Directive 2009/147/EC on the conservation of wild birds (the codified version of Council Directive 79/409/EEC as amended) (Ref 9.9);
- Wildlife and Countryside Act 1981 (WCA) (as amended) (Ref 9.47);
- The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations 2017) (Ref 9.42); and
- Natural Environment and Rural Communities Act 2006 (NERC) (Ref 9.32).

National Policy Statements (NPSs)

9.2.4 **Chapter 2 Regulatory and Planning Context** sets out the overarching policy context relevant to the Project, including the Overarching NPS for Energy (EN-1) (Ref 9.13). This is supported by the NPS for Electricity Networks Infrastructure (EN-5) (Ref 9.12).

Overarching NPS for Energy (EN-1), 2024

9.2.5 Paragraph 5.4.22 states that '*The design of energy NSIP proposals will need to consider the movement of mobile/migratory species such as birds, fish and marine and terrestrial mammals and their potential to interact with infrastructure. As energy infrastructure could occur anywhere within England and Wales, both inland and onshore and offshore, the potential to affect mobile and migratory species across the UK and more widely across Europe (transboundary effects) requires consideration, depending on the location of development'*.

9.2.6 Paragraph 5.4.55 states *'The Secretary of State should refuse consent where harm to a protected species and relevant habitat would result, unless there is an overriding public interest, and the other relevant legal tests are met. In this context the Secretary of State should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance'.*

9.2.7 The Project will consider opportunities to enhance ecosystem services and natural capital within the design which follows the mitigation hierarchy to avoid and minimise impacts and effects to biodiversity receptors. Where impacts and effects on biodiversity receptors are unavoidable, the design would incorporate appropriate mitigation and/or compensation measures. Where required, a derogation licence and/or Site of Special Scientific Interest (SSSI) assent issued by Natural England would be sought to ensure compliance with legal requirements. The Project will assess impacts on birds within the PEIR and the final Environmental Statement (ES) which will include justification of any residual effects.

NPS for Electricity Networks Infrastructure (EN-5), 2024

9.2.8 Section 2.9 (Applicant assessment), at paragraph 2.9.3 states that '*Electricity networks infrastructure pose a particular risk to birdlife including large birds, such as swans and geese, and perching birds….'* and paragraph 2.9.4 advises that *'Applicants should consider measures to make lines more visible such as bird flappers and diverters….*'.

9.2.9 Paragraph 2.9.6 states that '*Particular consideration should be given to feeding and hunting grounds, migration corridors and breeding grounds, where they are functionally*

linked to sites designated or allocated under the 'national site network' provisions of the Conservation of Habitats and Species Regulations'.

9.2.10 Paragraphs 2.10.2 to 2.10.4 state that:

- '*Careful siting of a line away from, or parallel to, but not across, known flight paths can reduce the numbers of birds colliding with overhead lines considerably*'.
- '*Making lines more visible by methods such as the fitting of bird flappers and diverters to the earth wire, which swivel in the wind, glow in the dark and use fluorescent colours designed specifically for bird vision can also reduce the number of deaths. The design and colour of the diverters will be specific to the conditions – the line and pylon/transmission tower specifications and the species at risk*'.
- '*Electrocution risks can be reduced through the design of lattice steel tower crossarms, insulators and the construction of other parts of high voltage power lines so that birds find no opportunity to perch near energised power lines on which they might electrocute themselves*'.

9.2.11 Potential collision risk will be assessed at areas as agreed with Natural England (such as rivers and green corridors) through bird survey work, and mitigation measures designed and installed as appropriate.

Other National Policy

9.2.12 Although the Project will be tested in line with National Policy Statements above, the preliminary assessment has also been undertaken in accordance with, and with reference to, the following national policy:

- National Planning Policy Framework (NPPF) (Ref 9.18) and accompanying planning practice guidance relating to the Natural Environment (Ref 9.59).

9.2.13 The NPPF (Ref 9.18) requires planning applications to contribute and enhance the natural and local environment through protecting and enhancing sites of biodiversity, as Para 192(b) states planning applications should '*promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity*.'

Regional and Local Policy

9.2.14 **Chapter 2 Regulatory and Planning Context** lists relevant regional and local policy. Key local policy relevant to ornithology, that has informed this preliminary assessment and will inform the assessment reported within the ES, includes:

- East Riding Local Plan 2012 - 2029, Adopted 2016 (Ref 9.19);
  - Policy ENV4: Conserving and enhancing biodiversity and geodiversity;
  - Policy ENV5: Strengthening green infrastructure;
- East Riding of Yorkshire Local Plan Update 2020 - 2039 (Proposed) (Ref 9.20
  - Policy ENV4: International, National and Local sites of Importance for Biodiversity;
  - Policy ENV5: Enhancing biodiversity and geodiversity;

- North Lincolnshire Local Development Framework Core Strategy 2006 - 2026; Adopted 2011 (Ref 9.37)
  - CS17: Biodiversity;
- North Lincolnshire Local Plan Saved Policies (Ref 9.36);
  - LC4 – Development Affecting Sites of Local Nature Conservation Importance
  - LC5 - Species Protection
- Bassetlaw Local Plan 2020 - 2038, Adopted 2024 (Ref 9.53);
  - Policy 39: Trees, woodlands and hedgerows;
- Cottingham Neighbourhood Plan and Design Guide 2015 - 2029, Adopted 2018 (Ref 9.54);
  - GP5B Biodiversity and the green network (wildlife);
- Treswell and Cottam Neighbourhood Plan, Adopted 2021 (Ref 9.55);
  - Policy 5: Lee Beck Green Corridor;
- Walkeringham Neighbourhood Plan 2019 - 2035, Adopted 2021 (Ref 9.56);
  - Neighbourhood Plan Policy 2: Protecting the natural environment and landscape character;
- Misterton Neighbourhood Plan 2022 - 2038 (Ref 9.57);
  - Policy 2R: Improving green and blue infrastructure and biodiversity.

9.2.15 The relevant Local Nature Recovery Strategies for Greater Lincolnshire, Hull and East Yorkshire and Nottinghamshire and Nottingham will be used to inform the final assessment reported in the ES, should they be published and become available prior to submission of application for development consent.

9.2.16 North Lincolnshire Council submitted the New Local Plan for Examination in November 2022. The Examination progressed however the authority took the decision to formally withdraw the New Local Plan from the Examination in September 2024. The Saved Policies in the Local Plan (2003) as updated in October 2024 (Ref 9.58), North Lincolnshire Local Development Framework Core Strategy (2011) (Ref 9.37) from the adopted Development Plan and have been considered in the PEIR where relevant.

9.3 Scoping Opinion and Consultation

Scoping Opinion

9.3.1 The scope of the assessment has been informed by the Scoping Opinion (Ref 9.48) provided by the Planning Inspectorate on behalf of the Secretary of State, following submission of the Environmental Impact Assessment (EIA) Scoping Report (Ref 9.49). The scope has also been informed through consultation and engagement with relevant consultees. A summary of the Scoping Opinion (Ref 9.48) together with a response from National Grid against each point of relevance to ornithology is provided in Table 9.1.

9.3.2 As ornithology was considered in the wider Ecology Chapter of the EIA Scoping Report one table of aspect comments was received as part of the Scoping Opinion (Ref 9.48 Table 9.1 only details those comments that are relevant to the assessment of ornithological receptors. For other comments refer to **Chapter 8 Ecology**.

Table 9.1 – Comments raised in the Scoping Opinion

ID	Inspectorate's comments	Response
3.3.1	**Permanent habitat loss, temporary habitat loss, disturbance and fragmentation, indirect impacts - Statutory and non-statutory designated sites (without mobile qualifying criteria) located greater than 2 km from the site** The Applicant proposes to scope out this matter for all phases for the receptors identified on the basis that the potential for significant effects as a result of the Proposed Development would not be likely. The Inspectorate considers that there is insufficient evidence relating to the extent and location of permanent habitat loss, demonstration that these designations do not form supporting habitat / foraging habitat (for example) to determine whether these statutory and non-statutory designated sites are linked to the Proposed Development. In the absence of this information, the Inspectorate is unable to agree that significant effects would not be likely.	The applicant does not propose to scope out designated sites with mobile qualifying criteria, for example birds. Therefore, permanent and temporary loss, disturbance, and fragmentation of supporting/foraging habitat (including functionally linked land) has been included in this preliminary assessment and will be included within the ES. Designated sites located in the relevant study areas (including those beyond 2 km) have been considered in terms of potential indirect impacts that could occur, for example changes to water quality where a potential hydrological link exists between the designated site and the Project. Sites beyond 2 km are not assessed where there is no likely pathway for significant effects.

ID	Inspectorate's comments	Response
3.3.2	**Incidental mortality of protected or notable species (Invertebrates) – Construction and Operation (Maintenance activity)** The Applicant proposes to scope out this matter for all phases for the receptor identified on the basis that it is unlikely that notable population assemblages will be significantly affected by direct mortality once mitigation measures are in place. The Inspectorate is content that this matter can be scoped out, subject to appropriate mitigation measures agreed with the relevant stakeholders, secured and embedded within control documents.	The applicant notes the Inspectorate's comments. Appropriate mitigation will be agreed with the relevant stakeholders and will be secured and embedded within the appropriate documents.
3.3.4	**Chesterfield Canal Site of Special Scientific Interest (SSSI)** The Applicant's attention is drawn to the consultation response from the Canal and River Trust (Appendix 2 of this Opinion). This states that a section of the Chesterfield Canal is a designated SSSI and, although it is designated primarily for the nationally uncommon aquatic plant community, it is an important flight line for birds and bats. The Inspectorate therefore advises that any cable crossings have measures in place to reduce the risk of cable strikes by birds and that any construction phase activities should be kept away from the canal corridor to minimise any disturbance. The ES should also provide full details of habitat loss in proximity to the Chesterfield Canal SSSI, including an assessment of the extent of vegetation loss. Any proposed mitigation measures should be agreed with the relevant stakeholders.	Preliminary effects in relation to birds are discussed within this chapter and will be reported in full in the ES**.** Proposed and appropriate mitigation measures will be agreed with the relevant stakeholders and will be secured and embedded within the appropriate documents. Aquatic ecology is addressed in **Chapter 8 Ecology**.

Project Engagement and Consultation

9.3.3 National Grid has held several meetings with relevant consultees, and the ornithology assessment has been, and will continue to be informed by, consultation and engagement with stakeholders including East Riding of Yorkshire Council, North Lincolnshire Council, Bassetlaw District Council, Newark and Sherwood District Council and Nottinghamshire County Council. The Royal Society for the Protection of Birds (RSPB) and Natural England. Further details of these discussions will be detailed in the ES.

9.4 Assessment Approach and Methods

9.4.1 **Chapter 5 Approach to Preparing the PEIR** sets out the overarching approach which has been used in developing the preliminary environmental information. This section describes the technical methods used to determine the baseline conditions, sensitivity of receptors and magnitude of impacts and sets out the criteria that have been used for the preliminary ornithological assessment. This section also identifies further assessment needed to be undertaken, the findings of which will be reported in the ES.

Guidance Specific to the Ornithology Assessment

9.4.2 Relevant guidance specific to ornithology that has informed the approach to the preliminary assessment, and which will inform the final assessment as part of the ES, comprises:

- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland Terrestrial, Freshwater, Costal and Marine (Ref 9.6);
- Natural England and Department for Environment, Food and Rural Affairs (Defra) Standing Advice (protected species) (Ref 9.16);

  BS 42020:2013 Biodiversity: Code of Practice for Planning and Development (Ref 9.3);
- Birds of Conservation Concern 5 and Concern 5a (BoCC 5 & BoCC 5a) (Ref 9.40);
- The International Union for Conservation of Nature Red List of Threatened Species (Ref 9.26);
- NatureScot (2017) Recommended bird survey methods to inform impact assessment of onshore windfarms (Ref 9.35);
- NatureScot (2016) Guidance – Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds (Ref 9.34);
- Bird Survey & Assessment Steering Group (2024). Bird Survey Guidelines for assessing ecological impacts (Ref 9.2);
- British Trust for Ornithology Common Birds Census Instructions (1983) (Ref 9.30 ;
- BTO (2017) WeBS. Survey methods analysis and interpretation (Ref 9.4); and
- Species – Raptors – A field Guide for Survey and Monitoring (Ref 9.25), Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment (Ref 9.39), Bird Monitoring Methods: A Manual of Techniques for UK Key Species (Ref 9.24

- East Riding of Yorkshire Biodiversity Action Plan Strategy (Ref 9.22);
- Lincolnshire Biodiversity Action Plan (Ref 9.29); and
- Nottinghamshire Local Biodiversity Action Plan (Ref 9.38).

Study Area

9.4.3 The CIEEM Ecological Impact Assessment (EcIA) guidelines (Ref 9.6) require assessments to be focused on 'Zones of Influence' (ZoI) – defined as being the area over which changes arising from construction, operation (including maintenance) and decommissioning could lead to ecologically significant effects.

9.4.4 The study area for the ornithology assessment and data gathering includes the land within the draft Order Limits, as well as all designated sites and areas likely to support birds that occur within the relevant ZoIs for the Project.

9.4.5 The study areas for the ornithology assessment are described in Table 9.2 below. The study area for the ornithology is presented in **Figure 9.1 Study Area**[1]. This is presented for the Project inclusive of both the Proposed Overhead Line and Proposed Substation Works.

Table 9.2 – Study area for ornithology

Study area (distance from draft Order Limits)	Feature
30 km	Statutory designated sites of international nature conservation value (Ramsar Sites and Special Protection Areas (SPAs)) where bird species with large foraging and migratory ranges are a qualifying feature.
10 km	All other statutory designated sites of international nature conservation value (Ramsar and SPA).
5 km	Statutory designated sites of national and local nature conservation value e.g. Sites of Special Scientific Interest (SSSI) (also referencing Natural England Impact Risk Zones for SSSIs on the 'Multi-Agency Geographic Information for the Countryside' (MAGIC) website (Ref 9.15), National Nature Reserves (NNR) and Local Nature Reserves (LNRs))[2]. Species records and data for wetland birds from the British Trust for Ornithology (BTO) Wetland Birds Survey (WeBS)[3].

[1] The study areas have been defined based on best estimate of ZoI - for example we set a much larger study area for SPAs supporting 'species with large foraging ranges' (e.g. pink-footed goose) than for other sites

[2] There is often spatial overlap between SSSIs/SPAs and qualifying ornithological features of SSSIs in some cases might forage over relatively large distances outside of the designated site. Therefore, the study area for SSSIs with qualifying ornithological features that overlap SPAs or Ramsar sites is extended to 10 km.

[3] The Wetland Bird Survey (WeBS) is a joint scheme run by the British Trust for Ornithology (BTO), the Wildfowl & Wetlands Trust (WWT), Royal Society for the Protection of Birds (RSPB) and Joint Nature Conservation Committee (JNCC) to monitor non-breeding waterbirds in the UK. The scheme aims to identify population sizes, to determine

Study area (distance from draft Order Limits)	Feature
2 km	Non-statutory designated sites of nature conservation value e.g. Local Wildlife Sites (LWSs), Wildlife Trust Reserves and RSPB reserves. Records of protected and notable birds received from Local Environmental Records Centres (LERCs) and the RSPB.
Custom search areas	For the purposes of literature review and species or source – specific data sets not covered above.

9.4.6 The study areas might be refined as more information becomes available regarding the potential ornithological effects of the Proposed Overhead Line, and through consideration of presence, distribution and abundance of ornithology receptors. This will form the ZoI (which will vary between different biodiversity receptors) which will be defined within the ES.

Baseline Data Gathering and Forecasting Methods

Data collection

9.4.7 The baseline information has been informed by a desk study which has drawn on the following information sources:

- Following on from the data collected for the routeing and siting stage of the Project, Local Records Centres (LRCs) were contacted initially in April 2023 and most recently in July 2024 to gain information on pre-existing ecological data (i.e. locations of non-statutory sites designated for nature conservation, existing records of protected, notable and invasive non-native species (INNS). The LRCs that were contacted are:
  - North and East Yorkshire Ecological Data Centre (NEYEDC);
  - Greater Lincolnshire Nature Partnership (GLNP); and
  - Nottinghamshire Biological and Geological Records Centre (NBGRC).
- BTO WeBS data for nine core count (high tide) and 16 low tide count sectors within 5 km of the Proposed Overhead Line where it passes through the Humberhead Levels north and south of the River Ouse crossing. These were identified within a search area based on a ‘Scoping Boundary’, which was used during the early stages of the Project design phase as a guide to the approximate route being developed for the proposed Overhead Line;
- Site – specific monitoring data supplied by the RSPB Blacktoft Sands Reserve staff, including wetland bird counts and breeding bird data for 8 locations across the Humberhead Levels either side of the River Ouse, that are monitored and/or

trends in numbers and distribution, and to identify important sites for waterbirds. Year – round monthly coordinated ‘core’ counts are made during high tide periods. Low tide counts are carried out at major estuaries over winter (November – February) across the UK on a rolling 6-year cycle (this is the standard survey cycle for low tide counts, however counts are sometimes undertaken more or less frequently than this.

managed by RSPB. These range from overlapping the draft Order Limits, up to 7.5 km from them.

- Online data resources that were reviewed include:
  - the Natural England designated sites search website (Ref 9.31) for information on statutory designated sites of nature conservation interest and to confirm reasons for designation and their condition.
  - the MAGIC website (Ref 9.15 to identify the location (and details) of statutorily designated sites.
  - the Joint Nature Conservation Committee (JNCC) website (Ref 9.27) for site information and designation details of Special Areas of Conservation (SAC), SPAs and Ramsar Sites;
  - aerial imagery (Google Maps);
  - Ordnance Survey (OS) 1:10,000, 1:25,000, 1:50,000 and 1:250,000 base mapping;
  - Lincolnshire Biodiversity Action Plan (Ref 9.29
  - Nottinghamshire Local Biodiversity Action Plan (Ref 9.38) and;
  - East Riding of Yorkshire Biodiversity Action Plan Strategy (Ref 9.22);

9.4.8 **Figures 9.13 – 9.15** in Volume 2 respectively show the BTO WeBS Core Count sectors, Low Tide Count Sectors and RSPB monitored sites for which data were acquired.

9.4.9 Further data will be acquired as the design develops to ensure that the baseline is sufficiently robust, contemporary and spatially relevant.

Site visit and surveys

9.4.10 In line with the outcome of stakeholder engagement undertaken for the Project, the survey areas/locations and the technical scope of surveys were defined to enable:

- monitoring of bird flights and habitat use within land potentially functionally linked to the Humber Estuary SPA/Ramsar site and at key locations more widely across the draft Order Limits;
- monitoring of potentially suitable habitat for foraging nightjar that intersects the draft Order Limits and their environs within 5 km of Thorne and Hatfield Moors SPA;
- sampling of breeding and non-breeding bird populations across the Proposed Overhead Line, including use of wetland habitats in the environs of the proposed River Ouse crossing point; and
- detection of wintering migrant swans and other wetland bird species using potential flyways between wetland sites, where such flyways are likely to result in birds flying across the Proposed Overhead Line.

9.4.11 Early phase surveys were undertaken at selected locations between July – October 2022. These were subsequently taken forward and further developed in scope to meet the data requirements for assessment of the Proposed Overhead Line.

9.4.12 The ecological survey programme outlined below is based on the field surveys undertaken to date and those planned, taking into account results of the desk study, good practice guidance and previous consultation/engagement. Further information on

these, and on the ongoing programme of surveys beyond September 2024 (the reporting cut-off date set for this PEIR – see paragraphs 9.4.13 – 9.4.14) is provided in Table 3.2 of **Appendix 9.1 Baseline Ornithology Report**. The survey programme on which assessments are based herein includes the following:

- Vantage Point (VP) surveys to monitor flight activity for a selection of target species that are potentially vulnerable to collision with overhead power line infrastructure;
- Field counts of birds engaging in habitat use either side of the proposed River Ouse crossing point, to provide baseline data to inform an early Project design;
- Functionally Linked Land (FLL) field counts of birds within a minimum of 500 m either side of the draft Order Limits across the Humberhead Levels;
- Through the Tide Counts (TTTCs) to count birds on the River Ouse at the location of the proposed crossing point and a minimum of 500 m either side of the crossing point;
- High and Low Tide Counts of wetland birds on the River Ouse and adjacent terrestrial habitats up to a minimum of 500m either side of the proposed crossing point. This method replaced the TTTC method in April 2023 and is ongoing;
- Foraging nightjar (Caprimulgus europaeus) surveys to monitor use of potentially suitable habitat that overlaps the draft Order Limits within the potential foraging range of this species, which is a qualifying feature (during the breeding season) of Thorne and Hatfield Moors SPA, Thorne Crowle and Goole Moors SSSI and Hatfield Moors SSSI; and
- Common Birds Census (CBC) surveys to detect and quantify breeding bird assemblages at 13 sampling locations that overlap the draft Order Limits.

9.4.13 Further engagement and consultation with relevant consultees regarding the survey programme is on-going and may influence the final survey scope, which will be reported within the ES. Further detail regarding each survey method is provided in **Appendix 9.1 Baseline Ornithology Report** and **Figures 9.4 – 9.9**. Annex A to the baseline ornithology report includes a survey timeline that shows the overlap and intervals between different survey methods over the course of the baseline gathering phase to date.

9.4.14 Transect survey data and records of habitat use by target species (from all surveys) up to and including the end of the breeding season (September 2024) have been included in this report.

9.4.15 Flight data from Vantage Point Surveys have been included up to and including the end of March 2024, as flight data for the 2024 breeding season have not been collated and reviewed in time for presentation in the preliminary assessment. These, and all other data from ongoing surveys, will be presented in full in the ES.

Further data to be collected to inform the ES

9.4.16 In addition to ongoing or pending surveys additional data will be acquired through desk study as the Project progresses. Further data sources are likely to include, but are not necessarily restricted to, the following:

- BTO data report;
- Local/regional barn owl groups and other organisations operating nationwide such as Barn Owl Trust (BOT) and Wildlife Conservation Partnership (WCP);

- Humber Nature Partnership;
- Species and taxon experts identified during stakeholder engagement with the relevant Local Planning Authorities (LPAs); and
- Local bird groups and organisations, where not already accessed through the LERCs.

9.4.17 Data forming part of other relevant planning applications and DCO application submissions within the ornithology study area (and their Environmental Statements) will be reviewed alongside any information available from local or regional bird reports/atlases, data from monitoring or tracking studies and surveys focused on bird movements and habitat use that are spatially relevant to the Project. Third-party data acquired to date will be refreshed as required to ensure data are contemporary and spatially relevant to the Project at the time of DCO application submission.

9.4.18 Ornithology surveys will continue into 2025, with the possibility of surveys continuing to 2026 should the need for this be identified and will inform the environmental baseline reported within the ES. The need for additional surveys not included in the survey programme will be reviewed on an ongoing basis to address any further Project design changes, and in response to statutory consultation and ongoing engagement with key stakeholders. Data for sensitive species (such as those present on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)) are to be controlled and managed to avoid release into the public domain, to avoid any adverse effect to these species. Reports containing information on sensitive bird species will be made available to those with a legitimate need to view it, in line with the guidance issued by the Planning Inspectorate (Ref 9.65).

Assessment Methods and Criteria

9.4.19 The following section summarises the methodology proposed to be used for the ornithology assessment which builds on the general assessment methodology presented in **Chapter 5 Approach to Preparing the PEIR**.

9.4.20 The impact assessment will be undertaken in accordance with best practice guidance for Ecological Impact Assessment (EcIA), issued by CIEEM ‘Guidelines as summarised below.

9.4.21 The principal steps involved in the CIEEM approach can be summarised as:

- ecological features that are both present and might be affected by the Proposed Overhead Line are identified through a combination of targeted desk-based study and field survey work to determine the relevant baseline conditions;
- the importance of the identified ecological features is evaluated, placing their relative biodiversity and nature conservation value into geographic context, which is then used to define the relevant ecological features that need to be considered further;
- the changes or perturbations predicted to occur as a result of the Proposed Overhead Line (i.e. the potential impacts) and which could potentially affect relevant ecological features are identified and their nature described. Established best-practice, legislative requirements or other incorporated design measures to minimise or avoid impacts are also described and are taken into account;
- the likely significant effects (beneficial or adverse) on relevant ecological features are then assessed, and where possible quantified;

- measures to avoid or reduce any likely significant effects, if possible, are then developed in conjunction with other elements of the design (including mitigation for other environmental disciplines) and if necessary, measures to compensate for likely significant effects on features of nature conservation importance are also included;
- the residual effects of the Proposed Overhead Line are reported; and
- scope for ecological enhancement is considered.

Sensitivity/value of ecological feature

9.4.22 The CIEEM guidelines (Ref 9.6) make clear that there is no need to '*carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*'. Therefore, it is not necessary for the assessment to address all habitats and species with potential to occur in the relevant study area. Rather, the focus is on those that are 'relevant' i.e. ecological features that are important and potentially affected by the Proposed Overhead Line.

9.4.23 To support a focussed assessment, there is a need to determine the scale at which the relevant ecological and/or ornithological features identified through the desk studies and field surveys undertaken for the Project are of value. The value of each relevant ecological feature has been defined with reference to the geographical level at which it matters.

9.4.24 The frames of reference that will be used for the assessment, based on Section 4.7 of the CIEEM guidelines (Ref 9.6), are:

- international (Ramsar sites, SACs and SPAs) (normally within the geographic area of Europe);
- UK or national (Great Britain, but considering the potential for certain ecological features to be more notable (of higher value) in England, with context relative to Great Britain as a whole);
- regional (Yorkshire and the Humber and East Midlands);
- county (East Riding of Yorkshire, North Yorkshire, South Yorkshire, Nottinghamshire, Lincolnshire);
- district (town or parish area e.g. Garthorpe, Beckingham, Doncaster etc);
- local (ecological features that do not meet criteria for valuation at a District or higher level, but that have sufficient value to merit retention or mitigation); and
- site (common and widespread ecological features of such low priority that they do not require retention or mitigation at the relevant location to otherwise maintain a favourable nature conservation status).

9.4.25 Species populations are valued based on their size, recognised status (such as recognised through published lists of species of conservation concern and designation of Biodiversity Action Plan (BAP) status) and legal protection. For example, bird populations exceeding 1% of published information on biogeographic populations are of international importance, those exceeding 1% of published data for national populations are considered to be of national importance, and so forth.

9.4.26 In assigning values to species populations, it is important to consider the status of the species in terms of any legal protection or inclusion as a qualifying feature of a designated site. However, it is also important to consider other factors such as its distribution, rarity, population trends and the size of the population which would be

affected. For example, barn owl (*Tyto alba*) is a Schedule 1 species (Ref 9.9 and therefore afforded enhanced legal protection while breeding; however, it is a BoCC Green List bird and in many counties in lowland England it is a common and widespread resident species (such as in Lincolnshire (Ref 9.5)). Therefore, in assigning values to species the geographic scale at which they are important has been considered. The assessments of value rely on the professional opinion and judgment of suitably experienced ecologists.

9.4.27 Due regard will also be paid to the legal protection afforded to species during the development of mitigation and compensation measures to be implemented for the Project.

9.4.28 Assessing the value of features requires consideration of both existing and future (predicted) baseline conditions. Therefore, the description and valuation of ecological and/or ornithological features takes account of any likely changes, such as trends in the population size or distribution of species, likely changes to the extent of habitats and the effects of other proposed developments or land use changes.

9.4.29 All ornithological/ecological features of local value and above, where there is the potential for the Project to impact them directly or indirectly, will be taken forward to assessment and will be the 'relevant ecological features' for the purposes of EcIA.

9.4.30 In line with Section 1.21 of the CIEEM guidelines (Ref 9.6), the terminology used within the EcIA draws a clear distinction between the terms 'impact' and 'effect'. For the purposes of this EcIA these terms are interpreted as follows:

- **impact** – actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow; and
- **effect** – outcome to an ecological feature from an impact. For example, the effects on a population or assemblage of breeding birds from the loss of a habitat feature such as a hedgerow.

9.4.31 When describing potential impacts (and where relevant the resultant effects) consideration is given, in line with the CIEEM guidelines, to the following characteristics likely to influence this:

- **positive or negative** – i.e. is the change likely to be in accordance with nature conservation objectives and policy and is that change:
  - **positive (beneficial)** – a change that improves the quality of the environment, or halts or slows an existing decline in quality e.g. increasing the extent of a habitat of conservation value; or
  - **negative (adverse)** – a change that reduces the quality of the environment e.g. destruction of habitat.
- **spatial extent** – the spatial or geographical area or distance over which the impact or effect may occur under a suitably representative range of conditions;
- **magnitude** – the 'size', 'amount' or 'intensity' and 'volume' of an impact – this is described on a quantitative basis where possible;
- **duration** – the time over which an impact is expected to last prior to recovery or replacement of the resource or feature. Consideration has been given to how this duration relates to relevant ecological characteristics such as a species' lifecycle. However, it is not always appropriate to report the duration of impacts in these terms. The duration of an effect may be longer than the duration of an activity or impact;

- **timing and frequency** – i.e. consideration of the point at which the impact occurs in relation to critical life-stages or seasons; and
- **reversibility** – i.e. is the impact temporary or permanent. A temporary impact is one from which recovery is possible or for which effective mitigation is both possible and enforceable. A permanent effect is one from which recovery is either not possible or cannot be achieved within a reasonable timescale (in the context of the feature being assessed).

9.4.32 Inter-project cumulative effects can result from the combined impacts of multiple developments on a receptor. Intra-project effects occur where multiple in-Project impacts interact with one another, for example, combined noise and lighting impacts on a single ornithological receptor. Please refer to **Chapter 21 Cumulative Assessment** for more detail.

Significance of effects

9.4.33 For each ecological feature only those characteristics relevant to understanding the ecological effect of the Proposed Overhead Line and determining the significance are described. The determination of the significance of effects will be made based on the predicted effect on the structure and function, or conservation status, of relevant ecological features, as follows:

- **not significant** – no effect on structure and function, or conservation status; and
- **significant** – structure and function, or conservation status is affected.

9.4.34 Sections 5.24 to 5.26 of the CIEEM guidelines (Ref 9.6) state that effects should be determined as being significant when;

9.4.35 '*an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national / local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local. A significant effect is an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution)*'.

9.4.36 Using this information and judgment, it is determined whether the effects will be significant or not on the structure and integrity (of site or ecosystems) or conservation status of each ecological feature and the effect significance is determined at the appropriate geographical scale.

9.4.37 There are a number of approaches for determining the significance of effects on ecological features. Whilst the CIEEM guidelines (Ref 9.6) recommends the avoidance of the use of the matrix approach for categorisation (major, moderate and minor), in order to provide consistency of terminology within the ES, as presented in **Chapter 5 Approach to Preparing the PEIR**, the findings of the CIEEM assessment will be translated into the classification of effects scale, as outlined in Table 9.3, but still remain consistent with the CIEEM guidelines.

9.4.38 As a rule, major and moderate effects are significant, whilst minor and neutral/negligible effects are considered to be not significant. However, professional judgement will also be applied when concluding whether an effect is significant or not, including taking account of whether the effect is permanent or temporary, its duration and frequency, whether it is reversible, and/or its likelihood of occurrence.

Table 9.3 – Relating CIEEM assessment terms to those used in Chapter 5 Approach to Preparing the PEIR

Effect classification terminology used in Chapter 5 Approach to Preparing the PEIR	Equivalent CIEEM assessment
Major beneficial	Beneficial effect on structure/function or conservation status at regional, national or international level.
Moderate beneficial	Beneficial effect on structure/function or conservation status at county and district level.
Minor beneficial	Beneficial effect on structure/function or conservation status at local level.
Neutral/negligible	No effect on structure/function or conservation status.
Minor adverse	Adverse effect on structure/function or conservation status at local level.
Moderate adverse	Adverse effect on structure/function or conservation status at county and district level.
Major adverse	Adverse effect on structure/function or conservation status at regional, national or international level.

Approach to assessing significance in the PEIR

9.4.39 As set out in **Chapter 5 Approach to Preparing the PEIR** the general approach taken to determining the significance of effect in this preliminary assessment is only to state whether effects are likely or unlikely to be significant, rather than assigning significance levels.

9.4.40 Following on from the identification of whether an effect is considered likely to be significant or not significant, a confidence in the prediction is given a rating of high, moderate or low in line with the confidence level definitions presented in **Chapter 5 Approach to Preparing the PEIR**.

Preliminary Assessment Assumptions and Limitations

9.4.41 The assessment has been undertaken based on the preliminary design information for the Proposed Overhead Line as described in **Chapter 4 Description of the Project**. This information is likely to develop further in response to ongoing design, assessment and stakeholder feedback, and will be updated for the ES as the design evolves.

9.4.42 As stated in earlier paragraphs further work is required to complete the desk study and the current survey programme is ongoing, with the potential to amend the survey programme as required to reflect any ongoing design changes or advice from stakeholders as the Project progresses. Data gathered after the end of September 2024 are not included in this preliminary assessment and **Appendix 9.1 Baseline Ornithology Report**.

9.4.43 The evaluation of importance/value assigned to some species is therefore preliminary and may be updated in the ES based on the full data set from all surveys combined. Ongoing surveys and other baseline gathering activities might identify species not considered herein, and these would be added to the assessment reported in the ES.

9.4.44 **Chapter 4 Description of the Project**, supported by the measures set out in the outline Code of Construction Practice (**Appendix 4.1 Draft Outline Code of Construction Practice CoCP**) describes the assumptions taken into account in this preliminary assessment with regards to vegetation losses and Project design measures taken to protect biodiversity and minimise habitat loss during construction and operation of the Proposed Overhead Line.

9.4.45 Unless otherwise stated, it is assumed that semi-natural habitats within the draft Order Limits could be potentially affected. This is because there is currently flexibility in the design within the draft Order Limits, for example access track locations are currently indicative and could move within those limits.

9.4.46 However, the assessment does not assume that all vegetation will be removed, as this is highly unlikely to be the case. Once all baseline surveys both for ornithology and terrestrial ecology (**Chapter 8 Ecology**) are complete it will be possible to identify where retention of habitats is desirable and achievable in order to avoid a potentially significant effect.

9.4.47 **Chapter 15 Air Quality** presents a preliminary assessment of construction dust on relevant ecological sites, located up to 50 m from the draft Order Limits and up to 50 m from the route(s) used by construction vehicles on the public highway, up to 250 m from the bellmouths. This has been used to inform the preliminary assessment presented in this chapter.

9.4.48 As detailed in **Chapter 15 Air Quality**, provisional construction traffic data have been reviewed for the preliminary assessment but are not yet sufficient enough to compare with the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK) Development Control screening thresholds set out **Chapter 5 Air Quality**. Therefore, the likely air quality impacts from construction vehicle emissions will be assessed and reported in the ES once further details are available, to determine whether any of the IAQM and EPUK screening thresholds have been exceeded.

9.4.49 At this preliminary stage of the assessment, it is anticipated that there would be no significant impacts on air quality during operation due to the Proposed Overhead Line being a static structure which will not have any associated emissions. Potential air quality effects from the maintenance of the Project have been scoped out. Therefore, this chapter does not consider potential effects on ornithological features (i.e. habitats,

sites and species) due to operational and maintenance air quality impacts, as no significant effects are anticipated.

9.4.50 The assumptions and limitations will be reviewed based on the design presented in the DCO application and, where required, they will be updated or refined. The ES will present the final parameters and assumptions used within that assessment, particularly drawing attention to any areas that may have changed from what is presented in this preliminary assessment.

Further Assessment within the ES

9.4.51 The ES will present a full detailed assessment in accordance with CIEEM guidance with the significance of the effect on a receptor presented, where relevant, during construction and operation (and maintenance), when considered in relation to the sensitivity or value of the receptor and the magnitude of the potential impact.

9.4.52 The assessment of significance in an EcIA context will include the reasoned argument setting out the rationale for the value, magnitude, and significance of effect in accordance with CIEEM EcIA guidelines (Ref 9.6).

Habitats Regulations Assessment

9.4.53 A HRA is required to consider whether a project is likely to have a significant effect on areas that have been internationally designated for nature and conservation purposes (habitat sites) including SACs, SPAs and Ramsar sites. Habitat sites are protected under the Conservation of Habitats and Species Regulations 2017 (Ref 9.42).

9.4.54 A HRA Preliminary Stage 1 Report is provided in **Appendix 8.2 HRA Preliminary Stage 1 Report** and a full assessment will be undertaken and submitted with the DCO application, and will follow the industry guidance comprising:

- General European Commission (EC) guidance on HRA (Ref 9.60
- General guidance on HRA published by the UK Government in July 2019 (Ref 9.61); and
- PINS guidance on HRA (Ref 9.62).

Biodiversity Net Gain Assessment

9.4.55 The need for provision of compensatory habitats where unavoidable habitat losses will result in significant effects on ornithological receptors, and the specifications of such habitats, will be integrated into the Biodiversity Net Gain (BNG) calculations where it is possible to do so.

9.4.56 More detail regarding the BNG assessment and calculations that will be submitted with the DCO application is provided in paragraphs 8.4.45 – 8.4.48 of **Chapter 8 Ecology**.

9.5 Baseline Conditions

9.5.1 This section describes the baseline Ornithology in the study area where it relates to the Proposed Overhead Line. The baseline Ornithology environment in the study area in relation to the Proposed Substation Works is presented in **Chapter 20 Substations and Associated Works**.

9.5.2 Baseline information has been acquired through desk study and ongoing surveys, as set out in section 9.4. Ornithology features (comprising designated sites, key locations, species and species assemblages) are presented with reference to the Route Sections of the Proposed Overhead Line within which they are located, as shown on **Figures 9.10 – 9.25**.

9.5.3 However, many species of bird are seasonally migratory as well as being capable of and liable to move over relatively long distances on a daily basis, such as between roosts and feeding areas. Furthermore, the survey locations (see section 3.3 of **Appendix 9.1 Baseline ornithology Report**; and **Figures 9.4 – 9.9**) were selected based on the likely distribution and movements of birds, which was guided by stakeholder engagement, professional judgement, the distribution of designated sites and, iteratively, through ongoing data collection. Therefore, some of the baseline data, particularly those that describe movements of birds, do not definitively fit to one Route Section.

9.5.4 In such cases, records are assigned to the Route Section in which they were predominantly encountered and their movements between, or overlap with, other Route Sections are acknowledged in the report narrative.

Statutory Designated Sites of International Importance

9.5.5 There are two Ramsar sites and three SPAs within the study area (including up to 30 km from the draft Order Limits). These are set out in **Table 9.5 – National statutory sites designated for Ornithology** and shown in **Figure 9.10 International Statutory Designated Sites**. The reasons for designation of each site are provided in Table 4.1, of **Appendix 9.1 Baseline Ornithology Report**.

Table 9.4 – International statutory designated sites for Ornithology (30 km study area)

Designation	Approximate distance from the draft Order Limits (km)	Closest Route Section
Lower Derwent Valley Ramsar Site	13.59 km	3
Lower Derwent Valley SPA	13.59 km	3
Humber Estuary Ramsar Site	Within	4
Humber Estuary SPA	Within	4
Thorne and Hatfield Moors SPA	2.69 km	6

Statutory Designated Sites of National Importance

9.5.6 There are six SSSIs and one NNR within the study area, for which birds are one of the qualifying features. These are shown on **Figure 9.11 National and Local Statutory Designated Sites**.

Table 9.5 – National statutory sites designated for Ornithology (5 km study area)

Designation	Approximate distance from the draft Order Limits (km)	Closest Route Section
Humber Estuary SSSI	Within	4
Thorne, Crowle and Goole Moors SSSI	2.69 km	6
Hatfield Moors SSSI	7.35 km	7
River Idle Washlands SSSI	2.50 km	8
Misson Training Area SSSI	2.89 km	8
Sutton and Lound Gravel Pits SSSI	4.71 km	9
Humberhead Peatlands NNR	2.70 km	6

Statutory Designated Sites of Local Importance

9.5.7 There are two LNRs within the study area for which birds are one of the qualifying features, as summarised in Table 9.6 and shown on **Figure 9.11 National and Local Statutory Designated Sites**.

Table 9.6 – Local Nature Reserves (LNR) designated for Ornithology (5 km study area)

Designation	Approximate distance from the draft Order Limits (km)	Closest Route Section
Phoenix Parkway LNR	4.15 km	6
Conesby Quarry LNR	4.26 km	6

Non-Statutory Designated Sites of Local Importance

9.5.8 There are 22 LWSs, two Wildlife Trust Reserves that support ornithological features[4]; and two RSPB Reserves within the study area.

9.5.9 These are summarised in Table 9.7 and shown on **Figure 9.12 Non-Statutory Designated Sites**. With the exception of the RSPB Reserves, none of the sites are designated exclusively for ornithology and the features listed are not specific (i.e. they are habitats with the capacity to support bird populations; or they are bird assemblages, rather than individual species).

[4] Both of the Wildlife Trust Reserves (Langholme Wildlife trust Reserve and Walkeringham Wildlife Trust Reserve) are spatially, geographically and biologically identical to two of the Local Wildlife Sites (respectively Langholme Wood LWS and Walkeringham Clay Pits LWS).

Table 9.7 – Local Non-Statutory sites supporting Ornithology features (2 km study area)

Designation	Minimum distance from the draft Order Limits (km)	Relevant Route Section
RSPB Blacktoft Sands	Overlapping	3 and 4
Stainforth and Keadby Canal Corridor LWS	Within the draft Order Limits	6
Three Rivers LWS	2 m	6
Crowle Brick Pits LWS	0.46 km	6
South Moor Covert and Fishpond Plantation LWS	Within the draft Order Limits	7
Sedge Hole Close LWS	Adjacent to the draft Order Limits	7
Rush Furlong LWS	0.57 km	7
Warping Drain Corridor LWS	Within the draft Order Limit	7/8
Shaw Ponds LWS	0.20 km	8
Langholme Wood LWS	0.83 km	8
Carr Road Drains Complex LWS	1.78 km	8
Walkeringham Wildlife Trust Reserve	0.73 km	8
Langholme Wood Wildlife Trust Reserve	0.74 km	8
Tongs and Dogholes Woods LWS	0.08 km	9
Beckingham Woods LWS	0.30 km	9
Wheatley Woods LWS	0.13 km	9
Mill Lane, Clayworth LWS	1.90 km	9
RSPB Beckingham Marshes	1.36 km	9
Bole Ings LWS	1.51 km	10
Clarborough Tunnel LWS and Wildlife Trust Site[5]	0.62 km	10
Treswell Wood LWS and Wildlife Trust Site[6]	0.29 km	10
Caddow Wood (Northern Assart) LWS	0.23 km	10

[5] This site carries both the LWS and Wildlife Trust Site designation, both of which are treated as a single designation for the purposes of assessment in Table 9.14.

[6] This site carries both the LWS and Wildlife Trust Site designation, both of which are treated as a single designation for the purposes of assessment in Table 9.14.

Designation	Minimum distance from the draft Order Limits (km)	Relevant Route Section
Bushstocks Lane Meadow LWS	0.35 km	10
Headon Verges LWS	0.41 km	10
Beast Wood Grassland LWS	0.65 km	10
Grove Road Woodland LWS	1.77 km	10

Records of Species and Assemblages of Birds

9.5.10 Baseline conditions have been gathered from desk-based information and site surveys and are presented with reference to the Route Section of the Project within which they are located. Detailed narrative on the ornithology baseline is presented in **Appendix 9.1 Baseline Ornithology Report**. A high-level summary of baseline conditions is reported herein, including:

- Occurrence of breeding species and breeding assemblages (up to and including the end of September 2024);
- Occurrence of non-breeding species and non-breeding assemblages (up to and including the end of September 2024); and
- Flight activity by species targeted for Vantage Point surveys (data up to and including the end of March 2024).

9.5.11 Narrative regarding the occurrence of species is informed by the desk study and field surveys. Narrative regarding flight activity is informed exclusively by field surveys.

9.5.12 A summary of the target species recorded engaging in habitat use (rather than, for example, simply overflying the survey areas) and their total counts by Route Section are set out in Table 9.11 and Table 9.8 using the combined results of the field counts, the FLL field counts and the VP surveys. The cumulative survey effort across the whole of the proposed overhead line alignment is significant; the combined survey duration achieved on vantage point surveys alone, up to the end of September 2024 amounts to 1,466.58 hours, of which:

- 71 hours were carried out in Route Section 1;
- 58.5 hours were carried out in Route Section 2;
- 450.5 hours were carried out in Route Section 3;
- 290.25 hours were carried out in Route Section 4;
- 66.5 hours were carried out in Route Section 5;
- 178.83 hours were carried out in Route Section 6;
- 60 hours were carried out in Route Section 7;
- 103 hours were carried out in Route Section 8;
- 60 hours were carried out in Route Section 9; and
- 128 hours were carried out in Route Section 10.

9.5.13 Further information regarding the occurrence of breeding, non-breeding and overflying birds is provided in the sections that follow Table 9.9.

Table 9.8 – Habitat use records for target and priority species summarised by Route Section

Species[7]	Latin names	Route Sections											Non-breeding season	Breeding Season	Total records	Total birds
		1	2	3	4	5	6	7	8	9	10	11				
Barn Owl	*Tyto alba*		2	8	1		4	1	2	1	3	1	Y	Y	23	4[8]
Bearded Tit	*Panurus biarmicus*				26								Y		2	26
Bittern	*Botaurus stellaris*			3										Y	1	1
Black Redstart	*Phoenicurus ochruros*		1											Y	1	1
Black-tailed Godwit	*Limosa limosa*			2										Y	1	2
Cetti's Warbler	*Cettia cetti*			47	11		1	4					Y	Y	57	63
Common Tern	*Sterna hirundo*			16					4					Y	5	20
Curlew	*Numenius arquata*			38	154								Y		9	192
Golden Plover	*Pluvialis apricaria*			177	18	1	16	14					Y		11	226
Green sandpiper	*Tringa ochropus*			1										Y	1	1

[7] Qualifying species of the Humber Estuary SPA are in **bold** font.

[8] Barn owls are secretive birds and determination of their population size requires specific surveys to be undertaken, which have not been carried out at time of writing. Records of potential breeding locations in the form of nest boxes and other structures capable of supporting nesting have been included in the 'total records' as a proxy for habitat use, while sightings of birds are included in the total birds column.

Species[7]	Latin names	Route Sections											Non-breeding season	Breeding Season	Total records	Total birds
		1	2	3	4	5	6	7	8	9	10	11				
Greenshank	*Tringa nebularia*			1										Y	1	1
Grey Heron	*Ardea cinerea*			3	1		1		1				Y		6	6
Greylag Goose	*Anser anser*	73	2	845	127		62				31		Y	Y	63	1140
Hen Harrier	*Circus cyaneus*						1						Y		1	1
Hobby	*Falco subbuteo*								1		3			Y	1	4
Kingfisher	*Alcedo atthis*			4			2		8				Y	Y	12	14
Lapwing	*Vanellus vanellus*			1,233	304				494				Y	Y	41	2031
Little ringed plover	*Charadrius dubius*			1										Y	1	1
Mallard	*Anas platyrhynchos*	4		160	12	6	30	19	82			12	Y	Y	80	325
Marsh Harrier	*Circus aeruginosus*		1	9	3	1							Y	Y	13	14
Mediterranean gull	*Ichthyaetus melanocephalus*			2										Y	1	1
Merlin	*Falco columbarius*				1									Y	1	1
Mute swan	*Cygnus olor*			7	21	2	101	2	2				Y		22	135
Oystercatcher	*Haematopus ostralegus*	4		4					5					Y	6	13
Peregrine	*Falco peregrinus*	2		76	2		1						Y	Y	61	81

Species[7]	Latin names	Route Sections											Non-breeding season	Breeding Season	Total records	Total birds
		1	2	3	4	5	6	7	8	9	10	11				
Pink-footed Goose	*Anser brachyrhynchus*			3,328	2,314	9,296			1,310				Y	Y	51	16,248
Pochard	*Aythya ferina*			2									Y		1	2
Quail	*Coturnix coturnix*				1				1					Y	2	2
Ruff	*Calidris pugnax*				6								Y		1	6
Shelduck	*Tadorna tadorna*			3	9								Y		7	12
Teal	*Anas crecca*			4					12				Y		4	16
Turtle Dove	*Streptopelia turtur*								1				Y		1	1
Whooper Swan	*Cygnus cygnus*			4	2				14				Y		3	20
Wigeon	*Mareca penelope*			8									Y		1	8

Breeding birds and breeding bird assemblages

9.5.14 Table 9.9 summarises the occurrence of breeding birds and breeding bird assemblages to date. The sites monitored by RSPB for which they supplied data are identified; sites that are greater than 2 km from the draft Order Limits are excluded from the baseline presented here, in line with the study areas set out in Table 9.2. Other breeding bird assemblages were recorded during surveys and are summarised below for each section.

Table 9.9 – Summary of breeding birds within and adjacent to the draft Order Limits

Feature	Description
Route Section 1 Creyke Beck to Skidby	
Peregrine Falcon	A peregrine was recorded perching on one of the 4ZR pylons within the draft Order Limits suggesting breeding.
Mallard	Present during the breeding season but no records specifically of breeding.
Oystercatcher	Present during the breeding season but no records specifically of breeding.
Breeding Bird Assemblage – Area 1, Birkhill Wood	Fifty-three species were recorded, of which 10 are confirmed breeders, 14 are considered probable breeding species, 23 are considered possible breeding species and the remaining six are incidental occurrences of non-breeding species. Additionally, 12 species are species of principal importance, 12 are BoCC5 red list species, 16 are BoCC5 amber list species and a further 24 are BoCC green list species. One species is not monitored by BoCC and appears on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland and woodland fringe habitat recorded on site. The site is adjacent and within the draft Order Limits.
Route Section 2 Skidby to A63 Dual Carriageway	
Breeding Bird Assemblage – Area 2, Socken Wood	Thirty-five species were recorded, of which 10 are confirmed breeders, nine are considered probable breeding species, 14 are considered possible breeding species and the remaining two are incidental occurrences of non-breeding species. Additionally, eight species are species of principal importance, one Schedule 1 (black redstart), four are BoCC5 red list species, 13 are BoCC5 amber list species and a further 15 are BoCC green list species. One species is not monitored by BoCC and appears on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland and woodland habitat recorded on site. The site is adjacent and partially within the draft Order Limits.

Feature	Description
Breeding Barn Owl	A barn owl was recorded flying into a shed that is suitable breeding habitat, 100 m north of the draft Order Limits.
Black Redstart	Present during the breeding season but no records specifically of breeding.
Breeding Bird Assemblage – Area 3, Brantingham Dale	Thirty-eight species were recorded, of which 12 are confirmed breeders, 13 are considered probable breeding species, 11 are considered possible breeding species and the remaining two are incidental occurrences of non-breeding species. Additionally, one species is on Schedule 1 (marsh harrier) and Annex 1, six are species of principal importance, seven are BoCC5 red list species, ten are BoCC5 amber list species and a further 14 are BoCC green list species. One species is not monitored by BoCC and appears on none of the lists of conservation concern. Overall, the bird community is typical of the woodland and woodland edge (arable) habitat recorded on site. The site is adjacent and partially within the draft Order Limits.
Route Section 3 A63 Dual carriageway to River Ouse Crossing	
Barn owl	A pole mounted nest box approximately 350 m north of the draft Order Limits, [redacted]. Several other tree-mounted and pole mounted nest boxes were located within and outside the draft Order Limits.
Marsh Harrier	A family of marsh harrier including three juveniles were recorded in the reedbeds at Oxmardyke Washlands indicating successful breeding, [redacted] of the draft Order Limits. Another pair of Marsh Harriers were observed entering Broomfleet Tileworks with prey suggesting breeding took place here [redacted] of the draft Order Limit.
Breeding Bird Assemblage – Area 4, Ings Lane (Humberhead levels)	Thirty-eight species were recorded, of which four are confirmed breeders, 12 are considered probable breeding species, 16 are considered possible breeding species and the remaining six are incidental occurrences of non-breeding species. Additionally, three species are listed on Schedule 1 (Cetti's Warbler, marsh harrier and Mediterranean gull), two are listed on Annex 1, eight are species of principal importance, eight are BoCC5 red list species, 16 are BoCC5 amber list species and a further 13 are BoCC green list species. One species is not monitored by BoCC and appears on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland habitat recorded on site. The site is within the draft Order Limits.
Cettis Warbler	Scattered records of singing males concentrated mainly at Broomfleet Tileworks and the north bank of the River Ouse either side of the proposed crossing point, on the boundary of

Feature	Description
	Sections 3 and 4. Within and adjacent to the draft Order Limits.
Peregrine falcon	Breeding on one existing pylon within the draft Order Limits and one existing pylon adjacent to the draft Order Limits.
Breeding Bird Assemblage - Broomfleet Tileworks (RSPB data)	A breeding assemblage of at least 41 species including ducks, waders, raptors and passerines. The breeding assemblage includes Schedule 1 birds such as marsh harrier, bittern, barn owl and Cetti's warbler. Adjacent to the draft Order Limits.
Lapwing	Displaying in cereal crop approximately 560 m north-west of the draft Order Limits, west of Ellerker.
Greylag goose	Widespread presence during breeding season but no records specifically of breeding.
Mallard	Widespread presence during the breeding season but no records specifically of breeding.
Little Ringed Plover	Heard calling from Broomfleet Tileworks, 100 m north of the draft Order Limits, but no signs of breeding activity.
Kingfisher	Present on Market Weighton Canal in suitable breeding habitat but no signs of breeding.
Bearded Tit	Family recorded erupting from Oxmardyke Washlands, 300 m north of the draft Order Limits, in October, indicates successful breeding took place.
Common Tern	Present on Market Weighton Canal but no signs of breeding.
Oystercatcher	Present during the breeding season but no records specifically of breeding.
Hobby	Recorded foraging over Broomfleet Tileworks adjacent to the draft Order Limits but no evidence of breeding.
Route Section 4 River Ouse Crossing	
Breeding Bird Assemblage – Area 5, River Ouse North Bank	Thirty-eight species were recorded, of which five are confirmed breeders, 14 are considered probable breeding species, 15 are considered possible breeding species and the remaining four are incidental occurrences of non-breeding species. Additionally, two species are list on Schedule 1 (Cetti's warbler and fieldfare), one is listed on Annex 1, seven are species of principal importance, five are BoCC5 red list species, 13 are BoCC5 amber list species and a further 19 are BoCC green list species. One species is not monitored by BoCC and appears on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland and riparian margin habitat recorded on site. The site is within the draft Order Limits.

Feature	Description
Breeding Bird Assemblage - Blacktoft Sands (RSPB data for Blacktoft Sands RSPB Reserve recording area)	A breeding assemblage of at least 55 species including ducks, waders, herons, raptors and a wide range of passerines. The breeding assemblage includes Schedule 1 birds (Cetti's warbler, bearded tit, barn owl, marsh harrier, avocet and bittern, the latter three of which are qualifying species of the Humber Estuary SPA). Adjacent to the draft Order Limits.
Breeding Bird Assemblage - Whitton Island (RSPB data for Blacktoft Sands RSPB Reserve recording area)	A breeding assemblage of at least 17 species. Breeding recorded for two Schedule 1 species (marsh harrier and avocet, both of which are qualifying species of the Humber Estuary SPA, the latter being recorded by RSPB as the same birds that occur at the Blacktoft Sands Site) as well as a range of waders, ducks and passerines. Approximately 1.6 km south of the draft Order Limits.
Breeding Bird Assemblage - Faxfleet Ponds (RSPB data for Blacktoft Sands RSPB Reserve recording area)	A breeding assemblage of at least 16 species including 2 Schedule 1 species (Cetti's warbler and bittern, the latter being a qualifying species of the Humber Estuary SPA), plus a range of ducks and common and widespread passerine species. Approximately 1.7 km southeast of the draft Order Limits.
Cetti's warbler	Singing males present on the north bank of the River Ouse either side of the proposed crossing point, on the boundary of Route Section 3 and 4.
Barn Owl	A pole mounted nest box was recorded approximately 500 m west of the draft Order Limits.
Quail	Singing male within the draft Order Limits south of Whitgift.
Greylag goose	Widespread presence during breeding season though no records specifically of breeding.
Mallard	Present during the breeding season but no records specifically of breeding.
Marsh Harrier	Marsh harriers are known to breed in RSPB Blacktoft Sands which is overlapping the draft Order Limits. Adult birds were recorded foraging in the arable farmland of this Route Section before returning to Blacktoft Sands with prey.
Bearded Tit	Family erupting in the reedbed on the north bank of the River Ouse.
Route Section 5 River Ouse Crossing to Luddington	
Mallard	Present during the breeding season but no records specifically of breeding.
Peregrine Falcon	Anecdotal reports of breeding peregrine falcon on an existing pylon adjacent to the draft Order Limit.

Feature	Description
Route Section 6 Luddington to M180 Motorway	
Mute swan	1 pair and 1 juvenile immediately south of the draft Order Limits east of Crowle.
Mallard	Present during the breeding season but no records specifically of breeding.
Cetti's Warbler	Singing male present but breeding not confirmed.
Marsh Harrier	Marsh harriers were recorded foraging over arable farmland within the draft Order Limits, suggesting breeding may take place in this area.
Barn Owl	There have been no sightings of this species to date, however several trees within the draft order limits in this Section have potential to accommodate natural nest sites. The trees are within the draft Order Limits.
Breeding Bird Assemblage – Area 6 Keadby Wind Farm	Survey area 6 is located within the grounds of Keadby Power Station. Due to specific access requirements surveys have not yet begun in this area but are planned.
Route Section 7 M180 Motorway to Graizelound	
Barn owl	Flew to a wooded area approximately 200 m north of the draft Order Limits, near Haxey. Indicative of possible breeding location. Barn owl nest box recorded on south bank of Warping Drain adjacent to draft Order Limits.
Mallard	Present during the breeding season and confirmed breeders.
Breeding Bird Assemblage – Area 7 Owston Ferry	Fifty-three species were recorded, of which 15 are confirmed breeders, 13 are considered probable breeding species, 21 are considered possible breeding species and the remaining four are incidental occurrences of non-breeding species. Additionally, one species is on Schedule 1 (Cetti's warbler), 11 are species of principal importance, ten are BoCC5 red list species, 17 are BoCC5 amber list species and a further 24 are BoCC green list species. One species is not monitored by BoCC and appears on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland and scrubland habitat recorded on site. The site is adjacent to and partially within the draft Order Limits.
Breeding Bird Assemblage – Area 8 Graizelound	Twenty-eight species were recorded, of which six are confirmed breeders, 11 are considered probable breeding species, nine are considered possible breeding species and the remaining two are incidental occurrences of non-breeding species. Additionally, two species are on Schedule 1 (barn owl and Cetti's warbler), five are species of principal importance, five are BoCC5 red list species, nine are BoCC5 amber list species and a further 13 are BoCC green list species. One species is not monitored by BoCC and appears on none of the

Feature	Description
	lists of conservation concern. Overall, the bird community is typical of the arable farmland and riparian margin habitat recorded on site. The site is adjacent to and partially within the draft Order Limits.
Route Section 8 Graizelound to Chesterfield Canal	
Hobby	A Hobby was recorded breeding close to [redacted] the draft Order Limits.
Barn Owl	A tree with potential to be a natural nest site was recorded north of the river Idle within the draft Order Limits.
Breeding Bird Assemblage – Area 9 River Idle	Forty-six species were recorded, of which ten are confirmed breeders, 16 are considered probable breeding species, 16 are considered possible breeding species and the remaining four are incidental occurrences of non-breeding species. Additionally, one species is on Schedule 1 (kingfisher), two are on Annex 1, nine are SPI, nine are BoCC5 red list species, 15 are BoCC5 amber list species and a further 21 are BoCC green list species. One species is not monitored by BoCC and appears on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland and riparian margin habitat recorded on site. The site is adjacent to and partially within the draft Order Limits.
Kingfisher	Kingfisher were confirmed to breed on the River Idle, adjacent to the draft Order Limits.
Lapwing	Six pairs alarm calling, mobbing crow, and nesting on inundated field. Approximately 1.3 km northwest of draft Order Limits.
Mallard	Present during the breeding season and confirmed breeders.
Quail	Singing male within the draft Order Limits west of Misterton.
Turtle Dove	Singing male within mature scrub on the north bank of the River Idle adjacent to the draft Order Limits
Oystercatcher	Present during the breeding season but no records specifically of breeding.
Common tern	Recorded use of Chesterfield canal by foraging adults. No breeding detected.
Route Section 9 Chesterfield Canal to A620 east of North Wheatley	
Breeding Bird Assemblage – Area 10 Gringley on the Hill	Thirty-one species were recorded, of which four are confirmed breeders, 12 are considered probable breeding species, 11 are considered possible breeding species and the remaining four are incidental occurrences of non-breeding species. Additionally, seven are species of principal importance, seven are BoCC5 red list species, seven are BoCC5 amber list

Feature	Description
	species and a further 15 are BoCC green list species. Two species are not monitored by BoCC and appear on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland habitat recorded on site. The site is adjacent to and partially within the draft Order Limits.
Breeding Bird Assemblage – Area 11 Beckingham Wood	Thirty species were recorded, of which four are confirmed breeders, 12 are considered probable breeding species, 13 are considered possible breeding species and the remaining one was an incidental occurrences of non-breeding species. Additionally, eight are species of principal importance, four are BoCC5 red list species, 10 are BoCC5 amber list species and a further 14 are BoCC green list species. Two species are not monitored by BoCC and appear on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland and woodland edge habitat recorded on site. The site is adjacent to and partially within the draft Order Limits.
Barn Owl	A pole mounted nest box was recorded within the draft Order Limits.
Route Section 10 A620 east of North Wheatley to Fledborough	
Breeding Bird Assemblage – Area 12 West Burton	Twenty-seven species were recorded, of which seven are confirmed breeders, 10 are considered probable breeding species, 9 are considered possible breeding species and the remaining one was an incidental occurrences of non-breeding species. Additionally, four are species of principal importance, three are BoCC5 red list species, nine are BoCC5 amber list species and a further 14 are BoCC green list species. One species is not monitored by BoCC and appears on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland and woodland edge habitat recorded on site. The site is adjacent to and partially within the draft Order Limits.
Breeding Bird Assemblage – Area 13 Fledborough	Thirty-four species were recorded, of which 10 are confirmed breeders, 10 are considered probable breeding species, 12 are considered possible breeding species and the remaining two are incidental occurrences of non-breeding species. Additionally, eight are species of principal importance, six are BoCC5 red list species, 11 are BoCC5 amber list species and a further 15 are BoCC green list species. Two species are not monitored by BoCC and appear on none of the lists of conservation concern. Overall, the bird community is typical of the arable farmland habitat recorded on site. The site is adjacent to and partially within the draft Order Limits.
Barn Owl	There have been no sightings of this species to date, however several potential nest sites were recorded within the Route Section.

Feature	Description
Route Section 11 Fledborough to High Marnham	
Barn Owl	A building suitable for nesting was recorded within the draft Order Limits.
Mallard	Pairs were recorded in suitable breeding habitat throughout the breeding season but no breeding confirmed.
Breeding Bird Assemblage – High Marnham Substation	Surveys have been carried out in support of the TCPA application for the proposed High Marnham Substation.

Non-breeding birds

9.5.15 Table 9.10 summarises the occurrence of non-breeding birds to date, focusing particularly on target species and species that are qualifying features of designated sites that were recorded engaging in habitat use rather than simply overflying the survey areas.

Table 9.10 – Summary of non-breeding birds within and adjacent to the draft Order Limits

Feature	Description
Route Section 1 Creyke Beck to Skidby	
Greylag goose	Small flocks foraging on the golf course and the arable farmland close to the substation.
Mallard	A pair were recorded in a small puddle on arable farmland.
Non-breeding Bird Assemblage – Area 1, Birkhill wood	No Data – surveys to be completed
Route Section 2 Skidby to A63 Dual Carriageway	
Barn Owl	Potential Nest sites can be used by non-breeding birds; therefore, this species is likely to be present year-round.
Route Section 3 A63 Dual carriageway to River Ouse Crossing	
Barn owl	Potential Nest sites can be used by non-breeding birds; therefore, this species is likely to be present year-round.
Cetti's warbler	Present mainly at Broomfleet Tileworks adjacent to the draft Order Limits.
Curlew	Exclusively within 1 km of both sides of the River Ouse, from adjacent to the draft Order Limits up to approximately 2 km from the draft Order Limits. Closest records are at Blacktoft Sands.

Feature	Description
Golden plover	Large flock of approximately 10,000 individuals in fields around the Humber estuary, east of Blacktoft Sands. Scattered records of foraging birds across farmland, a minimum of approximately 1 km from the draft Order Limits.
Grey heron	Scattered records of singles feeding on fields and ponds/drains.
Greylag goose	Widespread in flocks of up to 80 across farmland either side of the Proposed Overhead Line. Closest records are adjacent to the draft Order Limits. Frequently occurred at Broomfleet Tileworks and adjacent to the River Ouse.
Kingfisher	A single bird near the Market Weighton Canal adjacent to or within the draft Order Limits.
Lapwing	Widespread records of feeding flocks of up to 427 birds on arable farmland either side of the draft Order Limits. The closest records are adjacent to the draft Order Limits.
Mallard	Widespread records of between one and seven birds mostly on pools and field-edge ditches. Closest records are adjacent to the draft Order Limits.
Marsh harrier	A regularly used roost at Oxmardyke Washlands approximately 1 km north of the draft Order Limits.
Mute swan	Multiple records of birds utilising habitats such as arable fields ranging from two to 28 birds, adjacent to the draft Order Limits.
Peregrine	Singles and pairs occurring almost exclusively on existing pylons within or immediately adjacent to the draft Order Limits.
Pink-footed goose	Scattered flocks of between ten and 2,000 birds foraging on farmland either side of the draft Order Limits. The closest record is approximately 1 km south of the draft Order Limits.
Pochard	A single bird landing on Broomfleet Tileworks ponds immediately north of the draft Order Limits.
Shelduck	A single bird resting on farmland approximately 845 m northwest of the draft Order Limits east of Oxmardyke Washlands.
Teal	A single bird at Broomfleet Tileworks adjacent to the draft Order Limits and a small feeding party (three birds) approximately 845 m northwest of the draft Order Limits.
Whooper swan	Four birds landed at Broomfleet Tileworks ponds adjacent to the draft Order Limits.

Feature	Description
Wigeon	Eight birds on Broomfleet Tileworks Ponds, adjacent to the draft Order Limits.
Non-breeding Bird Assemblage - Broomfleet Tileworks	A wetland bird assemblage of at least 33 species, of which seven are SPA qualifying species. Of these, goldeneye, mallard, marsh harrier, pink-footed goose, pochard and teal reached numbers equalling or exceeding 1% of the Humber Estuary SPA population at least once during the count period, although pink-footed goose was not recorded as a regular visitor to these pools.
Route Section 4 River Ouse Cossing	
Barn Owl	Potential Nest sites (see Table 9.10) can be used by non-breeding birds, therefore this species is likely to be present year-round.
Bearded tit	Post-breeding flocks present in reedbeds on the banks of the River Ouse adjacent to the draft Order Limits.
Cetti's warbler	Present on the banks of the River Ouse adjacent to the draft Order Limits.
Curlew	Exclusively within 1 km of both sides of the River, from adjacent to the draft Order Limits up to approximately 2 km from the draft Order Limits. Closest records are at Blacktoft Sands.
Golden plover	One record of foraging approximately 200 m from the draft Order Limits south of Ousefleet.
Grey heron	Single record of a roosting bird on the River Ouse approximately 900 m west of the draft Order Limits.
Greylag goose	Scattered records of feeding flocks of up to 25 birds on farmland south of Blacktoft Sands. Closest records are approximately 500 m from the draft Order Limits.
Lapwing	Widespread records of feeding flocks of up to 150 birds on arable farmland either side of the draft Order Limits close to Blacktoft Sands. The closest records are adjacent to the draft Order Limits.
Marsh harrier	Two individuals loafing[9] on open fields adjacent to the draft Order Limits south of Blacktoft Sands.
Mute swan	Foraging groups of between 2 and 10 birds adjacent to the draft Order Limits south of Blacktoft Sands.
Peregrine	A single perched on a pylon adjacent to the draft Order Limits south of Blacktoft Sands.

[9] Loafing is a term used for when a bird is engaging in relaxed behaviours not specifically related to feeding, breeding or predator evasion.

Feature	Description
Pink-footed goose	Frequent and widespread feeding flocks of between 35 and 100 birds on arable farmland south of Blacktoft Sands. The closest records are within approximately 200 m of the draft Order Limits.
Ruff	A flock of six birds on arable farmland approximately 1.3 km west of the draft Order Limits.
Shelduck	Three birds on the River Ouse approximately 650 m west of the draft Order Limits and two birds feeding on farmland 150 m northwest of the draft Order Limits.
Whooper swan	Two birds landed on the River Ouse within the draft Order Limits.
Non-breeding Bird Assemblage - Blacktoft Sands	A wetland bird assemblage of at least 50 species 29 of which are qualifying features of the SPA. Of these, avocet, bittern, black-tailed godwit, brent goose, curlew, dunlin, golden plover, goldeneye, greenshank, hen harrier, lapwing, mallard, marsh harrier, pink-footed goose, pochard, redshank, ringed plover, ruff, sanderling, scaup, shelduck, teal, turnstone, whimbrel and wigeon reached numbers equalling or exceeding 1% of the SPA population in at least one of the survey years and most of them reached this threshold at the 5-year mean of peaks
Non-breeding Bird Assemblage - River Ouse	A wetland bird assemblage overlapping the draft Order Limits which, across all tidal states, supported (during surveys) 23 species, of which nine are qualifying species of the Humber Estuary SPA. Surveys identified interchange of individuals predominantly between the River Ouse channel and the pools and wet grasslands within Blacktoft Sands RSPB Reserve. A stone groyne 200 m west of the draft Order Limits supports small (non-significant in SPA terms) numbers of mallard, teal and wigeon and also cormorant, grey heron and several species of gull.
Route Section 5 River Ouse Crossing to Luddington	
Golden Plover	A single bird landed in a field adjacent to the draft Order Limits.
Mallard	A pair was recorded in a ditch.
Mute swan	A foraging pair approximately 500 m east of the draft Order Limits near Luddington.
Pink-footed goose	Frequent and widespread feeding flocks of between three and 3,000 birds on arable farmland between Adlingfleet and Luddington either side of the draft Order Limits. The closest records are immediately adjacent to the draft Order Limits.

Feature	Description
Route Section 6 Luddington to M180 Motorway	
Barn owl	Potential Nest sites (see Table 9.10) can be used by non-breeding birds, therefore this species is likely to be present year-round.
Grey heron	A single record near VP9 of an adult landing in a field.
Greylag goose	Small groups / feeding flocks of up to 14 birds adjacent to the draft Order Limits and Three Rivers near Keadby in March 2023.
Golden plover	Two records of foraging and loafing birds approximately 250 m south of the draft Order Limits.
Hen harrier	A single hunting female / immature bird approximately 250 m south of the draft Order Limits near Crowle.
Kingfisher	A bird was heard calling from a pond 250 m west of the draft Order Limits.
Mallard	Occasional scattered records of foraging birds.
Mute swan	Groups of between three and 28 birds on farmland adjacent to the draft Order Limits near Keadby wind farm and Crowle.
Peregrine	A single bird perched on an existing pylon within the draft Order Limits close to Crowle.
Route Section 7 M180 Motorway to Graizelound	
Barn owl	Nest sites (see Table 9.10) can be used by non-breeding birds; therefore, this species is likely to be present all year-round.
Mallard	Multiple records of birds ranging from one to 26 birds. All birds were seen using Warping Drain and Ferry Drain, approximately 200 m west of draft Order Limits.
Mute swan	A foraging pair close to Warping Drain, within approximately 200 m of the draft Order Limits.
Route Section 8 Graizelound to Chesterfield Canal	
Barn Owl	Potential Nest sites (see Table 9.10) can be used by non-breeding birds; therefore, this species is likely to be present year-round.
Grey heron	A single bird fishing on the River Idle adjacent to the draft Order Limits.
Golden plover	One record of a foraging flock immediately north of Warping Drain near Haxey, approximately 250 m north and west of the draft Order Limits.

Feature	Description
Lapwing	Feeding flocks of between 20 and 150 birds on arable farmland immediately west of the draft Order Limits north of the Warping Drain near Haxey.
Mallard	Small feeding groups and flocks of up to 26 birds on Warping Drain, the River Idle and adjacent pools. Closest records are adjacent to the draft Order Limits.
Mute swan	A foraging pair feeding in a wet drain within arable farmland close to the River Idle, within approximately 330 m of the draft Order Limits.
Pink-footed goose	Flocks of between six and 270 birds on a pool immediately south of the Warping Drain west of Graizelound and approximately 1 km west of the draft Order Limits.
Teal	Two feeding parties of six birds on the Warping Drain, the closest adjacent to the draft Order Limits.
Whooper swan	Fourteen birds feeding on arable field north of Chesterfield Canal, approximately 100 m west of the draft Order Limits.
Non-breeding Bird Assemblage – Area 2, Haxey	No Data – surveys to be completed
Non-breeding Bird Assemblage – Area 3, Misterton	No Data – surveys to be completed
Route Section 9 Chesterfield Canal to A620 east of North Wheatley	
Barn Owl	Potential Nest sites (see Table 9.10) can be used by non-breeding birds, therefore this species is likely to be present year-round.
Route Section 10 A620 east of North Wheatley to Fledborough	
Barn Owl	Potential Nest sites (see Table 9.10) can be used by non-breeding birds, therefore this species is likely to be present year-round.
Route Section 11 Fledborough to High Marnham	
Barn owl	Potential Nest sites (see Table 9.10) can be used by non-breeding birds, therefore this species is likely to be present year-round.
Non-breeding Bird Assemblage – High Marnham Substation	Surveys have been carried out in support of the TCPA for the proposed High Marnham Substation.

Flight activity

9.5.16 Table 9.11 includes a summary of the flights recorded for primary target species broken down by VP, Route Section and for the whole Proposed Overhead Line. The narrative that follows sets out key observations for primary target species, with the main focus on target species that are qualifying features of designated sites, including but not limited to the Humber Estuary SPA/Ramsar site (see Annex C of **Appendix 9.1 Baseline Ornithology Report**), and Schedule 1 birds.

9.5.17 Further narrative will be provided in the ES regarding secondary target species where these are required for detailed assessment. Furthermore, narrative analysing patterns and direction of flight in relation to habitat use by target species; and notes on the interactions between airborne birds and any existing Overhead Line is not provided here as the data set is incomplete. This will be provided in the ES and supporting documents as required. Full information is provided in Table 9.11 below.

9.5.18 A flight was classified as having the potential to collide if both of the following observations, recorded by the surveyor, were applicable either to an individual bird or any number of birds within a flock:

- the flight included any record of the birds within at least one of the height recording bands through which one or more of the proposed overhead cables would pass; and
- the flight intersected any part of the Scoping Corridor[10].

9.5.19 Route Sections 3 to 5 of the Proposed Overhead Line contributed the majority of flight records, with numbers of flights overall, and the number of species contributing to the flight totals generally decreasing with distance from the River Ouse. While this is very likely to be reflective of the relative importance of the Humber Washlands to a number of species present on the Humber Estuary and its adjacent habitats over much of the year, it is also a factor of the relatively larger number of VPs in Route Sections 3 to 5 and the greater combined survey duration at those VPs, compared with other Route Sections of the Proposed Overhead Line. Since surveys are ongoing, further commentary on this will be provided in the ES as required, which will include all baseline data collected.

9.5.20 Nevertheless, there are some clear patterns of distribution of key non-breeding species, as follows:

- the majority of SPA species were rarely recorded away from the River Ouse itself;
- pink-footed goose was recorded in by far the greatest numbers within Route Sections 3 to 5, with the greatest totals recorded in Route Sections 4 and 5, but was otherwise rather widespread, appearing in most Route Sections. The volume of flight activity appears to be closely tied to the distribution of feeding areas favoured by this species within these sections;
- lapwing occurred most commonly in Route Sections 3-5 but was otherwise widespread;
- golden plover was recorded infrequently, but almost exclusively in Route Sections 3 to 5;

[10] Since the assessments in this chapter are based on VP data up to and including March 2024, all risk of collision reported and assessed herein is based only on whether a flight intersected the Scoping Corridor. Detailed assessments to be reported in the ES for flights recorded from April 2024 onwards will be based on whether flights intersected the draft Order Limits.

- curlew rarely occurred outside Route Section 3;
- bittern was recorded only once, at Broomfleet Tile Works;
- marsh harrier was mostly recorded in Route Sections adjacent to the River Ouse, especially Route Sections 3 and 4, where there are known roosts and breeding sites, but wandering and foraging individuals occurred further from the estuary as well; and
- wild swans (mute swan and whooper swan) were widespread, occurring in modest numbers within most Route Sections.

9.5.21 During the breeding season many of the species above were absent or present only in small numbers, however at this time activity by several species peaked:

- peregrine was recorded repeatedly in Route Section 3, where the species was recorded breeding at two locations;
- marsh harrier occurred in Route Sections 3 and 4, where known breeding sites can be found within Broomfleet Tileworks and Blacktoft Sands and, similar to non-breeding activity, this species was occasionally recorded further from the estuary; and
- red kite flight activity was widespread, reflecting the availability of breeding habitat in copses and trees scattered across the length of the Proposed Overhead Line and its environs.

Table 9.11 – Summary of flight activity by Target Species in each of the Route Sections[11]

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	**1**	**2**	**3**	**4a**	**4b**	**5**	**6**	**18a**	**18b**	**Ouse**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	
Cormorant																						
Total Flights	-	-	4	13	14	9	1	1	6	24	-	-	2	-	-	3	3	1	3	-	-	84
Number of Birds	-	-	4	20	69	9	1	1	6	31	-	-	4	-	-	3	3	1	3	-	-	155
Flights at Risk	-	-	3	13	10	5	1	1	6	7	-	-	1	-	-	3	2	-	2	-	-	54
Number of Birds at risk	-	-	3	20	65	5	1	1	6	8	-	-	3	-	-	3	2	-	2	-	-	119
Curlew																						
Total Flights	-	-	2	3	1	-	1	-	-	53	-	-	-	-	-	-	-	-	-	-	-	60
Number of Birds	-	-	4	9	3	-	1	-	-	806	-	-	-	-	-	-	-	-	-	-	-	823
Flights at Risk	-	-	2	2	1	-	1	-	-	27	-	-	-	-	-	-	-	-	-	-	-	33
Number of Birds at risk	-	-	4	6	3	-	1	-	-	571	-	-	-	-	-	-	-	-	-	-	-	585
Dunlin																						
Total Flights	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	2
Number of Birds	-	-	-	-	-	-	-	-	-	35	1	-	-	-	-	-	-	-	-	-	-	36

[11] 'Flights at risk' denotes birds recorded as flying within a height band within which conductors ('wires') might be located. Much of the space within this band would continue to be unobstructed airspace beneath, between and above the conductors. However, if an overhead line were to be present birds are likely to alter their flight behaviour to avoid collision

[12] No VP surveys were carried out in Section 11 – see Table 9.3 for details.

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	1	2	3	4a	4b	5	6	18a	18b	Ouse	7	8	9	10	11	12	13	14	15	16	17	
Flights at Risk	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds at risk	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-	-	-	35
Gadwall																						
Total Flights	-	-	-	-	-	-	-	-	1	11	-	-	-	-	-	-	-	-	-	-	-	12
Number of Birds	-	-	-	-	-	-	-	-	9	54	-	-	-	-	-	-	-	-	-	-	-	63
Flights at Risk	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	3
Number of Birds at risk	-	-	-	-	-	-	-	-	9	15	-	-	-	-	-	-	-	-	-	-	-	24
Golden Plover																						
Total Flights	-	-	2	-	-	2	3	-	-	5	2	1	1	-	1	1	-	-	-	-	-	18
Number of Birds	-	-	99	-	-	916	288	-	-	194	40	5	70	-	120	23	-	-	-	-	-	1755
Flights at Risk	-	-	-	-	-	-	2	-	-	3	1	-	-	-	1	1	-	-	-	-	-	8
Number of Birds at risk	-	-	-	-	-	-	280	-	-	69	32	-	-	-	120	23	-	-	-	-	-	524
Grey Geese Sp.																						
Total Flights	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds	-	-	-	-	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110
Greylag Goose																						
Total Flights	16	2	6	1	7	14	3	-	-	57	1	-	1	3	2	3	1	-	-	1	1	119

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	1	2	3	4a	4b	5	6	18a	18b	Ouse	7	8	9	10	11	12	13	14	15	16	17	
Number of Birds	128	5	12	2	135	84	5	-	-	785	11	-	23	40	8	8	1	-	-	3	1	1251
Flights at Risk	11	1	4		6	7	3	-	-	25	1	-		2	2	3	1	-	-	1	1	68
Number of Birds at risk	85	2	7		132	36	5	-	-	383	11	-		5	8	8	1	-		3	1	687
Hen Harrier																						
Total Flights	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	4
Number of Birds	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	4
Hobby																						
Total Flights	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Flights at Risk	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds at risk	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Kingfisher																						
Total Flights	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Lapwing																						
Total Flights	1	-	11	1	3	2	4	4	3	26	4	1	-	-	-	11	6	4	1	-	5	87
Number of Birds	15	-	411	63	105	103	148	227	222	2108	274	11	-	-	-	866	368	21	72	-	272	5286
Flights at Risk	-	-	8	-	2	1	4	4	3	23	2	-	-	-	-	8	4	3	1	-	4	67

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	1	2	3	4a	4b	5	6	18a	18b	Ouse	7	8	9	10	11	12	13	14	15	16	17	
Number of Birds at risk	-	-	257	-	63	3	148	227	222	2092	123	-	-	-	-	646	232	10	72	-	255	4350
Little Egret																						
Total Flights	-	-	7	-	-	2	3	-	-	34	-	-	-	3	-	4	1	1	-	-	-	55
Number of Birds	-	-	21	-	-	2	4	-	-	44	-	-	-	3	-	5	1	1	-	-	-	81
Flights at Risk	-	-	1	-	-	1	2	-	-	5	-	-	-	2	-	3	1	1	-	-	-	16
Number of Birds at risk	-	-	1	-	-	1	3	-	-	7	-	-	-	2	-	4	1	1	-	-	-	20
Mallard																						
Total Flights	-	-	15	4	2	5	4	-	2	85	1	-	1	1	1	18	4	5	-	-	11	159
Number of Birds	-	-	42	4	9	12	6	-	14	301	2	-	7	1	2	71	7	10	-	-	16	504
Flights at Risk	-	-	10	4	1	2	4	-	2	39	1	-	-	1	1	13	4	5	-	-	9	96
Number of Birds at risk	-	-	26	4	7	5	6	-	14	126	2	-	-	1	2	59	7	10	-	-	11	280
Marsh Harrier																						
Total Flights	-	-	16	3	9	23	9	14	9	40	21	18	-	1	-	-	1	-	-	-	-	164
Number of Birds	-	-	18	3	9	23	9	14	10	41	21	18	-	1	-	-	1	-	-	-	-	168
Flights at Risk	-	-	7	1	7	8	6	13	8	16	16	13	-	1	-	-	1	-	-	-	-	97
Number of Birds at risk	-	-	7	1	7	8	6	13	9	16	16	13	-	1	-	-	1	-	-	-	-	98

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	1	2	3	4a	4b	5	6	18a	18b	Ouse	7	8	9	10	11	12	13	14	15	16	17	
Merlin																						
Total Flights	1	-	1	-	-	1	-	-	-	1	1	1	-	-	-	-	1	-	-	-	-	7
Number of Birds	1	-	1	-	-	1	-	-	-	1	1	1	-	-	-	-	1	-	-	-	-	7
Flights at Risk	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Number of Birds at risk	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Mixed grey geese including greylag																						
Total Flights	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		100
Mute Swan																						
Total Flights	-	-	1	-	-	2	-	-	-	3	2	2	1	1	1	-	-	-	-	1	-	14
Number of Birds	-	-	5	-	-	3	-	-	-	11	4	3	3	3	3	-	-	-	-	3	-	38
Flights at Risk	-	-	1	-	-	1	-	-	-	2	1	2	1	-	-	-	-	-	-	1	-	9
Number of Birds at risk	-	-	5	-	-	1	-	-	-	9	1	3	3	-	-	-	-	-	-	3	-	25
Osprey																						
Total Flights	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	1	2	3	4a	4b	5	6	18a	18b	Ouse	7	8	9	10	11	12	13	14	15	16	17	
Flights at Risk	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds at risk	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Peregrine																						
Total Flights	3	1	2	7	10	10	29	-	-	9	3	2	-	1	1	-	1	1	-	-	-	80
Number of Birds	3	1	2	7	12	11	31	-	-	11	3	2	-	1	1	-	1	1	-	-	-	87
Flights at Risk	1	-	-	5	8	8	24	-	-	8	3	2	-	1	1	-	1	-	-	-	-	62
Number of Birds at risk	1	-	-	5	10	8	26	-	-	10	3	2	-	1	1	-	1	-	-	-	-	68
Pink-Footed Goose																						
Total Flights	-	1	1	3	6	12	8	-	1	11	48	20	2	1	1	4	13	2	4	2	3	143
Number of Birds	-	27	34	464	570	3780	902	-	24	238	3185	3001	156	34	87	212	1784	155	262	115	303	15333
Flights at Risk	-	-	-	1	3	8	8	-	1	9	29	14	2	1	1	2	9	-	3	1	-	92
Number of Birds at risk	-	-	-	9	96	3350	902	-	24	236	1851	1765	156	34	87	76	1305	-	247	34	-	10172
Pochard																						
Total Flights	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Red Kite																						

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	1	2	3	4a	4b	5	6	18a	18b	Ouse	7	8	9	10	11	12	13	14	15	16	17	
Total Flights	-	4	2	2	-	-	2	-	-	1	1	-	-	-	-	-	1	-	-	-	-	13
Number of Birds	-	4	2	4	-	-	2	-	-	1	1	-	-	-	-	-	1	-	-	-	-	15
Flights at Risk	-	3	-	2	-	-	1	-	-	1	1	-	-	-	-	-	1	-	-	-	-	9
Number of Birds at risk	-	3	-	4	-	-	1	-	-	1	1	-	-	-	-	-	1	-	-	-	-	11
Redshank																						
Total Flights	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2
Number of Birds	-	-	1	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	14
Flights at Risk	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Number of Birds at risk	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Shelduck																						
Total Flights	-	-	3	-	-	-	1	-	-	48	1	1	-	-	-	-	-	-	-	-	-	54
Number of Birds	-	-	4	-	-	-	2	-	-	161	2	2	-	-	-	-	-	-	-	-	-	171
Flights at Risk	-	-	2	-	-	-	1	-	-	23	1	1	-	-	-	-	-	-	-	-	-	28
Number of Birds at risk	-	-	3	-	-	-	2	-	-	100	2	2	-	-	-	-	-	-	-	-	-	109
Snipe																						
Total Flights	-	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	3
Number of Birds	-	-	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	1	2	3	4a	4b	5	6	18a	18b	Ouse	7	8	9	10	11	12	13	14	15	16	17	
Flights at Risk	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2
Number of Birds at risk	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
Swan sp.																						
Total Flights	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	2
Number of Birds	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	6
Teal																						
Total Flights	-	-	1	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-	-	-	-	23
Number of Birds	-	-	2	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	102
Flights at Risk	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4
Number of Birds at risk	-	-	-	-	-	-	-	-	-	377	-	-	-	-	-	-	-	-	-	-	-	377
Unidentified Goose sp.																						
Total Flights	-	-	1	-	3	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	6
Number of Birds	-	-	8	-	117	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	127
Flights at Risk	-	-	1	-	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	4
Number of Birds at risk	-	-	8	-	45	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	54

Route Sections	1	2/3	3							4		5	6			7/8	8		9	10		Whole Project[12]
VP	1	2	3	4a	4b	5	6	18a	18b	Ouse	7	8	9	10	11	12	13	14	15	16	17	
Whooper Swan																						
Total Flights	-	-	-	-	-	1	-	-	-	2	1	1	1	-	-	1	1	-	-	-	1	9
Number of Birds	-	-	-	-	-	4	-	-	-	10	1	23	7	-	-	4	15	-	-	-	5	69
Flights at Risk	-	-	-	-	-	1	-	-	-	2	1	1	-	-	-	-	-	-	-	-	-	5
Number of Birds at risk	-	-	-	-	-	4	-	-	-	10	1	1	-	-	-	-	-	-	-	-	-	16
Wigeon																						
Total Flights	-	-	1	-	-	-	1	-	-	66	1	1	-	-	-	-	-	-	-	-	-	70
Number of Birds	-	-	25	-	-	-	13	-	-	1220	1	1	-	-	-	-	-	-	-	-	-	1260
Flights at Risk	-	-	-	-	-	-	1	-	-	18	-	-	-	-	-	-	-	-	-	-	-	19
Number of Birds at risk	-	-	-	-	-	-	13	-	-	561	-	-	-	-	-	-	-	-	-	-	-	574

Future Baseline

9.5.22 Predicting future baseline requires projecting forward any trends or changes and considering how they may affect the baseline conditions over time. The nature of the future baseline is influenced by a combination of natural and human processes, including climate change.

9.5.23 Professional judgement has been used to predict the natural and human influences that are likely to change the baseline conditions as set out in the previous section, prior to the construction period (2028-2033).

9.5.24 The majority of the baseline conditions recorded between 2024 and 2025 are unlikely to change markedly by the start of construction in 2028. Furthermore, it is not anticipated that any large-scale changes in agricultural policies and practices will occur and be implemented by that time. However, bird populations can and do fluctuate on a local, regional and national scale as evidenced by the changes to the rolling 5-year peak mean counts published by BTO in the WeBS Report Online (Ref 9.4) and the approximately 5-yearly updates to the BoCC Red and Amber Lists and recent addition of species to the BoCC Red List (Ref 9.41).

9.5.25 Additionally, BTO WeBS alerts are published on a roughly 6-year cycle, identifying significant changes for individual species of wetland bird occurring at monitored sites, including alerts for species at designated wetland sites listed in Table 9.5, Table 9.6, and Table 9.7.

9.5.26 The following observations focus on qualifying species of the designated sites, and are taken from the (Ref 9.50):

- Lower Derwent Valley SPA – significant long term downward trends for Bewick's swan, golden plover, ruff, upward trends for shoveler, wigeon, teal and the waterbird assemblage overall;
- Humber Estuary SPA and SSSI – long term downward trends for shelduck, golden plover, bar-tailed godwit, knot, dunlin, redshank mallard, pochard, scaup, lapwing, ringed plover, turnstone and sanderling and the waterbird assemblage, upward trends for Brent goose, avocet, grey plover and curlew.
- River Idle Washlands SSSI – significant downward trends for Bewick's swan; and
- Sutton and Lound Gravel Pits SSSI – significant upward trend for gadwall and a variety of other wetland species, with downward trends reported only for tufted duck and golden plover.

9.5.27 It is acknowledged that climate change can lead to changes in the distribution and abundance of some biodiversity features at the local level; however, any such changes are likely to occur over a relatively long period of time. It is unlikely that there would be any significant changes to biodiversity features by 2028 as a result of climate change.

9.5.28 Should there be any large-scale changes in agricultural policies and practices by 2028 these may result in changes to the land use within and surrounding the draft Order Limits, which could possibly result in some changes in the extent of the agricultural land. Notwithstanding this, any such changes are unlikely to alter the importance of the biodiversity features recorded between 2024 and 2026, given that planning policy pro-actively ensures that the Project leaves the environment in a better condition than it was before development (including but not limited to the expected mandated delivery, from November 2025, of 10% BNG) for NSIPs consented under the Planning Act 2008.

9.5.29 Future developments within the draft Order Limits are likely to be limited given the rural setting of most of the route and are likely to be localised, industrial-related developments on land close to existing development. Anticipated and committed developments that have considerable overlap with the draft Order Limits and therefore potential to significantly affect the current baseline are detailed in **Chapter 21 Cumulative Effects**.

9.6 Mitigation

9.6.1 As set out in **Chapter 5 Approach to Preparing the PEIR** mitigation measures fall into one of three categories: embedded measures; control and management measures; and additional mitigation measures. Those measures relevant to the assessment of effects on ornithology are set out below.

Embedded Mitigation Measures

9.6.2 Environmental appraisal has been an integral part of the Project design from the outset, which has meant that the Project has been able to avoid environmentally sensitive features as far as reasonably practicable.

9.6.3 National Grid has also embedded measures into the design of the Project to avoid where possible or reduce significant effects that may otherwise be experienced during construction and operation (and maintenance) of the Project.

9.6.4 Embedded measures are those that are intrinsic to and built into the design of the Project, which have been presented in Table 4.2 in **Chapter 4 Description of the Project**. Measures of relevance to the ornithology chapter include:

- Sensitive Routeing and Siting to develop the draft overhead line alignment, siting of substations and draft Order Limits. Avoids and reduces, as far as practicable, impacts on identified receptors, in line with the National Policy Statements EN-1 (Ref 9.13) and EN-5 (Ref 9.12) as well as the Holford Rules (Ref 9.67) and the Horlock Rules (Ref 9.66). Further information on options appraisal and the alternative options considered is set out in **Chapter 3 Project Need and Alternatives**.
- Close parallel sections; Where possible the Project has been designed to be parallel or close parallel with the existing overhead lines. In general terms, a close parallel route may have the potential to reduce the overall extent of environmental impacts arising from the Project by intensifying the degree of impact on receptors already affected by existing overhead lines, rather that spreading impacts to areas not currently affected and forming a coherent appearance in line with Holford Rule 6 (Ref 9.67).
  - Route Sections where close parallel has been possible taking into account constraints present along the existing overhead lines as well as technical complexity include:
  - Route Sections 1-5 to reduce effects on the Yorkshire Wolds Important Landscape Area and potential collision risk on interest features of the Humber Estuary Special Protection Area (SPA) and Ramsar.
  - Route Section 7 to reduce effects on the Isle of Axholme area of Special Historic Landscape Interest.

- River Ouse crossing; The crossing of the River Ouse has been designed to be upstream of its confluence with the River Trent to minimise the width of the crossing on the Humber Estuary Special Area Conservation (SAC)/SPA/wetland site(s) also designated to be of international importance (Ramsar)/Site of Special Scientific Interest (SSSI). The proposed overhead line has also been routed to be broadly parallel with the existing 400 kV overhead line (taking into account the other environmental, socio-economic and technical considerations) to minimise the potential for effects on the interest features of the Humber Estuary designated sites. The locations of the proposed crossing pylons have been sited outside of the designated sites.
- Siting of the proposed infrastructure within the draft Order Limits to minimise potential impacts on protected habitats and species. Individual pylons and temporary haul roads have been designed to avoid direct and indirect impacts on protected habitats and species where possible. Micro-siting of pylons has taken into account swing of the overhead lines to avoid or minimise loss of woodland and trees as far as practicable.
- Application of stand-off distances[13]. Appropriate stand-off distances have been applied to designated sites and priority habitats (including ancient woodland and potential ancient woodland) and watercourses to avoid direct effects where practicable.
- Biodiversity Net Gain (BNG); Areas of permanent habitat loss would be calculated and considered during the BNG assessment. The Project will deliver 10% or greater BNG.

Control and Management Measures

9.6.5 Control and management measures, comprising management activities and techniques, will be implemented during construction of the Project to limit effects on ornithology through adherence to good site practices and achieving legal compliance.

9.6.6 An Outline Code of Construction Practice (CoCP) is provided in **Appendix 4.1 Draft Outline Code of Construction Practice CoCP**. Measures contained in the Outline CoCP that are relevant to the control and management of impacts that could affect the ornithology assessment are:

- GG01: The Project will be run in compliance with all relevant legislation, consents and permits including the limitations and requirements set out in the DCO.
- GG03: The following environmental management plans will be produced prior to construction.
  - Code of Construction Practice (CoCP)
  - Register of Environmental Actions and Commitments (REAC)
  - Construction Traffic Management Plan (CTMP)
  - Soil Management Plan (SMP)
  - Public Rights of Way Management Plan

[13] 'Stand-off distances' refers to a buffer between the proposed infrastructure and associated construction works and a receptor such as a watercourse

  - Materials and Waste Management Plan (MWMP)
  - Noise and Vibration Management Plan
  - Landscape and Ecology Management Plan (LEMP) including an Outline Landscape Maintenance and Management Plan
- Archaeological Written Scheme of Investigation (WSI).
- GG04: The CoCP shall include measures to manage dust, waste, water, noise, vibration and soil during construction. The contractor(s) shall undertake site inspections to check conformance to the Management Plans.
- GG05: A suitably experienced Environmental Manager will be appointed for the duration of the construction phase. In addition, a qualified and experienced EnvCoW will be available during the construction phase to advise, supervise and report on the delivery of the mitigation methods and controls outlined in the CoCP. The EnvCoW will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required good practice and mitigation measures. The EnvCoW will be supported as necessary by appropriate technical specialist advisors, including archaeologists, ecologists, soil scientists, and arboriculturists.
- GG06: Construction workers will undergo training to increase their awareness of environmental issues as applicable to their role on the project. Topics will include but not be limited to:
  - Working hours;
  - Ecology: working in or adjacent to protected sites and priority habitats, protected species, management, mitigation and controls;
  - Water management: legislation, buffer zones, control mechanisms, flood risks and emergency response procedures;
  - Waste management: legislation, segregation, contamination, best practice;
  - Agreed traffic routes and access points;
  - Nuisance: dust, behaviour, noise, vibration, management and controls;
  - Working around trees: tree and root protection;
  - Contaminated land: recognising and dealing with contaminated material;
  - Pollution prevision and incident response; and
  - Spill and emergency response.
- GG07: A record of condition will be carried out (photographic and descriptive) of the working areas that may be affected by the construction activities, prior to works commencing. This record will be available for comparison following reinstatement after the works have been completed to ensure that the standard of reinstatement at least meets that recorded in the pre-condition survey.
- GG08: Land used temporarily will be reinstated where practicable to its pre-construction condition and use. Hedgerows, fences and walls (including associated earthworks and boundary features) will be reinstated to a similar style and of similar or higher quality to those that were removed, unless otherwise agreed.

- GG09: Where sensitive features are to be retained within or immediately adjacent to the draft Order Limits, an appropriate protective area will be established using appropriate fencing and signage and will be inspected, repaired and replaced as necessary. The protective areas will be shown on the Retention and Reinstatement Plans contained within the LEMP.
- GG11: Any activity carried out or equipment located within a construction compound that may produce a noticeable nuisance, including but not limited to dust, noise, vibration and lighting, will be located away from sensitive receptors such as residential properties or ecological sites where practicable.
- GG15 Fuels, oils and chemicals will be stored responsibly, away from sensitive water receptors. Where practicable, they will be stored >15 m from watercourses, ponds and groundwater dependent terrestrial ecosystems. Where it is not practicable to maintain a >15 m distance, additional measures will be identified. All refuelling, soiling and greasing of construction plant and equipment will take place above drip trays and also away from drains as far as is reasonably practicable. Vehicles and plant will not be left unattended during refuelling. Appropriate spill kits will be made easily accessible for these activities. Potential hazardous materials used during construction will be safely and securely stored including use of secondary containment where appropriate. Stored flammable liquids such as diesel will be protected either by double walled tanks or stored in a bunded area with a capacity of 110 % of the maximum stored volume. Spill kits will be located nearby.
- GG16: Runoff across the site will be controlled through a variety of methods including header drains, buffer zones around watercourses, on-site ditches, silt traps and bunding. There will be no intentional discharge of site runoff to ditches, watercourses, drains or sewers without appropriate treatment and agreement of the appropriate authority (except in the case of an emergency).
- GG17: Wash down of vehicles and equipment will take place in designated areas, for example within construction compounds and intermittently along construction access roads. Wash water will be prevented from passing untreated into watercourses and groundwater. Appropriate measures will include use of sediment traps.
- GG19: Earthworks and stockpiled soil will be protected by covering, seeding or using water suppression where appropriate.
- GG21: Construction lighting will be of the lowest luminosity necessary to safely perform each task. It will be designed, positioned and directed to reduce the intrusion into adjacent properties, protected species and habitats.
- B01: The contractor(s) will comply with relevant protected species legislation. Appropriate licences will be obtained where necessary from Natural England for all works affecting protected species as identified by the Environmental Statement and through pre-construction surveys. All applicable works will be undertaken in accordance with the relevant requirements and conditions set out in those licences.
- B02: In the event that vegetation, structures, walls or pylons with the potential to support breeding birds is required to be removed or otherwise disturbed during the breeding bird season, the habitats affected will first be checked for signs of nesting by the ECOW (or a suitably experienced taxon specialist supporting the ECOW if required); works would also be supervised by an ECoW if definitive evidence to prove or disprove nesting cannot be determined. Appropriate protection measures will be put in place should active nests be found. These will include exclusion zones

determined on a case by case basis by an ECOW under the advice of a taxon specialist if required, around active nests until chicks fledge or nests become inactive as determined by monitoring by the ECoW.

- B03: Pre-works checks for nesting birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (Ref 9.47 will be carried out prior to site clearance or construction works within a 500 m radius of mature trees and existing pylons, and a 200 m radius from nest boxes, buildings and trees with potential to support nesting birds. The EnvCOW will apply pre-construction measures on a case by case basis, as required.
- B04: Habitat checks for nesting barn owl, where required, will be carried out by an ornithologist in possession of an appropriate class licence issued by Natural England.
- W02: For open cut watercourse crossings and installation of vehicle crossing points, good practice measures will include but not be limited to, where practicable:
  - reducing the working width for open cut crossings of a main or ordinary watercourse whilst still providing safe working;
  - installation of a pollution boom downstream of open cut works;
  - the use and maintenance of temporary lagoons, tanks, bunds, silt fences or silt screens as required;
  - have spill kits and straw bales readily available at all crossing points for downstream emergency use in the event of a pollution incident;
  - the use of all static plant such as pumps in appropriately sized spill trays;
  - prevent refuelling of any plant or vehicle within 15 m of a watercourse;
  - prevent storing of soil stockpiles within 15 m of a main river;
  - inspect all plant prior to work adjacent to watercourses for leaks of fuel or hydraulic fluids; and
  - reinstating the riparian vegetation and natural bed of the watercourse, using the material removed when appropriate, on completion of the works and compacting as necessary. If additional material is required, appropriately sized material of similar composition will be used.
- AQ04: Preparing and Maintaining the Site: Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
  - Erect solid screens or barriers around dusty activities such as around the construction compounds so that they are at least as high as any stockpiles on site (where appropriate and practical).
  - Keep site fencing, barriers and scaffolding clean using wet methods.
  - Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site, cover as described below.
  - Cover, seed or fence stockpiles to prevent wind whipping (where needed and depending on duration).

- NV01: Construction working will be undertaken within the agreed working hours set out within the DCO. Best practicable means to reduce construction noise and limit effects on perceptual aspects of landscape, such as tranquillity, will be set out within the CoCP.
- NV02: Contractor(s) will be required to follow good construction practices (referred to as best practicable means (BPM)) as outlined in BS 5228-1 and BS 5228-2 to control noise and vibration respectively. BS 5228-1 and BS 5228-2 have Approved Code of Practice status (in England) under the powers conferred by Sections 71(1)(b), (2) and (3) of the Control of Pollution Act 1974 (Ref 9.8), as enacted under The Control of Noise (Code of Practice for Construction and Open Sites) (England) Order 2015 (Ref 9.43). Compliance with the good practice noise and vibration requirements stated therein are a statutory obligation under the Act.

9.6.7 The **Appendix 4.1 Outline Code of Construction Practice CoCP** does include other standard measures relating to Ornithology such as:

- Pre-construction surveys to validate and, where necessary, update the baseline survey findings. The purpose of these pre-construction surveys would be to ensure mitigation during the construction phase is based on the latest protected bird species information. This would also be required for any protected species licensing.
- Reasonable avoidance measures, including appropriate buffers around identified bird nests (if present) where possible throughout the site.

Additional Mitigation Measures

9.6.8 Additional mitigation comprises measures over and above any embedded and standard mitigation measures, for which assessment within this PEIR has identified a requirement to further reduce significant environmental effects.

9.6.9 The preliminary assessment reported in this PEIR has not identified any requirements for additional mitigation at this stage, over and above the embedded or control and management measures identified. This will continue to be reviewed as the assessment progresses and the preliminary design develops further.

Enhancement

9.6.10 In addition to the mitigation described above, National Grid will look to implement habitat enhancement and creation through delivery of Biodiversity Net Gain (BNG).

9.6.11 Biodiversity Net Gain is a way of making sure the habitat for wildlife is in a measurably better state than it was before development. It requires a minimum 10% gain calculated using the government's Biodiversity Metric. BNG must be managed, monitored and reported on to the Local Planning Authority for 30 years. From November 2025 BNG will become mandatory for NSIP projects consented under the Planning Act 2008.

9.6.12 Where possible National Grid will deliver BNG through partnerships and seek to provide value-added BNG with wider benefits to communities, including access to nature, and help deliver national and local policies on health and wellbeing, environmental awareness, education, skills and jobs to ensure best value for money from consumer-funded BNG.

9.6.13 National Grid has already begun talking to landowners within several areas, where habitat enhancement and creation might be most beneficial, to explore what

opportunities there might be. We are in early discussions with national conservation and environmental organisations to create partnerships to deliver BNG in ways that provide enduring benefit to communities.

9.7 Preliminary Assessment

9.7.1 This section first identifies the potential effects that could occur as a result of the construction, operation and maintenance of the Proposed Overhead Line. The preliminary assessment is then presented for the Proposed Overhead Line as described in **Chapter 4 Description of the Project.** The preliminary assessment of Proposed Substation Works is presented in **Chapter 20 Substations and Associated Works.**

9.7.2 The preliminary assessment takes into account the embedded, control and management and additional mitigation measures set out in section 9.6.

Potential Effects

9.7.3 The potential for the Proposed Overhead Line to result in likely significant effects on ornithological receptors was determined through the EIA Scoping process. This section lists those potential effects that have been scoped into the assessment within the Scoping Report (Ref 9.49 taking into account the comments received within the Scoping Opinion (Ref 9.48 . Where the scope has been amended since the EIA Scoping Report (Ref 9.49), explanatory text has been included to provide justification for this change.

Construction

9.7.4 The potential effects that could result from the construction of the Proposed Overhead Line are:

- Permanent and temporary direct habitat loss and temporary disturbance and fragmentation of the statutory designated Humber Estuary SPA/Ramsar/SSSI. No permanent habitat loss is now predicted for these designated sites, which is a change since the EIA Scoping Report (Ref 9.49 was issued.
- Permanent and temporary direct habitat loss and temporary disturbance and fragmentation of non-statutory designated sites.
- Permanent and temporary direct habitat loss and temporary disturbance and fragmentation of habitats utilised by protected and notable bird species.
- Incidental mortality of breeding and non-breeding birds.
- Disturbance to protected or notable species from noise/vibration, visual and lighting.
- Changes in air quality on designated sites within 200 m of the construction traffic routes.
- Pollution impacts on designated sites and notable species.
- Loss/reduction in habitat quality used by protected/notable birds from changes in groundwater levels.

Operation

9.7.5 The potential effects that could result from the operation of the Proposed Overhead Line are:

- Collision mortality on breeding and non-breeding birds due to permanent structures/barriers.
- Effects on protected and notable species via habitat fragmentation as a result of the Proposed Overhead Line creating a barrier to species dispersal.
- Habitat gains for some nesting bird species through the introduction of pylons.
- Increased predation effects from potential increased populations of predatory birds species on the Humber Estuary SPA/Ramsar/SSSI and breeding and non-breeding birds in areas where the proposed overhead line would not be in close parallel with the existing line and would therefore provide habitat for predatory birds where such habitat does not currently exist.

Maintenance

9.7.6 The potential effects that could result from the maintenance of the Proposed Overhead Line are:

- Temporary direct habitat loss and temporary disturbance and fragmentation and disturbance of the Humber Estuary SPA/Ramsar/SSSI and Blacktoft Sands RSPB Reserve due to maintenance access. No temporary habitat loss, disturbance and fragmentation is now predicted inside Humber Estuary SPA/Ramsar/SSSI and Blacktoft Sands RSPB Reserve, which is a change since the scoping report was issued. Potential for temporary direct habitat loss and temporary disturbance and fragmentation of habitat used by protected and notable bird species
- Incidental mortality of birds;
- Disturbance to protected or notable bird species from noise/vibration, visual and lighting;
- Pollution impacts on designated sites and notable bird species.

Preliminary Assessment Tables

9.7.7 Tables 9.3 – 9.15 present the preliminary assessment of effects respectively on statutory designated sites, non-statutory designated sites and individual species. No significant effects are identified for species assemblages.

9.7.8 The statutory designated site receptors included in Table 9.5 are listed in order of importance/value rather than by Project Route Section, starting with International statutory designated sites, then moving on to national and local statutory designated sites. The non-statutory designated site receptors in Table 9.7 are grouped by site type, starting with RSPB Reserves and moving on the Local Wildlife Sites and Wildlife Trust Reserves, each listed in ascending order by Route Section.

9.7.9 The species receptor Table 9.14 includes both breeding and non-breeding receptors in alphabetical order, since many species occur in multiple Route Sections.

9.7.10 The potential effects listed above in paragraphs 9.7.3 to 9.7.5 are included in the tables against individual receptors only where relevant, which means that for some receptors there will not necessarily be effects at all three stages of the Project (i.e. construction,

operation, and maintenance). The preliminary assessment of effects takes embedded mitigation measures and control and management measures into account, which are set out in section 8.6 of this chapter. The following specific impact pathways have been excluded from assessment:

- Construction-phase air quality impacts for any site beyond 200 m from the draft Order Limits (200 m has been stated as the distance threshold for this in the chapter);
- Operation-phase collision mortality for all sites that support individual species or assemblages of species that are predominantly small woodland/scrub breeding birds including passerines, doves, pigeons and corvids which are less susceptible to this risk; and
- Operation-phase impacts of increased predation for any site or species that occurs where the proposed overhead line follows a close parallel alignment to an existing overhead line, or is close to major National Grid electricity infrastructure[14].

9.7.11 Mallard and greylag goose have been combined as a single receptor row because their ecological requirements are similar, and they were recorded engaging in similar behaviours (largely foraging or loafing and overflying) across a closely matching spatial range within the Proposed Overhead Line and the wider survey areas.

9.7.12 Dunlin, Pochard and Wigeon were recorded in flight only and their flight activity is usually closely tied to the locations of their roosts and feeding areas within wetland sites that support bird assemblages. Therefore, these species, which occurred only as part of larger wetland bird assemblages in specific locations, are assessed only for effects on birds in flight or during dispersal during the operational phase of the Project. Effects on these species during the construction and maintenance phases of the Project are otherwise adequately assessed through the assessment of effects on designated sites and wetland bird assemblages.

9.7.13 Osprey occurs in England typically on passage to and from breeding or wintering grounds outside the study area, without engaging in habitat use. On this basis, effects on osprey are considered only for airborne birds and only at the operational stage.

9.7.14 Species that could engage widely in habitat use but for which the only records constitute flights include cormorant, red kite, hen harrier, redshank, little egret, gadwall and snipe. Impacts on these species are, for the preliminary assessment, considered only for airborne birds and only at the operational stage of the Project.

9.7.15 However, any of these species could engage in habitat use and, since surveys are ongoing, further analysis of their behaviours and distribution will be used to inform the detailed assessments in the ES, as required. Common tern was recorded in flight only along some watercourses. This species is known to commute along watercourse and to use them as feeding resources, often at some distance from breeding locations. Therefore, only those impact pathways with the potential to affect this species while commuting or foraging are considered, and these are relevant only to the operational phase of the Project.

9.7.16 Conversely, preliminary assessment of the effects of collision mortality is made for species that were not recorded in flight but that would be expected to do so regularly

[14] The introduction of an additional habitat (the proposed overhead line) for predatory birds adjacent to existing habitat (the existing overhead line) would not be expected to result in increased numbers of such species, as the additional habitat provided by the overhead line would lie within existing territories defended by incumbent birds.

based on recorded habitat use and that, based on their morphology and behaviours, would be potentially vulnerable to collision. These include ruff and barn owl.

9.7.17 Passerine species and those species that rarely engage in flights other than at low altitudes are regarded as not vulnerable to collisions with overhead structures (Ref 9.50) and on this basis would not be expected to be sensitive to impacts during dispersal. Therefore, the effects of collision and barriers to dispersal are scoped out of the assessment for Cetti's warbler, bearded tit, black redstart, quail and kingfisher.

9.7.18 The following preliminary assessment tables are set out in **Appendix 9.2 Preliminary Assessment**:

- Table 1.1 - Preliminary Assessment of Effects on Statutory Designated Sites;
- Table 1.2 - Preliminary Assessment of Effects on Non-statutory Designated Sites;
- Table 1.3 - Preliminary Assessment of Effects on Species Assemblages; and
- Table 1.4 - Preliminary Assessment of Effects on Species.

9.7.19 These tables list all potential effects from the Proposed Overhead Line on the relevant receptors. The following sections summarise those effects which at this preliminary stage have been assessed as potentially significant.

Statutory designated sites

9.7.20 Potentially significant effects have been identified on the following statutory designated sites and are summarised in Table 9.12:

- Humber Estuary SPA/Ramsar; and
- Humber Estuary SSSI

Table 9.12 – Preliminary assessment of effects on statutory designated sites

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
Humber Estuary SPA/Ramsar (International) Humber Estuary SSSI[15]	Construction	4	Potential for temporary direct habitat loss and temporary disturbance and fragmentation of the Humber Estuary Ramsar/SPA/SSSI.	Micro-siting of individual pylons and access routes as far as practicable to avoid direct and indirect impacts on protected habitats; Oversailing to avoid or minimise direct effects as far as technically feasible on designated site habitats and species; Appropriate stand-off distances will be applied to designated sites to avoid direct effects as far as practicable; Areas of temporary habitat loss would be reinstated, wherever practicable, following the completion of construction in each area. Wherever possible, reinstatement would be back to the type of habitat affected or improved/enhanced as far as practicable; Design of the Project includes crossing the River Ouse upstream of the River Trent to	Significant	Moderate – desk study and surveys ongoing. Final Project design and mitigation package is still in development and will be finalised for consideration in the ES

[15] For the purposes of assessment, pink-footed goose is treated as a de facto qualifying species of the Humber Estuary designations during the non-breeding season.

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
				minimise the width of the crossing of the Humber Estuary SPA/Ramsar/SSSI Control and management measures: GG01; GG03; GG05; GG06; GG07; GG08; B02.		
			Potential for disturbance to protected or notable species/qualifying species from noise/vibration, visual and lighting.	Design of the Project includes crossing the River Ouse upstream of the River Trent to minimise the width of the crossing of the Humber Estuary SPA/Ramsar/SSSI Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11; GG21; NV01; NV02.	Significant	Moderate – surveys and desk study are ongoing. Final Project design and mitigation package are still in development and will be finalised for consideration in the ES.
	Operation	3 - 6	Potential for collision mortality on breeding and non-breeding birds due to permanent structures/barriers.	Adoption of close-parallel and synchronised overhead line design as far as possible through the Yorkshire Wolds, Humberhead Levels and at the River Ouse crossing; Design of the Project includes crossing the River Ouse upstream of the River Trent to minimise the width of the crossing of the Humber Estuary SPA/Ramsar/SSSI and to restrict the crossing to where volume of bird flights are lower (when	Significant	Moderate – desk study and surveys ongoing. The Final Project design and mitigation packages are still in development and will be finalised for consideration in the ES.

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
				compared with downstream locations); Control and management measures: GG01.		
			Potential for effects on protected and notable species via habitat fragmentation as a result of the Proposed Overhead Line creating a barrier to species dispersal.	Adoption of close-parallel and synchronised Overhead Line design as far as possible through the Yorkshire Wolds, Humberhead Levels and at the River Ouse crossing, following an existing barrier rather than introducing a discrete new barrier; Design of the Project includes crossing the River Ouse upstream of the River Trent to minimise the width of the crossing of the Humber Estuary SPA/Ramsar/SSSI and to restrict the crossing to where volume of bird flights are lower (when compared with downstream locations); Control and management measures: GG01.	Significant	Moderate – desk study and surveys ongoing. The Final Project design and mitigation packages are still in development and will be finalised for consideration in the ES.

Non-statutory designated sites

9.7.21 Potentially significant effects have been identified on the following non-statutory designated sites and are summarised in Table 9.13:

- Blacktoft Sands RSPB Reserve;
- Stainforth and Keadby Canal Corridor LWS;
- South Moor Covert and Fishpond Plantation LWS;
- Sedge Hole Close LWS and Wildlife Trust Site;
- Warping Drain Corridor LWS;
- Treswell Wood LWS and Wildlife Trust Site;
- Bushstocks Lane Meadow LWS; and
- Headon Verges LWS.

Table 9.13 – Preliminary assessment of effects on non-statutory designated sites

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
Blacktoft Sands RSPB Reserve (County)	Construction	4	Potential for disturbance to protected or notable species/qualifying species from noise/vibration, visual and lighting.	Design of the Project includes crossing the River Ouse upstream of the River Trent to minimise the width of the crossing of the Humber Estuary SPA/Ramsar/SSSI Design of the Project includes crossing the River Ouse on the western side of the existing line to maximise distance from the Reserve whilst also adopting an alignment close to the existing line crossing. Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11; GG21; NV01; NV02.	Significant	Moderate - Final Project design and mitigation packages are still in development and will be finalised for consideration in the ES.
	Operation 3 - 5 3 - 5		Potential for collision mortality on breeding and non-breeding birds due to permanent structures/barriers.	Adoption of close-parallel and synchronised Overhead Line design as far as possible through the Yorkshire Wolds, Humberhead Levels and at the River Ouse crossing; Design of the Project includes crossing the River Ouse upstream of the River Trent to minimise the width of the crossing	Significant	Moderate – desk study and surveys ongoing. Final Project design and mitigation packages are still in development and will be finalised for consideration in the ES.

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
				of the Humber Estuary SPA/Ramsar/SSSI and to restrict the crossing to where volume of bird flights are lower (when compared with downstream locations); Control and management measures: GG01.		
			Potential for effects on protected and notable species via habitat fragmentation as a result of the Proposed Overhead Line creating a barrier to species dispersal.	Adoption of close-parallel and synchronised Overhead Line design as far as possible through the Yorkshire Wolds, Humberhead Levels and at the River Ouse crossing, following an existing barrier rather than introducing a discrete new barrier; Design of the Project includes crossing the River Ouse upstream of the River Trent to minimise the width of the crossing of the Humber Estuary SPA/Ramsar/SSSI and to restrict the crossing to where volume of bird flights are lower (when compared with downstream locations); Control and management measures: GG01.	Significant	Moderate - Final Project design and mitigation package is still in development and will be finalised for consideration in the ES.
Stainforth and	Construction	6	Potential for disturbance to	Control and management measures: GG01; GG03; GG04;	Significant	Moderate - Final Project design and mitigation

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
Keadby Canal Corridor LWS (Local)			protected or notable species from noise/vibration, visual and lighting	GG05; GG06; GG11; GG21; NV01; NV02.		package is still in development and will be finalised for consideration in the ES.
South Moor Covert and Fishpond Plantation LWS (Local)	Construction	7	Potential for disturbance to protected or notable species/qualifying species from noise/vibration, visual and lighting.	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11; GG21; NV01; NV02.	Significant	Moderate - Final Project design and mitigation package is still in development and will be finalised for consideration in the ES.
Sedge Hole Close LWS (Local)	Construction	7	Potential for disturbance to protected or notable species/qualifying species from noise/vibration, visual and lighting.	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11; GG21; NV01; NV02.	Significant	Moderate - Final Project design and mitigation package is still in development and will be finalise for consideration in the ES.
	Operation	7	Potential for effects on protected and notable species via habitat fragmentation as a result of the Proposed	Control and management measures: GG01.	Significant	Low – Baseline data collection, final Project design and mitigation package are still in development and will be finalised for consideration in the ES.

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
			Overhead Line creating a barrier to species dispersal.			
Warping Drain Corridor LWS (Local)	Construction	7/8	Potential for disturbance to protected or notable species/qualifying species from noise/vibration, visual and lighting.	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11; GG21; NV01; NV02.	Significant	Moderate - Final Project design and mitigation package is still in development and will be finalised for consideration in the ES.
	Operation	7/8	Potential for effects on protected and notable species via habitat fragmentation as a result of the Proposed Overhead Line creating a barrier to species dispersal.	Control and management measures: GG01.	Significant	Moderate - Final Project design and mitigation package is still in development and will be finalised for consideration in the ES.
Treswell Wood LWS and Wildlife Trust Site (Local)	Construction	10	Potential for disturbance to protected or notable species/qualifying species from	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11; GG21; NV01; NV02.	Significant	Moderate - Final Project design and mitigation package is still in development and will be finalised for consideration in the ES.

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
			noise/vibration, visual and lighting.			
Bushstocks Lane Meadow LWS (Local)	Construction	10	Potential for disturbance to protected or notable species/qualifying species from noise/vibration, visual and lighting.	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11; GG21; NV01; NV02.	Significant	Moderate - Final Project design and mitigation package is still in development and will be finalised for consideration in the ES.
Headon Verges LWS (Local)	Construction	10	Potential for disturbance to protected or notable species/qualifying species from noise/vibration, visual and lighting.	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11; GG21; NV01; NV02.	Significant	Moderate - Final Project design and mitigation package is still in development and will be finalised for consideration in the ES.

Species assemblages

9.7.22 The preliminary assessment has not identified potentially significant effects on species assemblages.

Species

9.7.23 Potentially significant effects have been identified on the following species and these are summarised in Table 9.15:

- Hobby (breeding);
- Lapwing (breeding and non-breeding);
- Little ringed plover (breeding);
- Oystercatcher (breeding);
- Peregrine falcon (breeding and non-breeding);
- Pink-footed goose (non-breeding); and
- Turtle Dove (breeding).

Table 9.14 – Preliminary assessment of effects on species

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
Hobby (breeding) (District)	Construction	3, 8 and 10	Potential for permanent and temporary direct habitat loss and temporary disturbance and fragmentation of habitats utilised by species.	Control and management measures: GG01; GG03, GG04; GG05; GG06; GG09; GG11; GG21; B01; B02; NV02.	Significant	Moderate – desk study and surveys are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES. However, surveys to date demonstrate the dependence on a natural nest site in a trees adjacent to the draft Order Limits for nesting and perching birds.
	Construction	3, 8 and 10	Potential for disturbance to species from noise/vibration, visual and lighting.	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11, GG21; NV02.	Significant	Moderate – desk study and surveys are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES. However, surveys to date identify a nest site adjacent to the Draft Order Limits.
Lapwing (breeding and non-breeding) (Local)	Operation	1, 3, 4, 5, 7, 8, 9, 10	Potential for collision mortality of breeding and non-breeding birds due to permanent structures/barriers.	Adoption of close-parallel and synchronised Overhead Line design as far as possible through the Humberhead Levels, Isle of Axholme and at the River	Significant	Low - surveys and desk study are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES.

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
				Ouse crossing as far as practicable; Control and management measures: GG01.		Relatively large volumes of flight activity have been recorded for this species across a wide area, however the close parallel Project design across the Humberhead Levels, the River Ouse and the Isle of Axholme will limit this effect in these areas.
Little ringed plover (breeding) (Local)	Operation	3	Potential for collision mortality with breeding birds due to permanent structures/barriers.	Adoption of close-parallel and synchronised Overhead Line design as far as possible through the Humberhead Levels as far as practicable; Control and management measures: GG01.	Significant	Low - surveys and desk study are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES. The close parallel Project design across the Humberhead Levels will limit this effect in area the species has been recorded. Little ringed plover are a small manoeuvrable species that have a very low collision risk. Finally, 107 hours of vantage point surveys have been done near the location of the little ringed plover and no flight activity has been recorded.
Oystercatcher (breeding) (Local)	Operation	1, 3, 8	Potential for collision mortality of breeding birds	Adoption of close-parallel and synchronised Overhead Line design as far as possible through the	Significant	Low - surveys and desk study are ongoing; final Project design and mitigation package is still in development and will be

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
			due to permanent structures/barriers.	Humberhead Levels and Isle of Axholme as far as practicable following an existing barrier rather than introducing a discrete new barrier; Control and management measures: GG01.		finalised for consideration in the ES. The close parallel Project design across the Humberhead Levels, and the Isle of Axholme will limit this effect in area the species has been recorded.
Peregrine falcon (breeding and non-breeding) (Local)	Construction	1, 2, 3, 4, 5, 6, 8	Potential for permanent and temporary direct habitat loss and temporary disturbance and fragmentation of habitats utilised by species.	Control and management measures: GG01; GG03, GG04; GG05; GG06; GG09; GG11; GG21; B01; B02; NV02.	Significant	Moderate – desk study and surveys are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES. However, surveys to date demonstrate high dependence on the existing pylons within or adjacent to the draft Order Limits for nesting and perching birds.
			Potential for disturbance to species from noise/vibration, visual and lighting.	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11, GG21; NV02.	Significant	Moderate – desk study and surveys are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES. However, surveys to date demonstrate high dependence on the existing pylons within or adjacent to the Draft Order Limits.

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
Pink-footed goose (non-breeding) (Local)	Construction	2, 3, 4, 5, 6, 7, 8, 9, 10	Potential for permanent and temporary direct habitat loss and temporary disturbance and fragmentation of habitats utilised by species.	Control and management measures: GG01; GG03, GG04; GG05; GG06; GG09; GG11; GG21; B01; B02; NV02.	Significant	Moderate – desk study and surveys are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES. However, distribution and high numbers of birds utilising habitats adjacent to the draft Order Limits suggest potential for significant effects across the Humberhead Levels and especially between Blacktooth Sands and Luddington.
			Potential for disturbance to species from noise/vibration, visual and lighting.	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11, GG21; NV02.	Significant	Low – the commitments stated and measures in the draft **Appendix 4.1 Outline Code of Construction Practice CoCP** may not be sufficient to avoid this effect, as pink-footed geese can be highly sensitive to visual and noise disturbance. Further consideration of this potential effect will be required in the ES upon completion of all baseline gathering activities.
	Operation	2, 3, 4, 5, 6, 7, 8, 9, 10	Potential for collision mortality non-breeding birds	Adoption of close-parallel and synchronised Overhead Line design as far as possible through the Yorkshire Wolds,	Significant	Moderate - Large volumes of flight activity have been recorded for this species, however the close parallel Project design across the Yorkshire Wolds,

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
			due to permanent structures/barriers.	Humberhead Levels, Isle of Axholme and at the River Ouse crossing as far as practicable; Control and management measures: GG01.		Humberhead Levels, the River Ouse and the Isle of Axholme will reduce this effect. Surveys and desk study are ongoing and the final Project design and mitigation package is still in development and will be finalised for consideration in the ES.
			Potential for effects on species via habitat fragmentation as a result of the Proposed Overhead Line creating a barrier to species dispersal.	Adoption of close-parallel and synchronised Overhead Line design as far as possible through the Yorkshire Wolds, Humberhead Levels, Isle of Axholme and at the River Ouse crossing as far as practicable, following an existing barrier rather than introducing a discrete new barrier; Control and management measures: GG01.	Significant	Moderate – pink-footed geese have been recorded making flights to and from feeding areas on both sides of the existing Overhead Line and making flights parallel to the existing Overhead Line south of the River Ouse, indicating a high degree of adaptation by this species to the existing infrastructure. However, there remains an as-yet unquantified risk of habitat fragmentation affecting this species. Desk study and surveys are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES.
	Construction	8	Potential for permanent and	Control and management measures: GG01; GG03,	Significant	Moderate – desk study and surveys are ongoing; final

Receptor / value	Project stage	Relevant Route Sections	Potential effect	Mitigation	Preliminary significance of effect	Confidence in prediction
Turtle Dove (breeding) (District)			temporary direct habitat loss and temporary disturbance and fragmentation of habitats utilised by species	GG04; GG05; GG06; GG09; GG11; GG21; B01; B02; NV02.		Project design and mitigation package is still in development and will be finalised for consideration in the ES. However, surveys to date demonstrate known breeding habitat is within or adjacent to the draft Order Limits for nesting and perching birds.
			Potential for disturbance to species from noise/vibration, visual and lighting	Control and management measures: GG01; GG03; GG04; GG05; GG06; GG11, GG21; NV02.	Significant	Moderate – desk study and surveys are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES.
	Operation	8	Potential for effects on protected and notable species via habitat fragmentation as a result of the Proposed Overhead Line creating a barrier to species dispersal	Control and management measures: GG01; GG03, GG04; GG05; GG06; GG09; GG11; GG21; B01; B02; NV02.	Significant	Moderate – desk study and surveys are ongoing; final Project design and mitigation package is still in development and will be finalised for consideration in the ES. However, surveys to date demonstrate known breeding habitat is within or adjacent to the draft Order Limits for nesting and perching birds.

Summary of the Preliminary Assessment of the Proposed Overhead Line with the Proposed Substation Works.

9.7.24 The preliminary assessment of the Proposed Substation Works is presented in **Chapter 20 Substations and Associated Works.**

9.7.25 Shared receptors between the Proposed Overhead Line and Proposed Substation Works at Birkhill Wood include:

- Lower Derwent Valley SPA/Ramsar;
- Humber Estuary SPA/Ramsar;
- Breeding bird Assemblage Area 1; and
- Individual species including lapwing, mallard, greylag goose, merlin, oystercatcher and peregrine falcon.

9.7.26 Shared receptors between the Proposed Overhead Line and the Proposed Substation Works at High Marnham include:

- Breeding Bird Assemblage Area 13; and
- Individual species including barn owl, hobby, lapwing, mallard, greylag goose, mute swan, pink footed goose and whooper swan.

9.7.27 Taking account of the embedded measures set out in **Chapter 4 Description of the Project** and the control and management measures as set out in **Appendix 4.1 Draft Outline Code of Construction Practice** any potential effects from the Proposed Substation Works are not likely to be significant, and, when considered together are unlikely to change the preliminary significance that is presented in this Chapter.

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National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com