The Great Grid Upgrade

North Humber to High Marnham

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North Humber to High Marnham

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Contents

9.	**Ornithology**	**1**
9.1	Introduction	1
9.2	Regulatory and Planning Context	2
9.3	Scoping Opinion and Consultation	10
9.4	Assessment Approach and Methods	35
9.5	Basis of Assessment	51
9.6	Baseline Conditions	54
9.7	Potential Effects	92
9.8	Mitigation	122
9.9	Residual Effects Assessment	131

Table 9.1 – NPS EN-1 sections relevant to ornithology 4
Table 9.2 – NPS EN-5 sections relevant to ornithology 5
Table 9.3 – NPPF sections relevant to ornithology 7
Table 9.4 – Comments raised in the Scoping Opinion 11
Table 9.5 – Assessment aspects raised at statutory consultation and how these have been addressed 12
Table 9.6 – Further engagement 26
Table 9.7 – Aspects scoped into the assessment 33
Table 9.8 – Study areas for ornithology 38
Table 9.9 – Ornithological surveys undertaken to characterise baseline conditions 42
Table 9.10 – Magnitude criteria for impacts 48
Table 9.11 – CIEEM effect classifications and EIA terminology 50
Table 9.12 – Flexibility assumptions 51
Table 9.13 – Statutory designated sites (notified for ornithological features) screening table 57
Table 9.14 – Non-statutory designated sites (notified for ornithological features) screening table 62
Table 9.15 – Summary year-round flight data for all target species at all VPs 68
Table 9.16 – Summary of non-breeding species and designated sites hosting non-breeding species, and screening for further assessment 72
Table 9.17 – Summary of breeding species and designated sites hosting breeding species, and screening for further assessment 84
Table 9.18 – Summary of potential ornithological effects on statutory designated sites during construction (C), operation (O) and maintenance (M) 94
Table 9.19 – Summary of potential ornithological effects on non-statutory designated sites during construction (C), operation (O) and maintenance (M) 100
Table 9.20 – Summary of potential effects on ornithological species and species assemblages 108
Table 9.21 – Assessment of residual effects on statutory designated sites 132
Table 9.22 – Assessment of residual effects on non-statutory designated sites 145
Table 9.23 – Assessment of residual effects on species and species assemblages that are not qualifying features of designated sites 158

Bibliography 189

9. Ornithology

9.1 Introduction

9.1.1 This chapter of the Environmental Statement (ES) presents the assessment of likely significant ornithological effects that could result from the North Humber to High Marnham Project (the Project) as described in **Application Document 6.4 Chapter 4 Description of the Project**.

9.1.2 This chapter describes the relevant legislation and policy, the scope of the assessment, methodology used, the datasets that have informed the assessment, the baseline conditions, mitigation measures, and the ornithological residual significant effects that could result from the Project.

9.1.3 The Order Limits, which illustrate the boundary of the Project, are shown on **Application Document 6.1.F1 Figure 1.1 Project Location and Route Sections**.

9.1.4 This chapter should be read in conjunction with the following ES chapters:

- **Application Document 6.4 Chapter 4 Description of the Project**;
- **Application Document 6.5 Chapter 5 EIA Approach and Methodology**;
- **Application Document 6.8 Chapter 8 Ecology**;
- **Application Document 6.15 Chapter 15 Air Quality**;
- **Application Document 6.16 Chapter 16 Noise and Vibration**;
- **Application Document 6.20 Chapter 20 Intra-project Cumulative Effects**; and
- **Application Document 6.21 Chapter 21 Inter-project Cumulative Effects**.

9.1.5 This chapter is supported by the following figures:

- **Application Document 6.9.F1 Figure 9.1 Statutory International Designated Sites of Ornithological Importance;**
- **Application Document 6.9.F2 Figure 9.2 Statutory National and Local Designated Sites of Ornithological Importance; and**
- **Application Document 6.9.F3 Figure 9.3 Non-Statutory Designated Sites of Ornithological Importance**.

9.1.6 This chapter is supported by the following appendices:

- **Application Document 6.9.A1 Appendix 9.1 Regional and Local Planning Policy**;
- **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**;
- **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**;
- **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report;**

- **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**; **and**
- **Application Document 6.8.A11 Appendix 8.11 Summary of Assessments for Sites of Special Scientific Interest.**

9.1.7 This chapter is supported by the following application documents:

- **Application Document 5.2 Habitats Regulations Assessment Report**;
- **Application Document 6.5.A1 Appendix 5.1 Environmental Impact Assessment (EIA) Scoping Report**;
- **Application Document 6.5.A2 Appendix 5.2 Scoping Opinion**;
- **Application Document 6.5.A3 Appendix 5.3 Scoping Response Tables**;
- **Application Document 7.1 Biodiversity Net Gain Report**;
- **Application Document 7.2 Outline Code of Construction Practice**;
- **Application Document 7.3 Register of Environmental Actions and Commitments**;
- **Application Document 7.4 Outline Construction Traffic Management Plan**;
- **Application Document 7.5 Outline Soil Management Plan**;
- **Application Document 7.7 Outline Noise and Vibration Management Plan**;
- **Application Document 7.8 Outline Landscape and Ecology Management Plan**;
- **Application Document 7.12 Water Framework Directive Assessment**;
- **Application Document 7.13 Flood Risk Assessment**; and
- **Application Document 7.14 Arboricultural Impact Assessment**.

9.2 Regulatory and Planning Context

9.2.1 This section sets out the legislation and planning policy that is relevant to the ornithology assessment. A full review of compliance with relevant national, regional, and local planning policy is provided within **Application Document 5.5 Planning Statement** submitted as part of the application for development consent.

9.2.2 **Application Document 6.2 Chapter 2 Legislation and Policy Context** describes the overall regulatory and planning policy context for the Project. Key legislation, policy, and planning guidance relevant to the assessment of ornithological effects of the Project is presented below.

Legislation

9.2.3 The legislation listed has been considered when identifying potential constraints to the Project, design options and mitigation. Other legislation more widely applicable to terrestrial ecology, but not specifically to ornithological interests, is set out in **Application Document 6.8 Chapter 8 Ecology**.

Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations)

9.2.4 The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) (HM Government, 2017) transposed the requirements of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) (European Council, 1992) and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the Conservation of Wild Birds (Birds Directive) (European Parliament, 2009) into UK law and provides for the designation and protection of European protected sites (and adopts planning and other controls for the protection of these sites). This includes Annex I (habitats) and Annex II (species) for which such European sites can be designated.

9.2.5 The Habitats Regulations (HM Government, 2017) also provide protection for certain European Protected Species that are listed on Schedule 2 (animals) or Schedule 5 (plants). Provision is made for the granting of licences that permit certain acts as lawful, providing the appropriate authority is satisfied that the permitted activities will be carried out for specified reasons or purposes, that there is no satisfactory alternative, and that the activities will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

9.2.6 From the date of EU Exit, the Habitats Regulations were amended to provide that Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK no longer form part of the EU's Natura 2000 ecological network.

9.2.7 The amendment through The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (2019 Regulations) (HM Government, 2019) instead created a national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes existing SACs and SPAs and proposed or new SACs and SPAs designated under these Regulations.

Wildlife and Countryside Act 1981

9.2.8 The Wildlife and Countryside Act (WCA) 1981 (HM Government, 1981) is a primary piece of UK wildlife legislation, protecting birds, other animals and plants (including vascular plants, bryophytes, lichens and fungi) and providing for the designation of protected areas, including Sites of Special Scientific Interest (SSSIs). It is an offence to cause the spread in the wild of any species listed under Schedule 9 of the WCA 1981 (HM Government, 1981).

Countryside and Rights of Way Act 2000

9.2.9 The Countryside and Rights of Way Act 2000 (HM Government, 2000) extends powers relating to the protection and management of SSSIs. This includes powers for entering management agreements, placing a duty on public bodies to further the conservation and enhancement of SSSIs, increasing penalties for conviction, and appeal processes for the notification, management and protection of SSSIs. It also introduced the offence of reckless disturbance of threatened species.

Natural Environment and Rural Communities Act 2006 (NERC)

9.2.10 Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (HM Government, 2006) requires the Secretary of State (SoS), in consultation with

Natural England, to publish and maintain a list of habitats and species that are of principal importance for the purpose of conserving biodiversity, and are regarded as conservation priorities under the UK Post-2010 Biodiversity Framework (JNCC on behalf of the Four Countries' Biodiversity Group, 2024).

Environment Act 2021

9.2.11 The Environment Act 2021 (HM Government, 2021) provides a post-EU Exit legal framework for environmental governance and makes provision for improvements to the natural environment. It requires the SoS to set long-term targets (15-year minimum) for biodiversity.

Environmental Protection Act 1990

9.2.12 The Environmental Protection Act 1990 (HM Government, 1990) makes provision for the control of pollution to the air, water, and land by regulating the management of waste and the control of emissions.

National Policy

National Policy Statements

9.2.13 National Policy Statements (NPSs) set out the primary policy tests against which the application for a Development Consent Order (DCO) for the Project will be considered.

9.2.14 Table 9.1 and Table 9.2 provide details of the provisions of the Overarching NPS for Energy (EN-1) (Department for Energy Security and Net Zero, 2025), referred to hereafter as NPS EN-1, and NPS for Electricity Networks Infrastructure (EN-5) (Department for Energy Security and Net Zero, 2025), referred to hereafter as NPS EN-5, that are relevant to the assessment of the Project's on ornithological receptors and how and where related information is provided in the ES and application. Other policies more widely applicable to terrestrial ecology, but not specifically to ornithological interests, are set out in **Application Document 6.8 Chapter 8 Ecology**.

Table 9.1 – NPS EN-1 sections relevant to ornithology

NPS EN-1 section	Where this is covered in the application
5.4.23 '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.'	Impacts on birds from the Project are covered in section 9.9 of this chapter. Effects on other mobile and migratory species are detailed in **Application Document 6.8 Chapter 8 Ecology**.

NPS EN-1 section	Where this is covered in the application
5.4.56 'The Secretary of State should ensure that species and habitats identified as being of importance for the conservation of biodiversity are protected from the adverse effects of development by using requirements, planning obligations, or licence conditions where appropriate.' *5.4.57 '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 or the climate resilience and the capacity of habitats to store carbon, which they consider may result from a proposed development.'*	Mitigation measures in line with the mitigation hierarchy are set out in section 9.8 of this chapter, and **Application Document 7.3 Register of Environmental Actions and Commitments**, which will avoid significant harm to protected species and their relevant habitat. Residual effects are detailed in section 9.9 of this chapter.

Table 9.2 – NPS EN-5 sections relevant to ornithology

NPS EN-5 section	Where this is covered in the Application
2.9.3 '*Electricity networks infrastructure pose a particular potential risk to birdlife including large birds, such as swans and geese, and perching birds. These may collide with overhead lines and risk being electrocuted. Large birds may also be electrocuted when landing or taking off by completing an electric circuit between live and ground wires. Even perching birds can be killed as soon as their wings touch energised parts of the infrastructure*.' 2.9.4 '*Applicants should consider measures to make lines more visible such as bird flappers and diverters which are covered in more detail in Sections 2.10.2 - 2.10.4* [of NPS EN-5].' 2.9.5 '*The applicant will need to consider whether the proposed line will cause such problems at any point along its length and take this into consideration in the preparation of the ES (see Section 4.3 of EN-1)*.'	Flight activity and potential risk of collision has been considered, and the residual effects are presented in section 9.9 of this chapter which is supported by **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**. Mitigation measures targeting the potential effects of collision risk are presented in section 9.8 of this document and **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment.**

NPS EN-5 section	Where this is covered in the Application
2.9.6 '*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….*'	Potential flight activity risk has been assessed at foraging and commuting areas associated with designated sites as agreed with Natural England (such as rivers and green corridors) as set out in **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment** and supported by robust baseline data gathered through bird survey work and detailed desk study set out in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**. Mitigation measures in line with the mitigation hierarchy are described in section 9.8 and residual effects in section 9.9 of this chapter respectively.
2.10.2 '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.'	The Project has been designed to route the proposed overhead line in close parallel with the existing 400 kV overhead lines wherever possible and, as described in **Application Document 5.9 Design Development Report**, especially through the Humberhead Levels where the highest numbers of qualifying features of statutory and non-statutory designated sites were expected (and confirmed by baseline data) to occur.
2.10.3 '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 of fluorescent colours designed specifically for bird vision can also reduce the risk of bird collisions and number of potential 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.'	A range of measures (including bird diverters) have been adopted to manage potential effects on breeding and wintering birds, as set out in section 9.8 of this chapter, **Application Document 7.2 Outline Code of Construction Practice**, **Application Document 7.3 Register of Environmental Actions and Commitments** and **Application Document 7.8 Outline Landscape and Ecology Management Plan**.
2.10.4 '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.'	Standardised design has been incorporated and therefore mortality through electrocution on transmission lines is unlikely, due to the large air gaps between live and earthed components. Birds that perch or nest on steel lattice pylons are therefore unlikely to be electrocuted by causing a short circuit, either by touching two live wires, or a live and an earthed component as, due to the air gap touching two of these components at the same time is highly unlikely.
2.11.1 'Where biodiversity impacts are identified, including those associated with bird collision with overhead lines, the Secretary of State should be satisfied that all feasible options for mitigation have been considered and evaluated appropriately.'	Mitigation measures in line with the mitigation hierarchy are described in section 9.8 of this chapter.

National Planning Policy Framework

9.2.15 The National Planning Policy Framework (NPPF) as revised in August 2026 (Ministry of Housing, Communities and Local Government 2026, 2026) sets out national planning policies that reflect priorities of the Government for the operation of the planning system and the economic, social, and environmental aspects of the development and use of land. The NPPF (Ministry of Housing, Communities and Local Government 2026, 2026) has a strong emphasis on sustainable development, with a presumption in favour of such development. Although the NPSs set out the primary policy tests for the Project, the NPPF (Ministry of Housing, Communities and Local Government 2026, 2026) has the potential to be considered important and relevant to the consideration of the Project by the Secretary of State (SoS).

9.2.16 Table 9.3 below provides details of the elements of the NPPF (Ministry of Housing, Communities and Local Government 2026, 2026) that relate to the ornithological assessment, and how and where they are covered in the ES and Application. Other policies more widely applicable to terrestrial ecology but not specifically to ornithological interests are set out in **Application Document 6.8 Chapter 8 Ecology**.

Table 9.3 – NPPF sections relevant to ornithology

NPPF section	Where this is covered in the application
Section 19 sets out policies designed to influence the design and location of new development to help drive nature's recovery and contribute to wider environmental outcomes, safeguarding our most important habitats, species and landscapes and recognising the centrality of natural capital to delivering sustainable growth. The policies contain very little content directly relevant only to ornithology, however the following policies include content that is indirectly relevant to ornithology. **Policy N2: Improving the Natural Environment** Paragraph 1: To contribute positively to the natural environment, and support nature's recovery, development proposals should[1]: c. Take suitable opportunities to connect to and strengthen ecological networks that extend beyond the site, drawing on the measures proposed by Local Nature Recovery Strategies, National Forest Strategies and Community Forest Plans,	This chapter sets out information on how the Project has sought to minimise impacts and protect priority species of ornithological interest; designated sites that support qualifying features of ornithological importance; and habitats beyond the boundaries of such designated sites that play a supporting role in the function and integrity of those sites. The following application documents provide the information required; • **Application Document 6.9 Chapter 9 Ornithology** • **Application Document 6.8 Chapter Ecology** • **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information** • **Application Document 5.2 Habitats Regulations Assessment Report;** • **Application Document 7.1 Biodiversity Net Gain Report;** • **Application Document 7.8 Outline Landscape and Ecology Management Plan** • **Application Document 5.5 Planning Statement**

[1] Paragraph 1 parts a and b are not relevant to biodiversity and are therefore excluded.

NPPF section	Where this is covered in the application
where present, and other relevant assessments; d. Conserve and enhance existing natural features of visual, historic or nature conservation value (such as established trees and hedgerows) where possible; and use appropriate landscaping to help create a well-designed place and integrate the development into its surroundings; f. Minimise any adverse impacts on biodiversity and include features which support priority or threatened species such as swifts, bats and hedgehogs. Development proposals should incorporate integrated nest boxes (commonly known as swift bricks) into their construction unless there are compelling technical reasons which prevent their use, or would make them ineffective; and **Policy N6: Areas of particular importance for biodiversity and geodiversity.** Paragraph 1: To support the conservation of important habitats, species and sites of geodiversity value, development proposals affecting: a. A site of international importance, which for the purpose of this policy is a habitats site, should be refused unless: i. An appropriate assessment has concluded that the proposal will not adversely affect the integrity of the site (either individually or in combination with other developments), or the proposal can satisfy the derogation tests61; and/or ii. The impact of development on the relevant protected features of the protected site is being addressed through an Environmental Delivery Plan which has been made and the developer has committed to paying the nature restoration levy. b. A site of national importance, which for the purpose of this policy is one designated	

NPPF section	Where this is covered in the application
as a Site of Special Scientific Interest, should only be supported if: i. There would be no adverse effect (either individually or in combination with other developments) on the site's features of special scientific interest; or ii. The benefits of the development in the location proposed clearly outweigh both the likely impact on the features of special scientific interest, and any broader impact on the national network of Sites of Special Scientific Interest; or iii. The impact of development on the relevant protected feature of the protected site is being addressed through an Environmental Delivery Plan which has been made and the developer has committed to paying the nature restoration levy. c. A site of local importance, which for the purpose of this policy is one designated as a Local Nature Reserve or identified as a local wildlife site, local geological site or equivalent in the development plan, should only be supported if: i. There would not be a significant adverse effect on the integrity of the site; or ii. There would not be a significant adverse effect on the integrity of the site; or The benefits of development in the location proposed clearly outweigh the likely impact on the features which make the site valuable for nature conservation. Paragraph 2: Irrespective of a site's status in nature conservation terms, development proposals which would entail the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists. Paragraph 3: This policy applies to development on land inside or outside a designated area, if it would have an impact	

NPPF section	Where this is covered in the application
on the identified biodiversity or geodiversity value of the area concerned.	

National Planning Practice Guidance

9.2.17 The NPPF (Ministry of Housing, Communities and Local Government 2026, 2026) is supported by Planning Practice Guidance (PPG) which was first published in March 2014. This guidance is updated on a regular basis and provides advice on a range of topics related to the implementation of NPPF (Ministry of Housing, Communities and Local Government 2026, 2026) policies. The PPG that is relevant to the ornithological assessment is summarised below.

Planning Practice Guidance for Natural Environment

9.2.18 The PPG for Natural Environment (Ministry of Housing, Communities and Local Government, 2025) explains key issues in implementing policy to protect and enhance the natural environment, including local requirements.

Regional and Local Policy

9.2.19 **Application Document 6.2 Chapter 2 Legislation and Policy Context** lists relevant regional and local policy documents.

9.2.20 A range of regional and local planning policies are in place that seek to protect and enhance biodiversity assets, including those of direct relevance to ornithology; these have been given due regard in the ornithology assessment and have been considered as part of the design development process of the Project. Full details of local policies relevant to this assessment are presented in **Application Document 6.9.A1 Appendix 9.1 Regional and Local Planning Policy**.

9.3 Scoping Opinion and Consultation

Scoping Opinion

9.3.1 A Scoping Report for the Project was issued to the Planning Inspectorate on 21 August 2023 (**Application Document 6.5.A1 Appendix 5.1 Environmental Impact Assessment (EIA) Scoping Report**) and a Scoping Opinion was received from the Planning Inspectorate on behalf of the SoS for the Department for Energy Security and Net Zero on 29 September 2023 (**Application Document 6.5.A2 Appendix 5.2 Scoping Opinion**).Table 9.4 sets out the comments raised in **Application Document 6.5.A2 Appendix 5.2 Scoping Opinion** that relate to ornithology and how these have been addressed in this assessment. **Application Document 6.5.A2 Appendix 5.2 Scoping Opinion** takes account of responses from prescribed consultees as appropriate. **Application Document 6.5.A3 Appendix 5.3 Scoping Response Tables** provide responses to the comments made by the prescribed consultees at the scoping stage that relate to the scope of the assessment and how each comment has been considered.

9.3.2 As ornithology was considered as part of scoping the wider ecological assessment in **Application Document 6.5.A1 Appendix 5.1 Environmental Impact Assessment (EIA) Scoping Report**, one table of comments was received as part of **Application Document 6.5.A2 Appendix 5.2 Scoping Opinion**. Table 9.4 only details those comments that are relevant to the assessment of ornithological receptors. For other comments, please refer to **Application Document 6.8 Chapter 8 Ecology**.

Table 9.4 – 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.	In line with the Planning Inspectorate's comments, designated sites with mobile qualifying features that include birds have not been scoped out. Therefore, permanent and temporary loss, disturbance, and fragmentation of supporting/foraging habitat (including Functionally Linked Land (FLL)[2]) have been included in this assessment. 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.
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	Comprehensive baseline surveys of bird flight activity have been carried out across Gringley and Misterton Carrs, including from a location on the north bank of the canal, from where flights along the canal were recorded. The baseline data includes very little flight activity along this part of the canal. This has been accounted for in the assessments and mitigation presented in this chapter sections (9.7 to 9.9)

[2] 'Functionally Linked Land' (FLL) or 'Functionally Linked Habitat' (FLH) are terms that are often used to describe habitats occurring outside of a Special Protection Area (SPA) or Ramsar site that are considered to be critical to, or necessary for, the ecological behavioural functions in a relevant season of a qualifying feature for which the site in question is designated. FLL also refers to mobile qualifying features associated with SSSIs and their associated IRZs.

ID	Inspectorate's comments	Response
	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.	

Statutory Consultation

9.3.3 Statutory consultation for the Project took place between 18 February and 15 April 2025. A summary of the relevant feedback received during statutory consultation relating to ornithology is provided below in Table 9.5. Further details on how consultation responses have informed the assessment are provided in **Application Document 5.1 Consultation Report**.

Table 9.5 – Assessment aspects raised at statutory consultation and how these have been addressed

Stakeholder	Assessment aspects raised	How this has been addressed
Natural England	Overall, Natural England advises that the survey methodology is robust and, subject to finishing the planned surveys, there will be sufficient data to be able to assess impacts to birds associated with designated sites within the HRA.	Acknowledged.
Natural England	It should be considered that construction disturbance can also affect SPA birds using land outside the SPA, so disturbance to FLL will also need to be assessed.	Impacts more widely on qualifying features within FLL have been assessed and any residual effects are reported in section 9.9 of this chapter.
Natural England	The preliminary assessment demonstrates the importance of the Ouse in the non-breeding season at both high and low tide, and during the breeding season for SPA birds. Therefore, we advise there is likely to be impacts to SPA birds during the construction period which are unlikely to be avoidable via timing of works. As such, additional mitigation measures should be considered.	Mitigation measures have been determined both during stakeholder engagement and as part of the Project design and assessment process. Those that are relevant to ornithology are set out in section 9.8 of this chapter.
Natural England	Discrepancies in the baseline data.	Apparent discrepancies in the data presented in the baseline have been checked and

Stakeholder	Assessment aspects raised	How this has been addressed
		amended where required for the purposes of the ES.
Natural England	Measures to avoid disturbance to Schedule 1 of the WCA birds only mention mature trees, pylons, nest boxes and buildings as potential nesting places, however, these are not the only places Schedule 1 birds nest. Marsh harriers, bearded tits and Cetti's warblers all nest in reedbeds for example. Natural England advise that reed-bed habitat should be included in any pre-works checks, and a review of alternative nesting habitats for SPA/Ramsar birds should be undertaken to ensure the proposed pre-works checks are exhaustive.	**Application Document 7.3 Register of Environmental Actions and Commitments,** commitment reference **ON02**, includes pre-construction checks of reedbed habitats where these would be affected by construction works.
Natural England	It is very difficult to find nests in vegetation, even for experienced ornithologists. Natural England advise that where required, all vegetation removal should be undertaken outside of the relevant breeding season. Specifically, the removal of reedbed habitats, which may be used by breeding Marsh Harrier, should be avoided during the breeding season.	Wherever possible in the Project design there has been a presumption against habitat removal during the breeding bird season for the reasons stated by Natural England, and there will be a presumption against habitat removal where practicable during the breeding season within the construction programme. **Application Document 7.2 Outline Code of Construction Practice** reflects this, with clearer wording on the measures in place to protect nesting birds where vegetation removal during the breeding season is required. **Application Document 7.3 Register of Environmental Actions and Commitments** has also been updated to reflect the presumption against vegetation clearance during the breeding season where possible. In addition to, and alongside timing of works, vegetation clearance works would be carried out following careful checks for nesting birds and supervision of vegetation clearance by a suitably qualified and experience

Stakeholder	Assessment aspects raised	How this has been addressed
		ornithologist working alongside an Environmental Clerk of Works (ECoW), These measures are set out in **Application Document 7.3 Register of Environmental Actions and Commitments** (commitment reference **ON01**).
Natural England	River Idle Washlands SSSI - Natural England note that the key species of interest with regard to this designation is Bewick's Swan and the preliminary assessment identified a significant downward trend in Bewick's Swan, which is likely to be relevant to the assessment, but should not be relied upon to rule out impacts. The ES should consider any desk study or survey data for Bewick's swan to ensure the assessment of these impacts is robust and based upon the most relevant information. It is noted that no Bewick's Swan have been recorded to date. The Breeding Bird Assemblage at this SSSI is also part of its notified interest, however, at approx. 2.5 km from the order limits, Natural England consider impacts to these species unlikely, as they are unlikely to forage at this distance.	The assessment of impacts and effects on Bewick's swan (*Cygnus columbianus*) has been updated to reflect the additional baseline data available for the ES. The downturn in the Bewick's swan population is accounted for in the assessments of receptor value and the impact assessments overall. The advice regarding the breeding bird assemblage feature of the designated site is welcomed and has been incorporated into the assessments presented in section 9.9 of this chapter.
Natural England	Sutton & Lound Gravel Pits SSSI - potential flyways between Beckingham Marshes/the River Trent and Sutton and Lound Gravel Pits represent key locations that can be considered to support the most valuable bird populations. Natural England note that the key feature of interest with regard to this designation is the variety of passage species that use it including Cormorant, Lapwing and Pink Footed Geese and which are likely to be moving between the River Trent and Sutton and Lound Gravel Pits as identified in the preliminary assessment. The ES should consider any desk study or survey data for	The assessments presented in section 9.9 of this chapter consider the impacts and effects of the Project on the Sutton and Lound Gravel Pits SSSI and its qualifying features, informed by the complete baseline. The SSSI is 4.71km away from the project and therefore outwith any key foraging ranges of the water bird assemblage. Flight activity surveys indicated very low levels of flight activity indicative of regular movements to/from the SSSI and therefore negligible potential for effects. South of Gringley Carrs relevant flight activity surveys included only a

Stakeholder	Assessment aspects raised	How this has been addressed
	passage and wintering species within or crossing the Order Limits to ensure any impacts to the overall variety of the assemblage using this SSSI is not reduced. The Breeding Bird Assemblage & a significant Population of Gadwall also make up the notified interest of this site, however, at approx. 4.71 km from the order limits, Natural England consider impacts to these species unlikely, as they are unlikely to forage at this distance.	few hundred records with a low proportion of these at potential collision risk height, this potential corridor of movement along the River Idle Valley and across Misterton Carrs already includes mitigation measures for whopper swan via installation of bird diverters on the overhead lines.
Natural England	Justification within the ES should be given as to why significant ornithological effects on SSSIs other than the Humber have been ruled out.	Only those SSSIs with qualifying features of ornithology interest within the stated study area have been considered. Impacts and effects on all relevant SSSIs are set out in section 9.9 of this chapter.
East Riding of Yorkshire Council	The principal embedded mitigation is in respect to avoidance with the line in close parallel to the existing, but it is understood that potential mitigation includes the use of line markers, habitat management, timing of works (potential conflict of breeding and overwintering) and noise abatement. We would encourage the use of such measures to minimise any confirmed effects.	A range of measures have been adopted to manage potential effects on breeding and wintering birds, as set out in section 9.8 of this chapter, **Application Document 7.2 Outline Code of Construction Practice**, **Application Document 7.3 Register of Environmental Actions and Commitments** and **Application Document 7.8 Outline Landscape and Ecology Management Plan**.
Bassetlaw District Council	It is hoped mitigation for the operational phase such as line marking will be used wherever possible to reduce the risk of bird collisions.	A range of measures have been adopted to manage potential effects on breeding and wintering birds, as set out in section 9.8 of this chapter, **Application Document 7.2 Outline Code of Construction Practice**, **Application Document 7.3 Register of Environmental Actions and Commitments** and **Application Document 7.8 Outline Landscape and Ecology Management Plan**.

Stakeholder	Assessment aspects raised	How this has been addressed
Nottinghamshire County Council	Generally, the surveys appear to provide a good level of baseline information. Gringley and Misterton Carr is an important site for wintering wild swans – particularly Whooper Swans, with Bewick's Swans now very scarce. We are concerned that the risk to this species at this location has been significantly under-estimated, given the number of swans involved and the fact that swans are particularly prone to collisions with powerlines.	Effects on wintering wild swans and other species occurring on Gringley and Misterton Carrs, especially qualifying features of the River Idle Washlands SSSI, are set out in section 9.9 of this chapter and informed by the completed baseline surveys, the results of which are presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**. This includes further desk study information and records from baseline surveys carried out since statutory consultation, including additional targeted survey effort to detect wintering wild swans and other wetland birds. This targeted survey effort was added to the wider survey scope following the statutory consultation in response to stakeholder comments received.
Nottinghamshire County Council	NPS EN-5 states '*applicants should consider measures to make lines more visible such as flappers and diverters*…'. The Council therefore consider it essential that flappers/diverters are installed where the lines cross Gringley and Misterton Carr, not least as it will presumably be much simpler and cost effective to do so during construction, rather than at a later date once swan casualties start occurring.	The identification of appropriate mitigation has been undertaken in line with the mitigation hierarchy. The requirements for mitigation, including bird diverters, are identified in section 9.8 of this report, with further details set out in **Application Document 7.2 Outline Code of Construction Practice**, **Application Document 7.3 Register of Environmental Actions and Commitments** and **Application Document 7.8 Outline Landscape and Ecology Management Plan**. Location-specific requirements for bird diverters have been determined by detailed assessment of the relative and estimated actual levels of risk using the bird flight data collected from all vantage points. This assessment of bird flight activity is presented in **Application**

Stakeholder	Assessment aspects raised	How this has been addressed
		Document 6.9.A3 Appendix 9.3 Flight Activity Assessment.
Nottinghamshire County Council	Gringley and Misterton Carr is also one of the few places in Nottinghamshire where Corn Buntings (*Emberiza calandra*) still occur (certainly in any numbers), a Red Listed species which has suffered an 83% population decrease between 1967 and 2022. We would strongly suggest that targeted surveys for this species are carried out along the route where it crosses Gringley and Misterton Carr to allow the impacts on this species to be properly assessed, and for appropriate mitigation to be designed.	Data regarding breeding corn bunting have been assembled from the completed dataset, which includes records from ongoing surveys completed on or close to Misterton and Gringley Carrs (VP surveys, non-specific breeding bird surveys); and a breeding corn bunting census undertaken in 2026 up to 500 m either side of the Order Limits between the River Idle and the Chesterfield Canal. The baseline for this species is presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** and summarised in section 9.6 of this chapter. Assessment of the potential effects of the Project on this species and mitigation to address those effects is presented in section 9.8 (mitigation) and section 9.9 (residual effects assessment) of this chapter.
Newark and Sherwood District Council	The site falls within a 10 km radius of an area where there might be a future classification as a SPA, hereafter referred to a possible potential SPA (ppSPA), for its breeding bird (specifically nightjar and woodlark) interest. Because this is neither a formal designation or a potential SPA, it is frequently missed by the usual desk study procedures.	This information is welcomed.
Newark and Sherwood District Council	Natural England have produced an Advice Note which details a risk-based approach for developments within the ppSPA to consider potential impacts on breeding nightjar and woodlark. In this instance the order limits are approximately 9.8 km away from the Royal Society for the Protection of Birds (RSPB) IBA of the ppSPA and the majority of habitats in	The ppSPA is more than 9km away from the Order Limits. This distance is considerably greater than the foraging ranges of breeding nightjar and woodlark. Therefore, there can be no impact pathways by which the Project can affect the possible qualifying features identified by the stakeholder.

Stakeholder	Assessment aspects raised	How this has been addressed
	closest vicinity are arable which would be unsuitable to support these species. However, for completeness and avoidance of doubt we would recommend that this is given consideration within the ES and it should be possible to do this succinctly because of the habitat types likely to be involved.	The ppSPA is therefore not considered further in this chapter
Newark and Sherwood District Council	There has been little survey effort within route section 11 to date, with VP 17 being the closest survey point to the Newark and Sherwood District Area. It is acknowledged that this is due to a combination of the initial design concept and low number of records. It is recommended that if this area is to remain with the order that further targeted breeding bird surveys are undertaken, it is suggested that a targeted approach is taken and would not necessarily require a full suite of surveys.	The Order Limits have been refined since statutory consultation, and the Order Limits no longer extend into the Newark and Sherwood District as explained in **Application Document 5.9 Design Development Report**. Further surveys have been completed including targeted surveys for nesting barn owl (*Tyto alba*), peregrine (*Falco peregrinus*), hobby (*Falco subbuteo*) and red kite (*Milvus milvus*), as set out in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** and **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report**.
Newark and Sherwood District Council	The Sherwood ppSPA has been missed from the assessment. While the council consider that the presence of European nightjar and woodlark within the Order Limits close to High Marnham is highly unlikely due to the lack of suitable habitat the applicant should confirm whether any of the surveys included a dusk survey to support this conclusion. This could also provide a good opportunity to identify owl roosts as barn owl have been recorded in this area.	There have been no dusk surveys specifically within this section of the Project. The survey scope was designed and targeted to the receptors likely to be affected by the Project and nightjar was not identified in this area as a key receptor for the reasons stated in the stakeholder's comment (distance from any breeding areas and general lack of suitable foraging habitat). Barn owl surveys have been carried out across the entire Project, using a combination of daytime habitat searches and, where these are inconclusive, watches of suitable nesting

Stakeholder	Assessment aspects raised	How this has been addressed
		habitats for breeding activity at dawn and dusk.
Newark and Sherwood District Council	The council advise that there should be further consideration for mitigation for farmland birds which could include features within embedded mitigation such as the provision of additional foraging resources such as beetle banks. Though it is noted that the majority of habitats within the Newark and Sherwood district area would only be temporarily disturbed.	Mitigation measures for farmland birds are set out in section 9.8 of this chapter, **Application Document 7.3 Register of Environmental Actions and Commitments** and **Application Document 7.8 Outline Landscape and Ecology Management Plan**.
Lincolnshire Wildlife Trust	As per the precautionary principle, The Trust are of a position that bird Diverters should be incorporated across all watercourses as standard, with exclusions justified on a case-by-case basis.	All sensitive watercourses are assessed on a case-by-case basis and appropriate mitigation identified to address potentially significant effects in line with the mitigation hierarchy. Location-specific requirements for bird diverters have been determined by detailed assessment of the relative and estimated actual levels of risk using the bird flight data collected from all vantage points. This assessment is presented in **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**.
Nottinghamshire Wildlife Trust	Treswell Wood SSSI The preliminary assessment highlights that during the construction phase there is the potential for 'permanent and temporary direct habitat loss and temporary disturbance and fragmentation of non-statutory designated sites'. It should be noted that Treswell Wood is a SSSI and is therefore, a statutory designated site and should be considered as such. It is stated that appropriate stand-off distances will be applied to designated sites to avoid direct effects where practicable. This statement seems ambiguous to us, and we therefore request clarity on what situation may arise that requires	The Order Limits overlap the eastern margins of Treswell Wood SSSI where a proposed Biodiversity Net Gain (BNG) mitigation area has been included in the Project design. However, **Application Document 7.3 Register of Environmental Actions and Commitments** includes a commitment that no works will be undertaken within the boundary of the designated site. The closest proposed infrastructure is a third-party access line that follows an existing farm track 0.18 km to the east of the SSSI. As such there is no potential for direct habitat loss of this SSSI

Stakeholder	Assessment aspects raised	How this has been addressed
	permanent and temporary habitat loss.	resulting from the Project. While Treswell Wood is a SSSI, it is not designated for specific qualifying ornithological interest features. Nevertheless, it is acknowledged that this site supports breeding birds as stated in the SSSI citation. The potential effects of the construction and operational phases of the Project, on birds using this habitat resource, are assessed in section 9.9 of this chapter, with specific measures to ensure the avoidance of any loss of or damage to SSSI habitat set out in **Application Document 7.2 Outline Code of Construction Practice** and **Application Document 7.3 Register of Environmental Actions and Commitments** (commitment reference **E53**). Potential effects on other qualifying features of Treswell Wood SSSI are assessed in section 8.9 of **Application Document 6.8 Chapter 8 Ecology**.
Nottinghamshire Wildlife Trust	Noted the potential for impacts to Schedule 1 Breeding Birds from permanent and temporary direct habitat loss and temporary disturbance and fragmentation during construction	Birds listed on Schedule 1 of the WCA have been considered, and the residual effects are presented in section 9.9 of the chapter. The methods by which baseline information for Schedule 1 birds was gathered are described in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** and **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report**, with the baseline information for these species presented in the latter document.
Nottinghamshire Wildlife Trust	Noted the potential for barn owl and kingfisher to be present within the study area.	Species-specific surveys for these and other Schedule 1 birds have been carried out. The potential impacts and effects of the Project on these species are

Stakeholder	Assessment aspects raised	How this has been addressed
		assessed in section 9.9 of this chapter, supported by the baseline reported for them in **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report** and section 9.6 of this chapter.
Nottinghamshire Wildlife Trust	We note that to avoid a breach of legislation, pre-works checks for nesting birds listed on Schedule 1 of the WCA 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. 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. We are satisfied with that approach.	These commitments are set out in **Application Document 7.3 Register of Environmental Actions and Commitments,** commitment reference **ON01**.
Nottinghamshire Wildlife Trust	The potential effects that could result from the maintenance of the proposed overhead line could result in disturbance to protected or notable bird species from noise/vibration, visual and lighting. Clarity on the procedure if maintenance required on a section of line, line connection or pylon where peregrine falcon is nesting is required.	As peregrine falcon is a Schedule 1 WCA species the measures detailed in paragraph 9.8.4 for minimising effects on schedule 1 species during construction would also apply where relevant to any other activities.
Nottinghamshire Wildlife Trust	Priority Breeding Bird Species Turtle Dove Turtle dove, a Red Listed Bird of Conservation Concern. There is potential for permanent and temporary direct habitat loss and temporary disturbance and fragmentation of habitats utilised by this species during the bird nesting season.	Mitigation is set out in section 9.8 of this chapter and residual effects on this species are set out in section 9.9.
Nottinghamshire Wildlife Trust	In the event that vegetation, structures, walls or pylons with the potential to support breeding birds are	These commitments are set out in **Application Document 7.3 Register of Environmental**

Stakeholder	Assessment aspects raised	How this has been addressed
	required to be removed or otherwise disturbed during the breeding bird season, it is proposed that the habitats affected will first be checked for signs of nesting by the EcCoW (or a suitably experienced taxon specialist supporting the EcCoW if required); works would also be supervised by an EcCoW if definitive evidence to prove or disprove nesting cannot be determined. Appropriate protection measures are proposed should active nests be found. These will include exclusion zones determined on a case-by-case basis by an EcCoW 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. We are satisfied with that approach.	**Actions and Commitments**, commitment reference **ON01**.
Nottinghamshire Wildlife Trust	We note that 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. 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 specialists. We are supportive of that approach. It is essential that the EnvCOW works closely with the EcCoW to ensure a consistent and thorough approach to prevent damage and disturbance to retained habitats and protected species.	The stakeholder's advice is welcomed and will be taken into account when establishing the Environmental Clerk of Works (EnvCoW) and Ecological Clerk of Works (ECoW) roles and responsibilities during the construction phase of the Project. This is as set out in Section 3.2 of **Application Document 7.2 Outline Code of Construction Practice** and secured through commitment code **ON01** in **Application Document 7.3 Register of Environmental Actions and Commitments.**
Nottinghamshire Wildlife Trust	Non-breeding birds Pink-footed goose	Pink-footed goose is given detailed consideration with respect to the impacts and effects of the Project in section

Stakeholder	Assessment aspects raised	How this has been addressed
	The preliminary assessment states that there is potential for permanent and temporary direct habitat loss and temporary disturbance and fragmentation of habitats utilised by species during construction. We encourage further consideration of this potential effect to be included in the ES upon completion of all baseline studies. We note large volumes of flight activity have been recorded for this species and we are concerned about the potential for this species to collide with permanent structures/barriers. In addition, it is stated that there is potential for habitat fragmentation because of the proposed overhead line creating a barrier to species dispersal.	9.9 of this chapter. The baseline for this species was incomplete at the point of statutory consultation, with further data available to support the assessments presented herein (section 9.9 of this chapter). Measures to avoid, minimise and mitigate any effects on this species are further detailed in section 9.8, **Application Document 7.3 Register of Environmental Actions and Commitments**, **Application Document 5.2 Habitats Regulations Assessment Report** and **Application Document 7.8 Outline Landscape and Ecology Management Plan**. The complete baseline for this species is presented in detail in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** and section 9.6 of this chapter.
Nottinghamshire Wildlife Trust	We acknowledge that National Grid install bird diverters on conductors to reduce the risk of bird collisions where the number of incidents justify such a response. We, however, advocate a proactive approach within areas designated for their value to ducks, geese, swans and wading birds. Bird diverters act as reflectors for bird species and can be spotted from around 50 m. When birds spot these objects, they divert their flight.	Location-specific requirements for bird diverters have been determined by detailed assessment of the relative and estimated actual levels of collision risk using the bird flight data collected from all vantage points. This assessment is presented in **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**.
Yorkshire Wildlife Trust	Collision Risk Assessment We are pleased to see that bird collision risk has been given some consideration and is considered to be a potential operational impact. We are in agreement with the areas identified as most at risk i.e. the (Humber Estuary SPA /Ramsar and Humber Estuary SSSI and RSPB Blacktoft Sands (Ouse crossing) which is an important migratory route	The approach to assessing potential collision risk and areas of greater flight activity has been agreed with key stakeholders including Natural England and RSPB. In contrast to onshore wind farms, there is no robust numerical model to predict collision mortality on an empirical basis for static structures such as overhead lines. Consequently,

Stakeholder	Assessment aspects raised	How this has been addressed
	highlighted not only by the numerous designations but also by the consideration of the East Atlantic Flyway migratory route as a UNESCO world heritage site. However, we would suggest the locations for collision risk assessment should be agreed not only with Natural England, but also with the RSPB and other specialist groups.	the agreed method for assessment of collision risk is focused on a flight activity assessment that follows a qualitative approach setting out relative risk levels posed by different sections of the Project, based on the levels and distribution of flight activity of key species, their behaviour and flight heights and how these factors may interact with the Project. This is set out in **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**.
Yorkshire Wildlife Trust	The following research papers will be of value when assessing risk of impact and suitable mitigation and compensation: The use of 'flight diverters' reduces mute swan (*Cygnus olor*) collision with power lines at Abberton Reservoir, Essex, England (Frost D. , 2008) This study indicates reduction in mortality of mute swans due to collision with overhead power lines following the installation of flight diverters. It also recommends that appropriate bird flight diverters are fitted as routine best practise when installing any new overhead power lines. Monitoring of effectiveness of bird flight diverters in preventing bird mortality from powerline collisions in Slovakia (Galis & Ševčík, 2020). This study observed a 93.5% reduction in the number of fatalities under the marked power lines after line marking compared to the period before installation of line markers. The reactions of birds at greater distances and reduced number of bird victims under marked lines indicate that all tested diverters have a positive effect on reducing the number of avian collisions with power lines.	The stakeholder's advice on this matter is welcomed. A review of the effectiveness of line markers (including the additional references supplied by the stakeholder) has been undertaken and this was used to inform the mitigation committed to and reported in **Application Document 7.3 Register of Environmental Actions and Commitments**.

Stakeholder	Assessment aspects raised	How this has been addressed
Canal and Rivers Trust	A section of the Chesterfield Canal is a designated Site of Special Scientific Interest (SSSI). Although the canal is designated primarily for aquatic wildlife, it is also important as a flight line for birds and bats. Therefore, it must be ensured that any cable crossings have measures in place that reduce the chance of cable strikes by birds and bats	This was identified at statutory consultation and is considered in more detail in section 9.8 and section 9.9 of this chapter. Tables of bird flight activity and assessment of collision risk for the Project and for specific locations including Gringley and Misterton Carrs and Chesterfield Canal are presented in **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**, enabling location-specific requirements for bird diverters to be identified.
Canal and Rivers Trust	The adoption of close-parallel and synchronised overhead line design will be used on some sections of the Project to minimise bird strike risks, this is not listed as a proposed option for the Chesterfield Canal. We do question whether this could be utilised in this location as well, given the potential use of the waterway route by birds and bats. Alternative mitigation should be identified within the Environmental Statement as applicable, should this not be considered possible.	For technical reasons set out in **Application Document 5.9 Design Development Report**, a close parallel design was not achievable through this section of the Project. As stated during statutory consultation, other measures have been set out in section 9.8 that will avoid or mitigate effects at the Chesterfield Canal and also surrounding areas identified as potentially sensitive for birds e.g. Gringley Carrs, taking into account the complete baseline and final Project design.

Stakeholder Engagement

9.3.4 National Grid Electricity Transmission plc (National Grid) has engaged with relevant stakeholders throughout the evolution of the Project, including Natural England, East Riding of Yorkshire Council, North Lincolnshire Council, Bassetlaw District Council, Newark and Sherwood District Council, Nottinghamshire County Council, the RSPB, and the Wildlife Trusts.

9.3.5 A summary of discussions and how these have influenced the scope and the approach to the ornithology assessment are provided in Table 9.6.

Table 9.6 – Further engagement

Organisation and date	Summary of issues raised	How this has been addressed
Natural England 22 August 2022	The scope of baseline surveys and Project design were discussed. Natural England provided the following comments/advice: • two years of survey would be required. • The River Ouse crossing could be a pinch point for bird collisions and is an area of concern (owing to the presence of the Humber Estuary Ramsar, SPA and SSSI, and Blacktoft Sands RSPB Reserve). • Natural England's main concern is impacts to designated national site network sites and SSSIs. • The presence of the existing overhead line and associated records could provide useful context to the assessment. Concern would be greater if there was no existing overhead line, and the lack of any known problem, especially given the proximity of the RSPB reserve may be helpful. • Impact Risk Zones (IRZs) are set at 5 km for lapwing and golden plover and bespoke for pink-footed goose.	The baseline survey data presented in section 9.6 of this chapter and **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** reflect the agreed survey scope, supported by detailed desk study. The presence of an existing overhead line adjacent to the proposed overhead line across the Humberhead Levels has been a key consideration in the assessment presented in section 9.9 of this chapter and within the Habitats Regulations Assessment (HRA) set out in **Application Document 5.2 Habitats Regulations Assessment Report**.
RSPB 7 August 2022	General discussion of potential ornithology constraints and risks including: • Key locations for Humber SPA species and associated movements; • High collision risk for bittern; • The potential for changing cropping patterns to result in changing patterns of bird distribution; • Historic and potential bird strikes with overhead lines in the Humber area, noting that	The advice regarding occurrence and habitat use by bird species in the vicinity of the River Ouse crossing and the RSPB Reserve has been taken into account in evolving the Project design and the assessments presented in section 9.9 of this chapter and **Application Document 5.2 Habitats Regulations Assessment Report**. The data provided by RSPB are a key part of the overall baseline presented in section 9.6 and **Application**

Organisation and date	Summary of issues raised	How this has been addressed
	separation of the old and proposed overhead lines would be a poor design option in this area, with agreement that a close parallel design is likely the best option; • Bird movements along the River Ouse are predominantly east to west; • Use of bird diverters on the earth wire advisable at the River Ouse crossing; • RSPB agreed to share monitoring data.	**Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**.
Nottinghamshire County Council Bassetlaw District Council 24 April 2023	An overview of the proposed survey scope and methods was presented to the stakeholders, and a written methodology scope was made available. Stakeholders highlighted the Washlands and Beckingham Marshes as key locations, with wild swan herds occurring in the north of the county in winter. It is assumed that the River Trent acts as a flyway although there is little data to prove this.	Baseline data for wintering wild swans covering the areas and locations specified were obtained through a combination of desk study and surveys, as set out in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**. Assessments of impacts and effects of the Project on these species are provided in section 9.9 of this chapter.
East Riding of Yorkshire Council 25 April 2023	The proposed ornithology scope and methods were presented to the stakeholder. No issues raised.	N/A
North Lincolnshire Council 15 May 2023	The proposed ornithology scope and methods were presented to the stakeholder North Lincolnshire Council advised that cranes (*Grus grus*) should be considered in the ornithology assessment. North Lincolnshire Council suggested data for Alkborough Flats can be obtained from Humber Nature Partnership.	Cranes were included as a target species in all surveys and impacts and effects on them are considered in section 9.9 of this chapter, where appropriate. The completed baseline includes detailed desk study data including those highlighted by the stakeholder. These are presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** and underpin the assessments in section 9.9 of this chapter.

Organisation and date	Summary of issues raised	How this has been addressed
Natural England 3 July 2023	General discussion of survey scope. No specific issues raised. Natural England advised that two winters/years of survey would be useful.	Baseline surveys began in the Summer of 2022 and ended in August 2026. Within this period, two full winters' worth of ornithology surveys were completed across the Humberhead Levels and Gringley and Misterton Carrs, both of which support qualifying features of sites designated at international and national levels for birds.
RSPB 28 June 2024	The survey scope and some key baseline results were presented to RSPB.	N/A
Natural England 19 August 2024	Further discussion was held regarding the survey scope and key results, with confirmation that the agreed scope is being followed and that a second winter of survey data is required.	N/A
Natural England 4 December 2024	Further discussion was held regarding survey scope including the addition of two further VP locations to monitor bird activity on the Yorkshire Wolds, nocturnal field counts on the Humberhead Levels, addition of Broomfleet Tileworks as a wetland bird count area and counting of pools within RSPB Blacktoft Sands Reserve, to be carried out by RSPB themselves on behalf of the Project. Approach to surveys agreed by Natural England. Natural England commented on the lower recorded use of fields by SPA birds across the Humberhead Levels due to farmers ploughing over fields earlier in Autumn 2024; this type if information (on crops/habitat use) is crucial to understanding how birds use FLL and should be included in the assessments wherever possible. General discussion of HRA including agreement of designated	The desk study includes data regarding land use and cropping types, obtained from the UK Centre for Ecology and Hydrology, for the period within which surveys of the habitats used by Humber Estuary SPA birds have been carried out (2022 – 2025 inclusive). These are further supported by the recording of land use/crop cover during Project surveys. This data has been used to aid interpretation of observed habitat use by SPA birds, in particular geese and waders, and to inform how habitat use patterns might change from year to year. The data are presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** and support the assessments presented in section 9.9 of this chapter.

Organisation and date	Summary of issues raised	How this has been addressed
	sites and impact pathways screened into assessment. The Project team advised that line markers are not installed on the existing overhead line; close parallel and synchronised design has been used as the key embedded mitigation for the Project to reduce barrier and collision effects.	
Nottinghamshire County Council Bassetlaw District Council 3 February 2025	Updates were provided regarding survey scope and key results. No issues raised.	N/A
RSPB 5 June 2025	Updates to survey scope and key baseline results were presented to RSPB. No issues raised	N/A
Natural England 28 May 2025	Further updates were provided to the stakeholder regarding survey scope and baseline results. Natural England confirmed they are satisfied that the agreed survey scope has been met and is robust. Natural England noted that the occurrence of 10,000 golden plover was not presented clearly in the preliminary assessment and will need to be presented clearly in the ES.	The ornithology assessment is based on the updated baseline, and all data considered in the assessments in section 9.9 of this chapter are presented clearly in section 9.6 of this chapter and in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**. Additional clarity has been provided where the need for this was identified by stakeholders.
East Riding of Yorkshire Council Lincolnshire County Council Nottinghamshire County Council (unable to attend but in receipt of recorded presentation and slide deck)	No issues raised by attendees.	N/A

Organisation and date	Summary of issues raised	How this has been addressed
Bassetlaw District Council September 2025		
Natural England 17 September 2025	The Project team set out an overview of baseline and assessment to date. Discussion was held around assessment approaches in HRA re. use of diverters, compensation for losses foraging habitat used by Humber Estuary SPA species, the species included in the Humber Estuary SPA non-breeding bird assemblage feature, noise thresholds and the use of noise contour maps for use in assessments; and foraging distances from the Humber Estuary SPA for non-breeding mallard. While there were no issues raised requiring specific responses from the Project team, the following advice was received in response to an informal set of written questions sent to NE after the meeting: • Calculations of loss of FLL for foraging birds should be on a worst-case scenario to determine habitat losses. Habitat created should be appropriately enhanced to support the relevant qualifying features; • Arable land can be included in the mitigation habitat. Recommendations include: — A suitable cropping regime e.g. sugar beet tops, oil seed rape, winter cereal, post-harvest cereal stubbles for geese, crop heigh below 8-10cm for waders such as wheat/barley during Autumn/Spring passage or fallow/newly tilled fields	The Project team agrees with the recommendations made and has incorporated them into the assessments. The recommendations for management of compensatory habitat will be incorporated as much as is reasonably practicable into the management prescriptions for any land secured for this purpose.

Organisation and date	Summary of issues raised	How this has been addressed
	— Avoidance of deep ploughing — Addition of manure subject to a reasonable agricultural cycle — Incorporating a ley crop — Including permanent grass margins to the fields • Use of recorded bird distribution and peak bird numbers to determine the losses of land that is functionally linked to the Humber Estuary SPA and the requirement for mitigation habitat provision; • 2 km foraging distance for non-breeding mallard, within which land can be considered functionally linked to the Humber Estuary SPA for this species; • Base timing of works restriction on bird survey results to target the most sensitive periods (rather than on generic understanding of species seasonal occurrence); • The assemblage feature is clarified in guidance supplied by NE; • No specific thresholds for noise assessment, which should assess change above baseline starting with a 55dB noise level as a trigger for assessment; Noise assessment should be supported by contour maps to illustrate the extent of potential noise impacts.	
RSPB 5 March 2026	Updates were provided by the Project team regarding survey results, the zone of influence for the Project and the key locations for Humber SPA qualifying features.	Golden plover numbers were likely higher outside the Survey Areas, based on observations from the wider area and of birds in flight through the survey areas.

Organisation and date	Summary of issues raised	How this has been addressed
	There was discussion of mitigation strategies being considered including noise and visual disturbance mitigation measures and provision of alternative foraging habitat to address potential effects during construction and operation. An area of land under consideration for this purpose was presented to RSPB. RSPB expressed surprise that golden plover counts were not higher. The RSPB team raised the following points about the mitigation habitat area: • Landowner agreements are important to ensure disturbance of birds using the land is avoided; • Dog walkers and bird scarers may cause disturbance across the identified land parcels; • The land potentially overlaps the boundary of the Humber Low Carbon Pipeline Project; • Appropriate crop rotations must be secured for the mitigation land. Suggestions included harvested sugar beet, winter cereals, retention of stubble including spilt or waste seed. Tall winter cover crops can prevent access to the land (by some SPA birds); and • The Environment Agency will be undertaking works to the flood banks between Yokefleet and Faxfleet.	The advice and observations raised by RSPB regarding the mitigation land are welcomed and will be taken into account when establishing landowner agreements and devising specific management proposals for the land. The mitigation habitat area has been moved to avoid overlap with the Humber Low Carbon Pipeline Project. The EA works will be taken into account in the cumulative effects assessment if there is a possibility of them temporally overlapping the Project.

Summary of Scope of Assessment

9.3.6 The following summarises which aspects have been scoped into and out of the assessment through **Application Document 6.5.A1 Appendix 5.1 Environmental Impact Assessment (EIA) Scoping Report** and **Application Document 6.5.A2**

Appendix 5.2 Scoping Opinion as set out in Table 9.4, statutory consultation as set out in Table 9.5 and further engagement with stakeholders as set out in Table 9.6.

Aspects scoped into the assessment

9.3.7 Table 9.7 sets out the aspects that have been scoped into the ornithology assessment with regard to the construction, operation and maintenance of the Project.

Table 9.7 – Aspects scoped into the assessment

Receptor	Potential for significant effect	Project phases(s)
Statutory designated sites (within the site or within 2 km of the site)	Potential for permanent habitat loss, fragmentation/modification (including functionally linked habitat). Temporary habitat loss, fragmentation and disturbance (including functionally linked habitat). Changes in air quality, negatively impacting protected or otherwise notable habitats within 200 m of the affected road network. Indirect pollution impacts (dust deposition, water). Loss/reduction in habitat quality for protected and notable species due to changes in groundwater levels. Displacement of birds that forage within land distant from the designated site (FLL). Collision mortality due to permanent structures/barriers (operation only), affecting qualifying features. Introduction of invasive non-native species (INNS) leading to degradation of existing habitat quality and reduction in native species due to being outcompeted.	Construction, operation and maintenance.
Statutory designated sites (with mobile qualifying criteria) located up to 10 km from the site. This is extended to up to 20 km for SPA and Ramsar sites supporting qualifying ornithological features with large foraging ranges.	Potential for permanent habitat loss, fragmentation/modification (including functionally linked habitat). Temporary habitat loss, fragmentation and disturbance (including functionally linked habitat). Displacement of birds that forage within land distant from the designated site (FLL). Collision mortality due to permanent structures/barriers (operation only), affecting qualifying features.	Construction, operation and maintenance.

Receptor	Potential for significant effect	Project phases(s)
Non-statutory designated sites (within the site or within 2 km of the site)	Potential for permanent habitat loss, fragmentation/modification. Temporary habitat loss, fragmentation and disturbance. Changes in air quality, negatively impacting protected or otherwise notable habitats within 200 m of the affected road network. Indirect pollution impacts (dust deposition, water). Introduction of INNS leading to degradation of existing habitat quality and reduction in native species due to being outcompeted. Loss/reduction in habitat quality for protected and notable species due to changes in ground water levels.	Construction, operation and maintenance.
Breeding birds	Collision mortality due to permanent structures/barriers (operation only). Incidental mortality of protected or notable species. Disturbance to protected or notable species (noise/ vibration, visual, lighting). Potential for permanent habitat loss, fragmentation/modification. Temporary habitat loss, fragmentation and disturbance. Beneficial effects on populations of predatory birds (predominantly corvids, kestrel, hobby and peregrine) due to increased nesting opportunities provided by proposed pylons.	Construction, operation and maintenance.
Wintering birds[3]	Collision mortality due to permanent structures/barriers (operation only). Incidental mortality of protected or notable species. Disturbance to protected or notable species (noise/vibration, visual, lighting). Permanent habitat loss. Temporary habitat loss and fragmentation.	Construction, operation and maintenance.

Aspects scoped out of the assessment

9.3.8 Non-statutory designated sites and statutory designated sites located greater than 2 km from the site that do not have mobile bird species as qualifying criteria have been scoped out of the assessment.

9.3.9 As detailed in **Application Document 6.15 Chapter 15 Air Quality**, the air quality assessment focuses on the local air quality impacts associated with the construction

[3] The term 'wintering' is used here as a catch-all for any period when birds are not engaged in breeding activity. The term 'non-breeding' is also used.

phase of the Project. As agreed through **Application Document 6.5.A2 Appendix 5.2 Scoping Opinion**, air quality assessment during operation and maintenance has been scoped out due to the Project being a static structure which will not have any associated operational emissions. Therefore, this chapter does not consider potential effects on ecological features (i.e., habitats, sites and species) due to operational and maintenance air quality impacts, as no significant effects are anticipated.

9.3.10 The potential effects of increased levels of predation previously considered at statutory consultation have been scoped out of further assessment for the following reasons:

- Any additional predation pressure would occur only where the proposed overhead line is not parallel with or anywhere near an existing overhead line or other structure that offers nesting or resting places for predatory birds (particularly peregrine and corvids), since these birds are territorial and would defend nest sites and territories/home ranges. Approximately 45 km of the Project's length is in close proximity to other infrastructure;
- Corvids, especially carrion crows, are widespread and opportunistic breeders capable of nesting on many types of tall structures from buildings to pylons to semi-natural features (trees). It does not follow that the introduction into the landscape of new pylons increases predation pressure from corvids since these species are already widely present in the landscape utilising other features as nests and lookout perches, and the abundance of prey will not change to an extent that it can carry any additional theoretical predation pressure; and
- Peregrine falcons tend to nest on tension pylons rather than suspension pylons, as tension pylons provide larger nesting platforms by virtue of their structural differences. Even if the proposed tension pylons along the length of the proposed overhead line were to become occupied, this would not increase predation pressure significantly.

9.3.11 For the reasons listed above, the potential benefit to the populations of some predatory bird species arising from the additional habitat provided by the proposed overhead line infrastructure, that would theoretically be used by perching and/or nesting birds, are regarded as negligible and have been scoped out of the assessment.

9.3.12 Decommissioning has been scoped out of the assessment as explained in **Application Document 6.5 Chapter 5 Environmental Impact Assessment Approach and Methodology**.

9.4 Assessment Approach and Methods

9.4.1 **Application Document 6.5 Chapter 5 Environmental Impact Assessment Approach and Methodology** sets out the overarching approach which has been used in preparing the information in this ES. 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 ornithological assessment. Where the assessment criteria terminology differs from the general assessment criteria terminology, as set out in **Application Document 6.5 Chapter 5 Environmental Impact Assessment Approach and Methodology**, justification is provided.

9.4.2 An assessment of the effects of the Project on terrestrial ecology features including habitats is provided separately in **Application Document 6.8 Chapter 8 Ecology**; however, adverse effects on habitats that are likely to result in significant effects specifically on ornithology receptors are addressed in this chapter through cross referencing and taxon-specific assessments.

Guidance Specific to the Ornithology Assessment

9.4.3 Relevant guidance, specific to ornithology, that has informed the approach to the assessment in this chapter comprises:

- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Costal and Marine (CIEEM guidelines) (CIEEM, 2024);
- Protected species and development: advice for local planning authorities (updated 2025) (Natural England and Department for Environment, Food & Rural Affairs, 2025);
- Natural England; guidance regarding the Humber Estuary Special Protection Area non-breeding waterbird assemblage (Natural England, pers. Comm.);
- BS 42020:2013 Biodiversity: Code of Practice for Planning and Development (British Standards Institution, 2013);
- Birds of Conservation Concern 5 (Stanbury, et al., 2021) (BoCC 5) and Birds of Conservation Concern 5a (Stanbury, et al., 2024) (BoCC 5a);
- The International Union for Conservation of Nature Red List of Threatened Species (IUCN Red List) (IUCN, 2025);
- Recommended bird survey methods to inform impact assessment of onshore windfarms (NatureScot, 2025);
- Guidance – Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds (NatureScot, 2025);
- Bird Survey Guidelines for assessing ecological impacts (Bird Survey & Assessment Steering Group, 2025);
- British Trust for Ornithology (BTO) Common Birds Census Instructions (Marchant, 1983);
- Wetland Bird Survey (WeBS): Survey Methods, Analysis and Interpretation (British Trust for Ornithology, 2026);
- Species – Raptors – A field Guide for Survey and Monitoring (3rd Edition) (Hardey, et al., 2013);
- Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment (Shawyer, 2012);
- Bird Monitoring Methods: A Manual of Techniques for UK Key Species (Gilbert, Gibbons, & Evans, 1998);
- Hull and East Yorkshire Local Nature Recovery Strategy (Hull and East Yorkshire Local Nature Partnership; East Riding of Yorkshire Council; Hull City Council; Natural England; National Farmers Union; Countryside Land and Business

Association; North and East Yorkshire Ecological Data Centre; Yorkshire Wildlife , 2023)

- East Riding of Yorkshire Biodiversity Action Plan Strategy (East Riding of Yorkshire Council, 2010);
- Lincolnshire Biodiversity Action Plan 2011 - 2030 (3rd Edition) (Lincolnshire Biodiversity Partnership, 2011); and
- Nottinghamshire Local Biodiversity Action Plan (Nottinghamshire Biodiversity Action Group, 2020).

9.4.4 The following have been updated since scoping: the CIEEM guidelines (CIEEM, 2024); Natural England and Department for Environment, Food & Rural Affairs protected species standing advice (Natural England and Department for Environment, Food & Rural Affairs, 2025), BoCC (Stanbury, et al., 2021), IUCN Red List (IUCN, 2025), Recommended bird survey methods to inform impact assessment of onshore windfarms (NatureScot, 2025), Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds (NatureScot, 2025), Bird Survey Guidelines for assessing ecological impacts (Bird Survey & Assessment Steering Group, 2025), Wetland Bird Survey (WeBS): Survey Methods, Analysis and Interpretation (British Trust for Ornithology, 2026). The updates have not affected the ornithology scope or method of assessment.

Study Area

9.4.5 The study areas for ornithology are presented in Figure A9.2.1 within **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report.**

9.4.6 The CIEEM guidelines (CIEEM, 2024) 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.

9.4.7 The study areas for the ornithology assessment and data gathering includes the land within the Order Limits, as well as all designated sites and habitat areas likely to support birds that occur within the relevant ZoIs (and corresponding study areas) for the Project.

9.4.8 The study areas for the ornithology assessment are described in Table 9.8 and illustrated in **Application Document 6.9.F1 Figure 9.1 Study Area**[4].

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

Table 9.8 – Study areas for ornithology

Study area (distance from Order Limits)	Feature[5]
20 km	Details of statutory designated sites of international nature conservation value (Ramsar sites and SPAs) where bird species with large foraging and migratory ranges are a qualifying feature[6].
10 km	Details of all other statutory designated sites of international nature conservation value (Ramsar and SPA).
5 km	Details of statutory designated sites of national and local nature conservation value, e.g. SSSIs (also referencing Natural England Impact Risk Zones for SSSIs on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (Department for Environment, Food & Rural Affairs, 2025), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs))[7]. Species records and data for wetland birds from the BTO Wetland Birds Survey (WeBS)[8].
2 km (route-wide)	Species and details of Local Wildlife Site (LWS) identified by the Local Records Centres (LRCs); Areas of ornithological interest identified in BTO data;
500 m	Barn owl nest and roost sites received from Wildlife Conservation Partnership, who supplied records amalgamated from multiple local/regional monitoring and species recovery scheme were used to identify Barn Owl study areas.

9.4.9 The boundaries and ZoIs for the ornithological study areas reflect standard industry good practice guidance and professional judgement and are the distances that statutory nature conservation bodies would typically expect to be considered for identification of features that could be impacted by the Project.

[5] Sites that are not notified for qualifying populations of birds are excluded from this chapter. They are included in **Application Document 6.8 Chapter 8 Ecology**.

[6] A ZoI of 30 km for Ramsar sites and SPAs was used at scoping and statutory consultation, however assessment of these designations has demonstrated “no impact/interest” from 20–30 km, therefore the ZoI has been reduced in this instance to 20 km.

[7] 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 is extended to 10 km.

[8] 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 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 to February) across the UK on a rolling six-year cycle (this is the standard survey cycle for low tide counts, however counts are sometimes undertaken more or less frequently than this.

Baseline Data Gathering and Forecasting Methods

Data sources

9.4.10 The baseline information presented in this chapter has been informed by a desk study which has drawn on the following information sources:

- Relevant Local Records Centres (LRCs) were contacted to obtain pre-existing ecological data (i.e. locations of non-statutory sites designated for nature conservation, existing records of protected species, notable species and INNS). The LRCs that were contacted are:
  - North and East Yorkshire Ecological Data Centre (data received in December 2025);
  - Greater Lincolnshire Nature Partnership (data received in January 2025); and
  - Nottinghamshire Biological and Geological Records Centre (data received in October 2025).
- British Trust for Ornithology WeBS data for core count (high tide) and 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.. The WeBS count sectors for which data were obtained are shown in **Figure A9.2.2 and Figure A9.2.3 in Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report.**
- Site-specific monitoring data and ad hoc records supplied by the Blacktoft Sands RSPB Reserve staff, including ad hoc observations, wetland bird counts and breeding bird data for eight locations across the Humberhead Levels either side of the River Ouse, that are monitored and/or managed by RSPB. These range from overlapping the Order Limits, up to 7.5 km from them.
- The BTO data report, which provides data on the species occurring within the study area (in this case, up to 2 km from the Order Limits) at different spatial scales.
- Wildlife Conservation Partnership, who provided monitoring data for barn owl nest sites, amalgamated from monitoring records gathered by local/regional barn owl groups and other organisations operating nationwide such as the Barn Owl Trust and the Wildlife Conservation Partnership, within the species-specific study area of up to 500 m from the Order Limits.
- Humber Nature Partnership; monitoring reports for Alkborough Flats.
- Species and taxon experts identified during stakeholder engagement with the relevant local planning authorities.
- Local bird groups and organisations, where not already accessed through the LRCs.
- UK Centre for Ecology and Hydrology, for land use and crop cover data in 2024 and 2025 for the Order Limits plus a radius of up to 2 km between the A63 and .the M180

- Online data resources including:
  - The Natural England designated sites search website (Natural England, n.d.) for information on statutory designated sites of nature conservation interest and to confirm reasons for designation and their condition;
  - The MAGIC website (Department for Environment, Food & Rural Affairs, 2025) to identify the location (and details) of statutory designated sites;
  - The Joint Nature Conservation Committee (JNCC) website (JNCC, n.d.) for site information and designation details of 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;
  - Treswell Wood Breeding Bird Monitoring (Treswell Wood IPM Group, 2025) (Treswell Wood IPM Group, 2024);
  - BTO WeBS Report online (Frost, et al., 2026) for counts from Beckingham Marshes, River idle Washlands, Hatfield Moors and River Trent – Littleborough;
  - Hatfield Moors Birding Blog ((Hatfield Moors Birding Blog, 2026);
  - Thorne Moors Birding Blog ((Thorne Moors Birding Blog, 2026);
  - Idle Washlands Bird Report 2021 (Furber, 2021);
  - Doncaster Bird Report 2002/03 (Doncaster and District Ornithological Society, 2012);
  - Yorkshire Bird Report 2010 (Yorkshire Naturalist's Union, 2010); and
  - Nottinghamshire Birders Sightings (Nottinghamshire Birdwatchers, 2026) for individual species records; and county guide (Nottinghamshire Birdwatchers, 2026) for information specific to Beckingham Marshes.

Site visits and surveys

9.4.11 The requirement for ornithology surveys was informed by professional judgement, desk study and advice received during stakeholder engagement and statutory consultation undertaken for the Project, as set out in Table 9.5 and Table 9.6 respectively. The scope of the surveys was continually reviewed, and updated where required, to meet the requirements of the evolving Project design and in response to the baseline information arising from ongoing surveys, desk study, and stakeholder engagement, as set out in section 9.3.

9.4.12 The survey areas/locations and the technical scope of surveys were designed 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 Order Limits;
- Monitoring of the use of potentially suitable habitat for foraging nightjar that intersects the Order Limits and their environs within the core foraging range (5 km from breeding sites) of Thorne and Hatfield Moors SPA;

- Sampling of breeding and non-breeding bird populations across the Order Limits, including use of wetland habitats in the environs of the River Ouse crossing point;
- The distribution of breeding Schedule 1 birds;
- 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 Order Limits;
- Quantification of breeding corn bunting populations across Misterton and Gringley Carrs; and
- Identification of pink-footed goose roost sites, foraging locations and the migratory paths between them in the wider area around the River Idle.

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

9.4.14 The ornithological survey programme outlined below is based on the field surveys undertaken, taking into account results of the desk study, good practice guidance and previous consultation/engagement. Further information on these is provided in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**. The survey programme on which assessments have been based is shown in Table 9.9

Table 9.9 – Ornithological surveys undertaken to characterise baseline conditions

Survey type	Survey method	Survey period	Survey area
Vantage Point (VP) watches	Monitor flight activity for a selection of target species that are potentially vulnerable to collision with overhead power line infrastructure, including but not limited to qualifying features of the Humber Estuary SPA and Ramsar designated sites.	November 2022 – March 2026	Order Limits plus up to 2 km (location-specific).
Diurnal field counts (River Ouse)	Diurnal field counts of birds engaging in habitat use either side of the River Ouse crossing point, to provide baseline data to inform an early Project design.	January 2023 – January 2024	Site-specific areas.
Diurnal field counts of potential FLL	Diurnal field counts of birds within FLL up to a minimum of 500 m either side of the Order Limits across the Humberhead Levels, carried out over consecutive non-breeding seasons (December 2023 to April 2024; and October 2024 to April 2025). The second year of diurnal field counts was extended to include the length of the Project that crosses the Yorkshire Wolds between Brantingham Dale and Skidby.	October 2023 – April 2024 October 2024 – April 2025	Minimum 500 m either side of Order Limits across Humberhead Levels between Ellerker and Keadby; and Yorkshire Wolds between Brantingham and Skidby.
Nocturnal field counts of potential FLL	Nocturnal field counts of birds within FLL up to a minimum of 500 m either side of the Order Limits, between Luddington in the south and Ellerker in the north [9].	October 2024 – April 2025	Minimum 500 m either side of Order Limits across Humberhead Levels between Ellerker and Luddington.
Through the tide counts (TTTCs)	Through the tide counts (TTTCs) to count birds on the River Ouse at the location of the crossing point and a minimum of 500 m either side of the crossing point.	June 2022 – March 2023	River Ouse crossing point and minimum 500 m either side of the crossing point.

[9] This area was defined in response the bird distributions observed during diurnal surveys and VP surveys and in consultation with Natural England and RSPB.

Survey type	Survey method	Survey period	Survey area
High and low tide counts (River Ouse)	High and low tide counts of wetland birds on the River Ouse and adjacent terrestrial habitats up to a minimum of 500 m either side of the crossing point. This method replaced the TTTC method in April 2023.	April 2023 – July 2025	River Ouse and adjacent terrestrial habitats up to a minimum of 500 m either side of the crossing point.
High tide counts (Broomfleet Tileworks)	High tide counts of wetland birds using the pools within and adjacent to Broomfleet Tileworks.	October 2024 – January 2026; and April – July 2026	Broomfleet Tileworks.
Foraging nightjar (*Caprimulgus europaeus*) surveys	Foraging nightjar surveys to monitor use of potentially suitable habitat that overlaps the 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.	June – July 2022; Repeated June – July 2024	Suitable foraging habitat that overlaps Order Limits within foraging range of this species.
Common Birds Census	Common Birds Census surveys to detect and quantify breeding bird assemblages at 13 sampling locations that overlap the Order Limits.	April 2024 – July 2025	13 locations overlapping or adjacent to the Order Limits.
Breeding Schedule 1 Bird Surveys	Surveys for breeding red kite, peregrine falcon, barn owl, hobby and kingfisher (*Alcedo atthis*). These species were selected in response to the findings of other ongoing surveys.	April – September 2025	Suitable habitats and suspected breeding locations within Order Limits and species-specific survey areas beyond the Order Limits: Kingfisher 100 m; Barn owl 175 m; Red kite 300 m; Hobby 450 m; and Peregrine 750 m.

Survey type	Survey method	Survey period	Survey area
Diurnal field counts (Winter)	Diurnal field counts of two areas within the River Idle Valley and Gringley Carrs to provide supplementary data on habitat use by wintering wild swans, geese and waders.	October 2024 – February 2025	River Idle Valley and Gringley Carrs, mapped to suitable habitats ranging between overlapping the Order Limits up to approximately 1.8 km beyond them.
Wintering swans	Diurnal field counts over an area of farmland either side of the Order Limits where the Project crosses Gringley and Misterton Carrs, North Nottinghamshire. Supplemented by two VPs to detect airborne birds flying over the Order Limits. These surveys were added in response to the statutory consultation feedback received from Nottinghamshire County Council in Table 9.5.	October 2025 – March 2026	Walkover surveys up to a minimum of 500 m either side of the Order Limits between Misterton Golf Course and the Chesterfield Canal. VP survey areas are site-specific to provide visual coverage of airspace through which the Project passes.
Corn bunting surveys	Breeding corn bunting surveys up to 500 m either side of the Order Limits where the Project crosses Misterton and Gringley Carrs. This survey was added in response to the statutory consultation feedback received from Nottinghamshire County Council (Table 9.5) and has been completed over the period May – July 2026.	May – July 2026	Up to 500 m either side of the Order Limits where the Project crosses Misterton and Gringley Carrs and access was available.
Pink-footed goose tracking surveys	Monitoring of geese departing from and arriving at roost sites on Hatfield Moor SPA and tracking of their diurnal foraging patterns across the wider countryside between Hatfield Moor, Haxey, Misterton and Bawtry.	November – December 2025	Monitoring at Hatfield Moor SPA and tracking of foraging patterns across the wider countryside between Hatfield Moor, Haxey, Misterton and Bawtry.

9.4.15 Annex A to **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** includes a survey timeline that shows the overlap and intervals between different surveys over the course of the baseline gathering phase. The extent of each survey area is shown in **Figure A9.2.5** to **Figure A9.2.20 in Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report.**

9.4.16 Data for sensitive species (such as those vulnerable to persecution or egg theft, that are present on Schedule 1 of the WCA 1981 (HM Government, 1981)) 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 Annex to Advice Note 7 – Presentation of the Environmental Statement (Planning Inspectorate, 2017). Baseline data and any information regarding the breeding locations of such species is restricted to the **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report.**

Assessment Methods and Significance Criteria

9.4.17 The following section summarises the methods used for the ornithology assessment. This builds on the general assessment method presented in **Application Document 6.5 Chapter 5 Environmental Impact Assessment Approach and Methodology**.

9.4.18 The impact assessment has been carried out in accordance with best practice guidance for EcIA, issued by CIEEM (CIEEM, 2024). The principal steps involved in the CIEEM approach can be summarised as:

- Ecological (ornithological) features that are both present and might be affected by the Project 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 (ornithological) features is evaluated, placing their relative biodiversity and nature conservation value into geographical context, which is then used to define the relevant ecological features that need to be considered further;
- The changes or perturbations predicted to result as a consequence of the Project (i.e. the potential impacts or impact pathways) 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 (ornithological) 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 Project are reported; and
- The potential for delivering ecological (ornithological) enhancements is considered.

Sensitivity/value of ecological feature

9.4.19 The CIEEM guidelines (CIEEM, 2024) make it 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*'.

9.4.20 Therefore, it was not necessary for the assessment to address all habitats and species with potential to occur in the relevant study area. Instead, the focus was on those that are relevant, i.e. ornithological features that are considered to be important and potentially affected by the Project. This does not mean that efforts have not be made to safeguard wider biodiversity.

9.4.21 To support a focused assessment, there was a need to determine the scale at which the relevant ornithological features identified through the desk studies and field surveys undertaken for the Project were of value. The value of each relevant ornithological feature was defined with reference to the geographical level at which it matters.

9.4.22 The frames of reference that have been used for this assessment, based on paragraph 4.7 of the CIEEM guidelines (CIEEM, 2024), are:

- International (Ramsar sites 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 (North Yorkshire, East Riding of Yorkshire, Lincolnshire, South Yorkshire, Nottinghamshire);
- District (town or parish area, e.g. Garthorpe, Beckingham, Doncaster);
- Local (ecological/ornithological 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, the priority of which is low enough that they do not require retention or mitigation at the relevant location to otherwise maintain a favourable nature conservation status).

9.4.23 Species populations were 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 the published size of a biogeographic population are of International importance, those exceeding 1% of the published size of a national population are considered to be of National importance, and so forth.

9.4.24 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 was 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 is a Schedule 1 species (HM Government, 1981) 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 (Casey, Clarkson, Espin, & Hyde, 2021)). 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 judgement of suitably experienced ecologists.

9.4.25 Due regard has been paid to the legal protection afforded to species during the development of mitigation and compensation measures to be implemented for the Project and, where such protection is intended to protect species that are declining or rare, this has been taken into account when setting the nature conservation value.

9.4.26 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 took into account 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.

9.4.27 All ornithological/ecological features of Local value and above, where there is the potential for the Project to impact them directly or indirectly, have been taken forward to assessment and are the relevant ornithological features for the purposes of EcIA.

Magnitude of ornithology impacts

9.4.28 In line with paragraph 1.21 of the CIEEM guidelines (CIEEM, 2024), the terminology used within the assessment draws a clear distinction between the terms ‘impact’ and ‘effect’. For the purposes of this assessment, these terms are defined as follows:

- Impact – actions resulting in changes to an ornithological feature; for example, site clearance activities leading to the loss of foraging habitat for a particular bird species; and
- Effect – outcome resulting from an impact, acting upon the conservation status or structure and function of an ornithological feature; for example, reducing the availability of suitable foraging habitat and therefore increasing feeding pressures may lead to an adverse effect on the conservation status of the population concerned.

9.4.29 With reference to the CIEEM guidelines (CIEEM, 2024), the following parameters have been considered when describing potential impacts and the resultant effects on ornithological features:

- Positive or negative – i.e. whether the impact will have a positive (beneficial) or negative (adverse) change on the quality of the ornithological feature:
  - 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 for ornithological features; or
  - Negative (adverse) – a change that reduces the quality of the environment, e.g. destruction of habitat that supports ornithological features.
- Spatial extent/complexity – the 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 determined where possible on a quantitative basis, e.g. total or partial.

- 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 – consideration of the point at which the impact occurs in relation to critical life-stages or seasons.
- Reversibility – whether recovery from the effect is possible or not, i.e. irreversible (permanent) effects or reversible (temporary) effects. A temporary effect 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).

Combined, these characteristics form the magnitude criteria for impacts of the Project on important ornithological features as summarised in Table 9.10.

Table 9.10 – Magnitude criteria for impacts

Magnitude	Magnitude criteria
Large	Changes to an ornithological feature that almost always have an adverse effect on its integrity or conservation status. Such changes are usually long-term and often permanent and/or irreversible.
Medium	Adverse changes on an ornithological feature that, in some circumstances, may affect its integrity or conservation status. Although such changes may be long-term, they are potentially reversible.
Small	Adverse changes on an ornithological feature that do not usually change its integrity or conservation status. Such changes are often short-term and/or reversible.
Negligible	There is no noticeable change on the ornithological feature.

9.4.30 Inter-project cumulative effects can result from the combined impacts of multiple developments on a receptor. Intra-project effects occur where multiple impacts from the same project combine and affect a receptor, for example combined noise and lighting impacts on a single ornithological receptor. More details on the cumulative assessment are provided in **Application Document 6.20 Chapter 20 Intra-project Cumulative Effects** and **Application Document 6.21 Chapter 21 Inter-project Cumulative Effects**.

Significance of effects

9.4.31 For each ornithological feature only those characteristics relevant to understanding the ecological effect of the Project and determining the effect significance are described. The significance of effects has been determined based on the predicted effect on the structure and function, or conservation status, of relevant ornithological features, as follows:

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

9.4.32 Paragraph 5.24 of the CIEEM guidelines (CIEEM, 2024) states:

'*…For the purpose of EcIA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' (explained in Chapter 4) 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.*'

9.4.33 Paragraphs 5.25 and 5.26 of the CIEEM guidelines (CIEEM, 2024) state that:

'*A significant effect is simply 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. A significant effect is a positive or negative ecological effect that should be given weight in judging whether to authorise a project: it can influence whether permission is given or refused and, if given, whether the effect is important enough to warrant conditions, restrictions or further requirements such as monitoring. A significant effect does not necessarily equate to an effect so severe that consent for the project should be refused planning permission. For example, many projects with significant negative ecological effects have been lawfully permitted following EIA procedures*.

In broad terms, significant effects encompass impacts on the structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).'

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

9.4.35 There are a range of approaches for determining the significance of effects on ecological/ornithological features. Whilst the CIEEM guidelines (CIEEM, 2024) recommends avoiding 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 **Application Document 6.5 Chapter 5 Environmental Impact Assessment Approach and Methodology**, the findings of the CIEEM assessment have been translated into the classification of effects scale, as outlined in Table 9.11, but still remain consistent with the CIEEM guidelines (CIEEM, 2024).

9.4.36 As a rule, major and moderate effects are considered to be significant, whilst minor and negligible effects are considered to be not significant. However, professional judgement has been 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 9.11 – CIEEM effect classifications and EIA terminology

Effect classification	Effect classification terminology used in Application Document 6.5 Chapter 5 EIA Approach and Methodology	Equivalent CIEEM assessment
Significant (beneficial)	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 District or County level.
Not significant	Minor beneficial	Beneficial effect on structure/function or conservation status at Local level.
	Negligible	No effect on structure/function or conservation status.
	Minor adverse	Adverse effect on structure/function or conservation status at Local level.
Significant (adverse)	Moderate adverse	Adverse effect on structure/function or conservation status at District or County level.
	Major adverse	Adverse effect on structure/function or conservation status at Regional, National or International level.

Assumptions and Limitations

9.4.37 The assessment has applied the assumptions with regards to vegetation removal and management as set out in **Application Document 6.4 Chapter 4 Description of the Project and Application Document 2.13 Trees and Important Hedgerows to be Removed or Managed Plans.**

9.4.38 Unless otherwise stated, it has been assumed that vegetation within the Order Limits, but outside of the areas listed above, could be potentially affected. This is because there is flexibility in the design within the Order Limits (Limits of Deviation), for example access track locations are currently indicative and could move within the Order Limits. Importantly, though, the assessment does not assume that all vegetation will be removed, as this is highly unlikely to be the case. Commitments in terms of vegetation retention are included in **Application Document 7.3 Register of Environmental Actions and Commitments**.

9.4.39 It is assumed that there will be no working beyond the working hours specified in **Application Document 7.2 Outline Code of Construction Practice**.

9.4.40 **Application Document 6.15 Chapter 15 Air Quality** presents an assessment of construction dust on relevant ecological sites. The study area for construction phase dust, which has also been used to inform the assessments presented in this chapter,

was derived based on the Institute of Air Quality Management (IAQM) construction dust guidance (IAQM, 2024), and is as follows:

- 250 m from the Order Limits for human and ecological receptors; and
- 50 m from the route(s) used by construction vehicles on the public highway, up to 250 m from the proposed bellmouths for human and ecological receptors.

9.4.41 The assessment presented in this chapter is based on the watercourse crossings schedule presented in **Application Document 6.4.A2 Appendix 4.2 Indicative Bridge and Culvert Schedule**.

9.4.42 Specific assumptions and limitations relevant to each survey, including how any limitations have been overcome, are included within the relevant technical reports presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**, **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment** and **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report.**

9.5 Basis of Assessment

9.5.1 This section sets out the assumptions that have been applied in respect of design flexibility maintained within the Project.

9.5.2 Details of the available flexibility and assessment scenarios are presented in **Application Document 6.5 Chapter 5 Environmental Impact Assessment Approach and Methodology**.

Flexibility Assumptions

9.5.3 The ornithology assessment has been undertaken based on the description of the Project provided in **Application Document 6.4 Chapter 4 Description of the Project**. To take account of the flexibility allowed in the Project, consideration has been given to the potential for effects to be of greater or different significance, should any of the permanent or temporary infrastructure elements be moved within the Limits of Deviation (LoD) (horizontal, vehicle or longitudinal) or Order Limits.

9.5.4 The assumptions made regarding the use of flexibility for the assessment are set out in Table 9.12.

Table 9.12 – Flexibility assumptions

Element of flexibility	How this has been considered within the assessment
Horizontal LoD	Each pylon and the proposed overhead line has been assessed in its current location and centreline as shown on **Application Document 2.4 Works Plans**. The assessment has considered whether or not the potential for pylons to be moved horizontally within the LoD will make any material difference to the outcome of the assessment. Commitments in terms of vegetation retention are included in **Application Document 7.3 Register of Environmental Actions and Commitments**, including buffers from habitats such as woodland (including ancient woodland), hedgerows and waterbodies. Therefore, the assessment of effects on habitats

Element of flexibility	How this has been considered within the assessment
	are not anticipated to change due to the flexibility afforded by the horizontal LoD. Similarly, in terms of protected and notable species, any horizontal pylon movement would be subject to legal compliance, and movements which would impact protected or notable species more adversely would be avoided where possible.
Vertical LoD	Each pylon has been assessed at the height shown in **Application Document 6.4.A1 Appendix 4.1 Indicative Pylon Schedule**. The vertical LoD does not affect the likely significance of effects on ornithology receptors, since sufficient caution has been built into the survey protocols for recording the height above ground of birds in flight. This precautionary approach is built into the assessment of potential collision risk set out in **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**.
Longitudinal LoD	Each pylon and the proposed overhead line has been assessed in its current location and centreline as shown on **Application Document 2.4 Works Plans**. The assessment has considered whether or not the potential for pylons to be moved longitudinally within the LoD will make any material difference to the outcome of the assessment, such potential movements being limited by span lengths, topography and committed buffers within **Application Document 7.3 Register of Environmental Actions and Commitments**. Commitments in terms of vegetation retention are included in **Application Document 7.3 Register of Environmental Actions and Commitments**. Therefore, the assessment of effects on habitats is not anticipated to change due to the flexibility afforded by the longitudinal LoD. Similarly, in terms of protected and notable species, any longitudinal pylon movement would be subject to legal compliance, and movements which would impact protected or notable species more adversely would be avoided where possible.
Pylon footprint	The pylon footprint has been considered in terms of permanent habitat loss where this might affect the availability of habitat for nesting and foraging birds; however, flexibility in the footprint of each pylon will make no material difference to the assessment, since the differences are likely to be insignificant in the context of the overall Project design.
Foundation type	Indicative foundation types are shown in **Application Document 6.4.A1 Appendix 4.1 Indicative Pylon Schedule**. The ornithology assessment assumes all foundations would be piled, as a worst-case. In comparison with alternative methods, piling could result in increased temporary disturbance to protected and notable species due to noise and vibration.
Order Limits – temporary construction works	Access tracks for construction and temporary working areas have been assessed as being located where they are currently shown in **Application Document 6.4.F3 Figure 4.3 Temporary Construction Works**. Although it is accepted that access tracks and other working areas can be moved to other locations within the Order Limits, it is not possible to assess every eventuality. Commitments in terms of vegetation retention, protection and reinstatement/compensation are included in **Application Document 7.3 Register of Environmental Actions and Commitments**, including buffers

Element of flexibility	How this has been considered within the assessment
	from habitats such as woodland (including ancient woodland), hedgerows and waterbodies. Therefore, the assessment of effects on habitats is not anticipated to change due to the flexibility in the design regarding the locations of temporary working areas. Similarly, in terms of protected and notable species, any movement would be subject to legal compliance, and movements which would impact protected or notable species more adversely would be avoided where possible.
Watercourse crossings	Watercourse crossings have been assessed as shown in **Application Document 6.4.A2 Appendix 4.2 Indicative Bridge and Culvert Schedule**, which lists the proposed crossing type for each watercourse. Temporary bridges have been committed to at main rivers and canals. Crossing types at other watercourses will typically be culverted, but in some locations clear span bridges would be installed instead. The potential effects on birds for all construction elements are considered within the assessment.
Modifications to third-party assets – construction methodology	Allowance has been made within the Project design to modify third-party assets that are crossed by the proposed overhead line. These modifications to third party assets would include placing the asset underground, which could include the use of open cut trenching or trenchless techniques such as horizontal directional drilling (HDD) to facilitate the crossing of roads or other existing infrastructure. The ornithology assessment assumes open cut trenching would be used for undergrounding works, as a worst-case scenario, which would result in more temporary loss and disturbance to habitats than trenchless crossing methods. The possible use of HDD methods, which might occur at night as well as during daytime hours, is considered with respect to disturbance of birds at night.

Optionality

9.5.5 As set out in **Application Document 6.4 Chapter 4 Description of the Project** and shown on **Application Document 6.4.F3 Figure 4.3 Temporary Construction Works** optionality has been included at the following five locations.

- Two alternative options for temporary construction access between Pennyhill Cottages (Main Street) Primary Access Route (PAR 34) and proposed pylon 4AF82 and satellite construction compound S-3:
  - Bellmouths BM-040/41, associated construction access track and watercourse crossings C-169 and BC-11; or
  - Bellmouths BM-040A/41A off Pennyhill Cottages (PAR 34), associated construction access tracks and watercourse crossings C-220A, C-169A and BC-11A.
- Two alternative options for temporary construction access tracks to proposed pylon 4AF88:
  - Watercourse crossings BC-36 and BC-37; or
  - Watercourse crossing B-06A.

- Two alternative options for the construction access track between proposed pylons 4AF130 and 4AF131:
  - Watercourse crossing BC-29; or
  - Watercourse crossings BC-26A and BC-29B
- Two alternative options for taking access off High Melwood (PAR 63) and the associated construction access track:
  - Bellmouth BM-077; or
  - Bellmouth BM-100.
- Two alternative power supply connections to the proposed main construction compound (M1) as shown on **Application Document 6.4.F4 Figure 4.4 Third Party Works.**
  - NPG-09A from the west – there is currently uncertainty whether capacity of the network would be sufficient for this connection; or
  - NPG-09B from the east.

9.5.6 Where differences in effects between options have been identified these are set out within section 9.9, with clear reference to the nature, extent, and significance of any resulting ornithology effects.

Sensitivity Test

9.5.7 Under the terms of the DCO, construction could commence any year up to five years from the granting of the DCO which is assumed to be 2028. Consideration has therefore been given to whether the effects reported would be different if the works were to commence in any year up to year five, following the granting of the DCO. Where there is a difference, this is reported in section 9.9.

9.6 Baseline Conditions

9.6.1 This section describes the baseline ornithological baseline conditions in the relevant study areas and survey areas set out in Table 9.8 and Table 9.9.

9.6.2 Baseline conditions have been gathered from desk-based information and field surveys (see section 9.4). The full ornithology baseline is presented in the supporting appendices (**Application Documents 6.9.A2** to **6.9.A4**). **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report** sets out the breeding locations of species that are protected against disturbance under the provisions of the WCA 1981 (HM Government, 1981) and that must be treated as sensitive for the purposes of protecting that species from persecution during the breeding season. In the spatial context of the Project, this includes:

- Barn owl;
- Hobby;
- Red kite;
- Kingfisher;
- Peregrine falcon;

- Marsh harrier;
- Bittern;
- Bearded tit;
- Little ringed plover; and
- Avocet.

9.6.3 Circulation of **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report** has been restricted to the National Grid project team, the Planning Inspectorate and key stakeholders (local planning authorities, RSPB, and Natural England). Summary results are presented in this section for the purposes of informing the assessments of potential effects in section 9.7.

9.6.4 Other Schedule 1 species that breed within the study or survey areas include quail (*Coturnix coturnix*) and Cetti's warbler, however these are not widely persecuted and their precise whereabouts are unlikely to be consistent between years. The baseline for these species has not been restricted to **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report**.

Existing Baseline

Statutory designated sites

9.6.5 All statutory designated sites for nature conservation within the study area that are designated partly or wholly for their qualifying features of ornithological interest are shown in **Application Document 6.9.F1 Figure 9.1 Statutory International Designated Sites of Ornithological Importance** and **Application Document 6.9.F2 Figure 9.2 Statutory National and Local Designated Sites of Ornithological Importance**. Table 9.13 summarises the designated sites within the study area (see Table 9.8 for the search areas applied to different designations) and their spatial relationship to the Project.

9.6.6 There are 23 statutory designated sites within the relevant study areas that support qualifying features of ornithological interest. These are:

- Five Internationally designated sites (two Ramsar sites and three SPAs);
- Thirteen SSSIs;
- One NNR; and
- Four LNRs.

9.6.7 The reasons for designation of each site are presented in **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**. All distances between the Order Limits and the designated site boundaries relate to the Order Limits but exclude the proposed FLL compensation area (Route Section B), and the public right of way temporary diversion in the Adlingfleet area (Route Section B).

9.6.8 Statutory designated sites (notified for ornithological qualifying features), their distance from the Order Limits and screening for further assessment are summarised in Table 9.13. Where no potential impact pathways are identified, this is stated within the screening rationale, and these designated sites have not been taken through to the residual effects assessment.

9.6.9 In addition to the named qualifying features and assemblage species, for the Humber Estuary SPA, species which are not listed on the SPA citation (Natural England, 2007) but occur at site levels of more than one percent of the national population, according to the most recent Humber Estuary Wetland Bird Survey (WeBS) 5-year average count were included. These species (Green sandpiper (*Tringa ochropus*) – non-breeding; Greylag goose (*Anser anser*) – non-breeding; Little egret (*Egretta garzetta*) – non-breeding; Pink-footed goose (*Anser brachyrhynchus*) – non-breeding; Shoveler (*Anas clypeata*) – non-breeding; and Crane (*Grus grus*) – non-breeding.) were also included under the term qualifying features and any FLL association and subsequent assessment.

Table 9.13 – Statutory designated sites (notified for ornithological features) screening table

Designation	Approximate distance from the Order Limits (km)	Level of designation	Screened in for assessment of effects?	Screening rationale
Lower Derwent Valley Ramsar site	13.59 km	International	No	No impact pathways identified (no FLL connectivity with mobile species, Order Limits are outside foraging ranges).
Lower Derwent Valley SPA	13.59 km	International	No	No impact pathways identified (no FLL connectivity with mobile species, Order Limits are outside foraging ranges).
Humber Estuary Ramsar site	Partly within	International	Yes	Impact pathways identified due to overlap with the Order Limits.
Humber Estuary SPA	Partly within	International	Yes	Impact pathways identified due to overlap with the Order Limits.
Thorne and Hatfield Moors SPA	2.69 km	International	No	Potential impact pathways for foraging nightjar in potential FLL habitats ruled out based on survey results presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**.
Humber Estuary SSSI	Partly within	National	Yes	Impact pathways identified due to overlap with the Order Limits.
Thorne, Crowle and Goole Moors SSSI	2.69 km	National	No	Potential impact pathways for foraging nightjar in habitats beyond the designated site boundary ruled out based on survey results presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**.

Designation	Approximate distance from the Order Limits (km)	Level of designation	Screened in for assessment of effects?	Screening rationale
River Idle Washlands SSSI	2.50 km	National	Yes	Impact pathways identified. Order Limits are within foraging range of qualifying features.
Misson Line Bank SSSI	2.80 km	National	No	No impact pathways identified (Order Limits are beyond the foraging range of interest species).
Misson Training Area SSSI	2.89 km	National	No	No impact pathways identified (Order Limits are beyond the foraging range of interest species).
Sutton and Lound Gravel Pits SSSI	4.71 km	National	No	No impact pathways identified (Order Limits are beyond the foraging range of interest species). The SSSI is 4.71 km away from the project and therefore outwith any key foraging ranges of the water bird assemblage. Flight activity surveys indicated very low levels of flight activity indicative of regular movements to/from the SSSI and therefore negligible potential for effects. South of Gringley Carrs relevant flight activity surveys included only a few hundred records with a low proportion of these at potential collision risk height, this potential corridor of movement along the River Idle Valley and across Misterton Carrs already includes mitigation measures for whooper swan via installation of bird diverters on the overhead lines.
Lea Marsh SSSI	3.13 km	National	No	No impact pathways identified (Order Limits are beyond the foraging range of interest species).
South Cliffe Common SSSI	3.25 km	National	No	Potential impact pathways for foraging nightjar in habitats beyond the designated site boundary ruled

Designation	Approximate distance from the Order Limits (km)	Level of designation	Screened in for assessment of effects?	Screening rationale
				out based on general foraging distance and habitats.
Gamston and Eaton Woods and Roadside Verges SSSI	3.37 km	National	No	No impact pathways identified (Order Limits are beyond the likely foraging range of interest species).
Epworth Turbary SSSI	3.41 km	National	No	No impact pathways identified (Order Limits are beyond the foraging range of interest species).
Haxey Turbary SSSI	3.81 km	National	No	No impact pathways identified (Order Limits are beyond the foraging range of interest species).
Treswell Wood SSSI	Immediately adjacent[10]	National	Yes	Impact pathways identified due to proximity to the Order Limits.
Humberhead Peatlands NNR	2.70 km	National	Yes	Impact pathways identified. Order Limits are within foraging range of qualifying features (breeding nightjar).
Owston Ferry Castle LNR	0.69 km	Local	No	No impact pathways identified due to distance from Order Limits.
Phoenix Parkway LNR	4.01 km	Local	No	No impact pathways identified due to distance from Order Limits.

[10] The Order Limits partially overlaps the fringes of Treswell Wood SSSI, however a commitment has been made to no works occurring within the designated site. The commitment is set out in **Application Document 7.3 Register of Environmental Actions and Commitments**.

Designation	Approximate distance from the Order Limits (km)	Level of designation	Screened in for assessment of effects?	Screening rationale
Conesby Quarry LNR	4.22 km	Local	No	No impact pathways identified due to distance from Order Limits.
Atkinson's Warren LNR	4.41 km	Local	No	No impact pathways identified (Order Limits are beyond the foraging range of interest species).

Non-statutory designated sites

9.6.10 There are 39 non-statutory designated sites covering 35 spatially distinct designated areas (some with multiple designations) within the relevant study area that partly or wholly support qualifying features of ornithological interest. These are summarised in Table 9.14 and comprise:

- Thirty-three Local Wildlife Sites (LWSs);
- Four Wildlife Trust Reserves[11]; and
- Two RSPB Reserves[12].

9.6.11 The reasons for designation of each site are presented in **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**. All distances between the Order Limits and the designated site boundaries relate to the Order Limits but exclude the proposed FLL compensation area (Route Section B), within which there would be no construction works or operational infrastructure.

9.6.12 Non-statutory designated sites (notified for ornithological features), their distance from the Order Limits and screening for further assessment are summarised in Table 9.14. Where no potential impact pathways are identified, this is stated within the screening rationale, and these designated sites are not taken through to the residual effects assessment.

[11] Three of the Wildlife Trust Reserves (Langholme Wildlife Trust Reserve, Walkeringham Wildlife Trust Reserve and Treswell Wood Wildlife Trust Reserve) are spatially, geographically and biologically identical to three of the Local Wildlife Sites (respectively Langholme Wood LWS, Walkeringham Clay Pits LWS and Treswell Wood LWS).

[12] Beckingham Marshes RSPB Reserve is spatially, geographically and biologically identical to Beckingham Marshes LWS.

Table 9.14 – Non-statutory designated sites (notified for ornithological features) screening table

Designation	Approximate distance from the Order Limits	Level of designation	Screened in for assessment of effects?	Screening rationale
East Riding of Yorkshire				
Brantingham Dale Historic LWS	Partially within	County	Yes	No site details. Spatial overlap with the Order Limits and includes woodland habitat.
Blacktoft Sands RSPB Reserve	Partially within	National	Yes	Spatial overlap with the Order Limits.
Woodale Historic LWS	Adjacent	County	Yes	No site details. Proximity to the Order Limits and includes woodland habitat.
Sweatty Hill Plantation Historic LWS	0.75 km	County	No	No site details. Outwith potential 500 m disturbance buffer.
Newport Brick Ponds Historic LWS	1.19 km	County	No	No site details. Distance from the Order Limits.
Slipperbridge Pit Historic LWS	1.95 km	County	No	No site details. Distance from the Order Limits.
Lincolnshire				
Sedge Hole Close LWS and Wildlife Trust Reserve	Partially within	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Stainforth and Keadby Canal Corridor LWS	Partially within	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.

Designation	Approximate distance from the Order Limits	Level of designation	Screened in for assessment of effects?	Screening rationale
Warping Drain Corridor LWS	Partially within	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
South Moor Covert and Fishpond Plantation LWS	Partially within	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Three Rivers LWS	Partially within	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Crowle Brick Pits LWS	0.46 km	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Langholme Wood LWS	0.83 km	County	No	No impact pathways identified due to distance from the Order Limits.
Langholme Wood Wildlife Trust Reserve	0.74 km	County	No	No impact pathways identified due to distance from the Order Limits.
Rush Furlong LWS	1.06 km	County	No	No impact pathways identified due to distance from the Order Limits.
Nottinghamshire				
Caddow Wood (Southern Assarts) LWS	Adjacent	County	Yes	Impact pathways identified due to proximity to the Order Limits.
Tongs and Dogholes Woods LWS	14 m	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.

Designation	Approximate distance from the Order Limits	Level of designation	Screened in for assessment of effects?	Screening rationale
Beckingham Woods LWS	68 m	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Wheatley Wood LWS	0.13 km	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Treswell Wood LWS and Wildlife Trust Site[13]	Adjacent to Order Limits[14]	County	Yes	Impact pathways identified due to proximity to the Order Limits.
Shaw Ponds LWS	0.20 km	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Caddow Wood (Northern Assart) LWS	0.23 km	County	Yes	Impact pathways identified due to spatial overlap with Order Limits.
Bushstocks Lane Meadow LWS	0.35 km	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Headon Verges LWS	0.38 km	County	Yes	Impact pathways identified due to spatial overlap with the Order Limits.
Beast Wood Grassland LWS	0.56 km	County	No	No impact pathways identified due to distance from the Order Limits.

[13] 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

[14] The Order Limits partially overlaps the fringes of Treswell Wood LWS and Wildlife Trust Site, however a commitment has been made to no works occurring within the designated site. The commitment is set out in **Application Document 7.3 Register of Environmental Actions and Commitments**.

Designation	Approximate distance from the Order Limits	Level of designation	Screened in for assessment of effects?	Screening rationale
Clarborough Tunnel LWS and Wildlife Trust Site[15]	0.62 km	County	No	No impact pathways identified due to distance from the Order Limits.
Hutchinson's Holt LWS	0.84 km	County	No	No impact pathways identified due to distance from the Order Limits.
Saundby Marsh Drains LWS	1.34 km	County	No	No impact pathways identified due to distance from the Order Limits. No site details.
Beckingham Marshes LWS and RSPB Reserve	1.36 km	County	No	No impact pathways identified due to distance from the Order Limits.
West Burton Reedbed LWS	1.52 km	County	No	No impact pathways identified due to distance from the Order Limits.
Bole Ings LWS	1.55 km	County	No	No impact pathways identified due to distance from the Order Limits.
Mill Lane, Clayworth LWS	1.65 km	County	No	No impact pathways identified due to distance from the Order Limits.
Carr Road Drains Complex LWS	1.66 km	County	No	No impact pathways identified due to distance from the Order Limits.
Grove Road Woodland LWS	1.49 km	County	No	No impact pathways identified due to distance from the Order Limits.

[15] 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

Designation	Approximate distance from the Order Limits	Level of designation	Screened in for assessment of effects?	Screening rationale
Marsh Road Pond Walkeringham Candidate LWS	1.86 km	County	No	No impact pathways identified due to distance from the Order Limits.

Species

9.6.13 Detailed narrative on the ornithology species baseline is presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** and **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report**. A high-level summary of baseline conditions is reported herein, including:

- Occurrence of non-breeding species and non-breeding assemblages;
- Occurrence of breeding species and breeding assemblages, and
- Flight activity by species targeted for VP surveys.

9.6.14 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.

9.6.15 The following qualifying features of one or more designated sites either would not occur because there are no suitable habitats for them within the survey area; or they did not occur during surveys; or they occurred during surveys in such low numbers or so infrequently that there are no patterns of habitat use or regular movements to report for them, and as a result there is no potential for any significant effects on them and they cannot be assessed. These species are scoped out of the assessment and will not be discussed further:

- Whimbrel (*Numenius phaeopus*);
- Ruff (*Calidris pugnax*);
- Little tern (*Sternula albifrons*);
- Knot (*Calidris canutus*);
- Dunlin (*Calidris alpina*);
- Black-tailed godwit (*Limosa limosa*);
- Bar-tailed godwit (*Limosa lapponica*);
- Grey plover (*Pluvialis squatarola*);
- Hen harrier (*Circus cyaneus*);
- Greenshank (*Tringa nebularia*);
- Sanderling (*Calidris alba*);
- Scaup (*Aythya marila*);
- Turnstone (*Arenaria interpres*); and
- Brent goose (*Branta bernicla*).

Flight activity (all species, year-round)

9.6.16 Table 9.15 summarises the key flight data for all target species (combined) at each VP. There were 103,910 target species passes[16] through the airspace within the combined viewsheds (the 2 km viewing arc from each VP location) over the course of all VP surveys between 2022 and 2026. Vantage Point locations and viewsheds are shown in **Application Document A9.2.5 Figure 9.5** and **Application Document A9.2.6 Figure 9.6**. The contribution of each VP to the flight totals varied across the survey area. Vantage points 3 to 8 (including the Ouse VP) contributed 81% of all flights recorded, within which the biggest contributors of bird flights were the River Ouse VP (c. 14% of all flights recorded) and VP 4b (c. 18% of all flights recorded).

9.6.17 Comparative values expressed as flight rate per hour of observation (rather than total number of flights overall) demonstrate that the highest flight rates were recorded across the Humberhead Levels at VPs 3 to 7 (including the River Ouse VP) between Ellerker in Route Section A and Garthorpe in Route Section B, indicating that this is a key focal area for flight activity.

9.6.18 Warping Drain in Route Section D, the River Idle Valley on the boundary of Route Sections D and E, and Misterton and Gringley Carrs in Route Section E support qualifying features of the River Idle Washlands SSSI and, at times, pink-footed geese that otherwise roost at Hatfield Moors. Flight activity in these areas is also relatively frequent and they can be also considered potentially sensitive areas.

9.6.19 Generally, flight rates were much lower elsewhere, particularly across the Yorkshire Wolds (VPs 1, 2, 19 and 20) in Route Section A and south of the Chesterfield Canal (VPs 15 to 17) in Route Sections E and F as the proposed overhead line moves away from Misterton Carrs.

9.6.20 The flight data demonstrate that the highest risk of collision with the proposed overhead line occurs at:

- VPs 3, 4a, 4b, 5, 6 and 7, within the broad areas of the Humberhead Levels between Ellerker in Route Section A and Garthorpe in Route Section B; and
- VPs 12 and 13, overlooking the River Idle Valley and north Idle washlands between Owston Ferry in Route Section D and Misterton in Route Section E.

9.6.21 There were no observations of direct collisions with any existing 400 kV overhead lines that resulted in casualties during the surveys.

Table 9.15 – Summary year-round flight data for all target species at all VPs

VP[17]	Hours of observation	Number of passes through viewshed	Passes per hour through viewshed	% at risk (crossing the Order Limits at risk height)	Passes per hour at risk
1	86.0	752	8.74	41.3	3.61

[16] The metric 'bird passes' is a product of the number of flights recorded and the number of birds in each flight. Expressing flight activity in this way accounts for flocks or pairs of birds making flights together without committing the surveyors to recording each bird individually. For example, a surveyor recording 1,000 geese in a flock or skein would record these birds as a single 'flight' that contributes 1,000 bird passes to the dataset.

[17] In geographical order from north to south

VP[17]	Hours of observation	Number of passes through viewshed	Passes per hour through viewshed	% at risk (crossing the Order Limits at risk height)	Passes per hour at risk
19	42.0	1,226	29.19	16.7	4.87
20	42.0	39	0.93	51.7	0.48
2	87.5	517	5.91	31.9	1.88
3	124.5	4,644	37.30	34.3	12.79
4a	100.0	5,326	53.26	41.7	22.21
4b	102.0	17,904	175.53	41.4	72.67
18a	105.0	5,440	51.81	14.8	7.67
18b	105.0	5,277	50.26	15.6	7.84
5	143.0	11,927	83.41	25.0	20.85
6	137.0	4,406	32.16	42.7	13.73
Ouse	199.8	13,757	68.87	13.8	9.50
7	138.5	8,620	62.24	39.0	24.27
8	108.5	3,964	36.53	41.7	15.23
9	108.0	1,980	18.33	34.7	6.36
10	109.5	2,137	19.52	42.9	8.37
11	84.0	779	9.27	51.7	4.79
12	99.0	2,855	28.84	45.8	13.21
13	90.0	6,791	75.46	27.9	21.05
21	36.0	798	22.17	54.3	12.04
14	109.0	3635	33.35	45.0	15.01
15	75.0	375	5.00	36.8	1.84
16	75.0	142	1.89	46.2	0.87
17	74.0	619	8.36	17.1	1.43
Total	**2,380.3**	**103,910**			

Non-breeding birds

9.6.22 The majority of bird records, particularly those that are qualifying features of the Humber Estuary SPA/Ramsar site/SSSI, occurred within the broad area referred to as the Humber Washlands or Humberhead Levels, which is generally defined as the low-lying agricultural land between Ellerker in the north (as far as the A63) in Route Section A and Keadby in the South (as far as the M180) in Route Section D. Within

this area, qualifying features of the Humber Estuary SPA/Ramsar site/SSSI occurred most frequently and in the greatest numbers between Broomfleet and Luddington in Route Section A. This is the key focal area for potential effects and resultant mitigation to minimise potential disturbance and displacement effects.

9.6.23 Target qualifying features of designated sites were monitored for flight activity occurring within terrestrial habitats and were represented almost entirely (in order of abundance) by pink-footed goose, greylag goose, lapwing, golden plover, mallard, wigeon, teal and curlew. These species were engaged predominantly in opportunistic foraging and in some cases roosting, with small numbers of Bewick's swan, whooper swan, little egret, snipe, green sandpiper, shelduck, and oystercatcher occurring on some of the field drains and adjacent arable fields across the area.

9.6.24 Across the Order Limits south of Keadby there were fewer records of notable birds, however exceptions to this include key areas located at:

- Hatfield Moors in Route Section D and the wide area southwards towards the River Idle on the boundary of Route Sections D and E for pink-footed geese[18];
- Warping Drain in Route Section D and adjacent farmland between Haxey and Owston Ferry in Route Section D; and
- Misterton and Gringley Carrs in Route Section E for pink-footed geese, whooper swans, mute swans (*Cygnus olor*) and plovers including small numbers of lapwing and golden plover.

9.6.25 Further south in Nottinghamshire there were fewer records of target species, and the numbers of designated site qualifying features fell away dramatically, as would be expected with increasing distance from designated sites. The birds encountered in these areas are beyond the foraging ranges (from roost sites and designated sites) of the species in question.

9.6.26 Key locations on or adjacent to the Order Limits that support significant populations of non-breeding birds include the following:

- The River Ouse (including habitat that lies within the Humber Estuary SPA/Ramsar site/SSSI and Blacktoft Sands RSPB Reserve) in Route Section B, which supports large numbers of waterbirds including qualifying features of the Humber Estuary Ramsar and SPA.
- Broomfleet Tileworks in Route Section A, which regularly supports individual qualifying features in numbers equal to or exceeding 1% of the Humber SPA population, including mallard, pochard, goldeneye, teal and wigeon, plus several species that qualify as part of the non-breeding assemblage feature, including greylag goose, snipe, little egret and water rail.
- The farmland FLL either side of the Rivers Ouse and Humber in Route Sections A and B, which at some locations within 500 m of the Order Limits regularly support individual qualifying features of the Humber Estuary SPA/Ramsar site/SSSI in numbers that equal or exceed 1% of the SPA population, including pink-footed goose, curlew, lapwing and golden plover; and species that qualify as part of the non-breeding assemblage feature including greylag goose. Other priority species

[18] This area lies beyond the widely accepted maximum foraging distance of pink-footed goose from roosts that occur within the Humber Estuary, therefore the geese occurring in this area do not indicate that it is functionally linked to the Humber Estuary SPA. The maximum foraging distance for this species is discussed further in Section 3.2 of **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**.

and SPA qualifying features that occur in lower numbers include whooper swan, marsh harrier, teal, wigeon, little egret and snipe.

- The River Idle Valley and Misterton and Gringley Carrs between the River Idle on the boundary of Route Sections D and E and Chesterfield Canal in Route Section E, where occasionally large feeding flocks of pink-footed goose occurred, numbering several thousand, as well as regular occurrences of whooper swan numbering between a few dozen and 196 birds (numbers within 500 m of the Order Limits peaking at 72), and small numbers of golden plover and lapwing.

9.6.27 Additionally, Oxmardyke Washlands, immediately north of the Selby railway line at Broomfleet in Route Section A, 286 m northeast of the Order Limits and 866 m north of the LoD, was a regular focal point for smaller numbers of non-breeding qualifying features including, lapwing, teal and mallard, with occasional use by small numbers of pink-footed goose and greylag goose and a variety of other water birds. This location also supported a regularly recorded marsh harrier roost.

9.6.28 The fields adjacent to Warping Drain southeast of Haxey in Route Section D supported moderate numbers of foraging lapwing, with numbers peaking at 150. However, these are not within the foraging range of birds residing within the Humber Estuary SPA and therefore are considered to be part of the wider UK population that winters on low-lying farmland.

9.6.29 All non-breeding ornithological receptors, their distance from the Order Limits and screening for further assessment are summarised in Table 9.16. Where no potential impact pathways are identified, this is stated within the screening rationale, and these receptors are not taken through to the residual effects assessment.

Table 9.16 – Summary of non-breeding species and designated sites hosting non-breeding species, and screening for further assessment

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
Humber Estuary SPA and Ramsar site: Pink-footed goose	Widespread foraging either side of the River Ouse, principally between Broomfleet Tileworks and Luddington Exceedance of 1% of the Humber Estuary SPA population occurred at locations close to Broomfleet Tileworks (peak count 2,000), Adlingfleet (peak count 3,000) and Luddington (peak count 1,000) between October and February. Repeated occurrence over multiple years adjacent to Broomfleet Tileworks and near Adlingfleet.	Widespread, peaking between Ellerker and Luddington at all heights. Some flight at high altitude over Yorkshire Wolds.	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SPA and Ramsar site: Greylag goose	Occurs almost exclusively between Broomfleet and Garthorpe, exceeded 1% of the Humber population at Broomfleet Tileworks (peak count 234), farmland west of the tileworks (peak count	Peak numbers between Broomfleet Tileworks and the River Ouse. Low levels of flight activity elsewhere.	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
	600), Ousefleet and Blacktoft Sands (peak count 400).				
Humber Estuary SPA and Ramsar site: Golden plover	Occurred sparsely between Ellerker and Keadby, peak counts from surveys reaching 1% of the Humber SPA population. RSPB reported numbers up to 520 foraging near Luddington. More widely either side of the Rivers Ouse and Humber up to 10,000 were present near Brough and 450 were recorded near Island Farm. Very few records on Yorkshire Wolds.	Flight activity occurred between Ellerker and the River Ouse, most of which was low or zero risk.	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SPA and Ramsar site: Lapwing	Recorded extensively between Ellerker and Luddington, peak counts exceeding 1% of the Humber SPA population only at Luddington (peak 450; RSPB reported up to 940 here). Beyond the ZoI, other occurrences numbered up to 650 birds at locations either side of the River Ouse.	Peak activity recorded between Ellerker and Luddington, with collision risk highest close to the Market Weighton Canal, River Ouse and Luddington.	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
Humber Estuary SPA and Ramsar site: Curlew	All records occurred between Ellerker and Garthorpe. Peak counts equalled or exceeded 1% of the Humber SPA population only on the banks of the Rive Ouse (56 and 37 birds). Larger counts were recorded further from the Order Limits, but always within 500 m of the River Ouse.	Flight activity occurred at very low levels between Ellerker and Garthorpe with no flight activity elsewhere.	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SPA and Ramsar site: Redshank	Redshank was mostly absent, occurring only 4 times away from Broomfleet Tileworks and Blacktoft Sands, and with counts mostly of singles or pairs.	None	International	No	No impact pathways identified due to general absence of records within the survey area.
Humber Estuary SPA and Ramsar site: Mallard	Widespread between Ellerker and Garthorpe. Peak counts during daytime surveys of up to 24 at Broomfleet Tileworks, 47 on the River Ouse and up to 28 on a pond near Ellerker. Elsewhere feeding in small numbers close to drains and ditches across farmland.	Widespread but very low levels, peaking at the River Ouse. Negligible collision risk.	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
Humber Estuary SPA and Ramsar site: Teal	Teal occurred exclusively at watercourses or pools, with peak counts of 64 at Broomfleet Tileworks, 29 at Oxmardyke Washlands and 159 at the River Ouse, where the species occurred throughout the survey period. Elsewhere there were few records.	Negligible	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SPA and Ramsar site: Wigeon	Very similar distribution to teal, with peak counts at Broomfleet Tileworks (127), the River Ouse (123) being the only locations where 1% of the Humber SPA population was exceeded.	Negligible	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SPA and Ramsar site: Bittern	Bittern was not recorded during the non-breeding surveys. Observations by RSPB staff indicate presence of an occasional foraging bird at Broomfleet Tileworks.	No flights were recorded during surveys. RSPB staff recorded flights between (probably) Broomfleet Tileworks and Blacktoft Sands, with flight trajectories deliberately over and beneath the existing overhead line.	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
Humber Estuary SPA and Ramsar site: Little egret	Predominantly at Broomfleet Tileworks (peak count 5) and the River Ouse (peak count 1), with foraging singles and small groups up to 4) recorded near Ellerker, Blacktoft, Ousefleet and Garthorpe. Away from the Humber SPA and Broomfleet Tileworks occurred as singles and pairs across Misterton Carrs and close to the River Idle.	Low levels of flight, mostly between Ellerker and Garthorpe. Risk levels negligible or zero at all locations.	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SPA and Ramsar site: Shelduck	Occurred in small numbers at Broomfleet Tileworks (peak 3), the River Ouse (peak 9) and occasionally on farmland either side of the River Ouse.	Little flight activity, except at the River Ouse, but negligible risk at all locations	International	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SPA and Ramsar site: Shoveler	Peak counts of 14 at Broomfleet Tileworks and 16 at Blacktoft Sands (the latter just outside the ZoI). This species was mostly absent outside these locations.	Negligible	International (birds within the Humber Estuary)	No	No impact pathways identified due to distance of birds from the Order Limits.

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
Humber Estuary SPA and Ramsar site: Snipe	Peak counts of 1 were recorded at Broomfleet Tileworks and 3 at the River Ouse. Several foraging and loafing records were recorded northwest of Garthorpe and at several locations north of the River Ouse including Broomfleet beck and other small watercourses. A resting group of 7 birds was recorded close to Ellerker on one occasion.	Negligible	International (birds within the Humber Estuary)	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SSSI	See species accounts for Humber Estuary SPA and Ramsar site.	See species accounts for Humber Estuary SPA and Ramsar site.	National	Yes	See species accounts for Humber Estuary SPA and Ramsar site.
River Idle Washlands SSSI: Whooper swan	Whooper swans were repeatedly recorded across Misterton Carrs foraging in numbers of up to 72 within 500 m of the Order Limits, and 196 further west (where the species was most frequently recorded).	The majority of flights occurred across the northern half of Misterton Carrs, which contributed virtually all of the collision risk for this species.	National	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Bewick's swan	A foraging group of 4 birds occurred at Broomfleet	All flight activity (12 passes) occurred close to Broomfleet	Local	Yes	Impact pathways identified due to spatial overlap with

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
	Tileworks and adjacent farmland in November 2024. There were no other records.	Tileworks, with birds gaining height to cross the overhead line when moving between foraging locations. Three passes were at risk of collision.			and/or proximity to the Order Limits.
Goldeneye	This species occurred only at Broomfleet Tileworks (peak count 52) and is not regarded as a part of the SPA population as it is sedentary.	None	District	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Pochard	Pochard occurred at Broomfleet Tileworks (peak 25) and is not regarded as a part of the SPA population as it is fairly sedentary.	Negligible	District	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Marsh harrier	Marsh harriers were recorded widely foraging over farmland as singles between Ellerker and Garthorpe. The species is known to occur at Broomfleet Tileworks and Blacktoft Sands, however the key location was Oxmardyke Washlands, 500 m north of the Order Limits, where this species roosted.	Widespread but infrequent flight activity, with peaks in the vicinity of Market Weighton Canal, Broomfleet Tileworks and Oxmardyke Washlands. Risk level negligible.	District	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
Whooper swan	Counts of 4 and up to 17 foraging birds were respectively at Broomfleet Tileworks and adjacent fields. Up to 26 were recorded on the River Ouse.	Very small numbers of flights near Broomfleet Tileworks, the River Ouse and farmland either side of the River Ouse. Mostly absent elsewhere. Risk level negligible.	County	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Pink-footed goose	Foraging in numbers up to 5,000 near Misson and on farmland between the River Idle and Hatfield Moor. Roosts in numbers of at least 8,000 at Hatfield Moor. Foraging in numbers of at least 650 and up to several thousand across Gringley Carrs more than 500 m west of the Order Limits.	Negligible flight activity south of Gringley. Greater levels of activity in the Haxey and River Idle areas, mostly attributable to birds from Hatfield Moor roosts.	County	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Water rail	Occurred only at Broomfleet Tileworks (peak 1) and Oxmardyke Washlands (peak 1). Beyond 500 m from the Order Limits, it also occurred at Blacktoft Sands (peak 1)	None	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Golden plover	Recorded only on Misterton and Gringley Carrs (peak 23)	Negligible	Local	Yes	Impact pathways identified due to spatial overlap with

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
	and close to Warping Drain south of Haxey (peak 14).				and/or proximity to the Order Limits.
Lapwing	Lapwing was generally absent across most of the study area, except across Gringley and Misterton Carrs, where foraging flocks of between 2 and 65 birds repeatedly occurred; and north of Warping Drain near Haxey, where feeding flocks of between 3 and 150 birds repeatedly occurred.	Widespread but low levels of flight activity and risk, peaking close to Warping Drain and the River Idle.	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Gadwall	Gadwall occurred only at Broomfleet Tileworks (peak 20) and the River Ouse (peak 8).	None	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Little egret	Predominantly at Broomfleet Tileworks (peak count 5) and the River Ouse (peak count 1), with foraging singles and small groups up to 4) recorded near Ellerker, Blacktoft, Ousefleet and Garthorpe. Away from the Humber SPA and Broomfleet Tileworks occurred as singles and pairs	Low levels of flight, mostly between Ellerker and Garthorpe. Risk levels negligible or zero at all locations.	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
	across Misterton Carrs and close to the River Idle				
Shoveler	Peak counts of 14 at Broomfleet Tileworks and 16 at Blacktoft Sands (the latter just outside the ZoI). This species was mostly absent outside these locations	Negligible	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Snipe	Peak counts of 1 were recorded at Broomfleet Tileworks and 3 at the River Ouse. Several foraging and loafing records were recorded northwest of Garthorpe and at several locations north of the River Ouse including Broomfleet beck and other small watercourses. A resting group of 7 birds was recorded close to Ellerker on one occasion.	Negligible	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Farmland bird assemblage	Project-wide assemblage of foraging species including starling, redwing, fieldfare, Cetti's warbler, linnet, meadow pipit, reed bunting,	N/A	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Receptor	Description and locations of habitat use within the study area	Flight activity	Receptor value	Screened in for further assessment?	Rationale
	skylark, corn bunting. Collectively of Local value.				
Greylag goose	Very few records, with occasional records on the Yorkshire Wolds, Brantingham, Garthorpe and Three Rivers.	Negligible	Site (birds are part of the feral UK population)	No	Below threshold value for assessment.
Mallard	Largely absent, with peaks of 11 at the Warping Drain and repeated counts numbering up to 36 birds close to the River Idle and Warping Drain.	Negligible	Site (part of a very common and widespread UK population)	No	Below threshold value for assessment.

Breeding birds

9.6.30 Table 9.17 sets out summary information regarding breeding birds present within the study area, summarising the key information presented in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report** regarding habitat use for breeding and foraging purposes (during the breeding season), and flight activity.

9.6.31 The breeding farmland bird assemblage has been derived from the results of the Common Birds Census surveys across sampling areas that lie partially or wholly within open farmland habitats, and the tallied records of non-target species during VP surveys.

9.6.32 Since the Project interacts with very few areas of continuous woodland habitat, these were targeted for surveys where habitat losses were possible. For this reason, breeding bird assemblages associated with woodlands intersected by or adjacent to the Order Limits are separated out as ornithological features in their own right.

9.6.33 Corn bunting and turtle dove are two species undergoing particularly severe population decline across their UK breeding range, the former being identified by Nottinghamshire County Council as a key species of concern (see Table 9.5). For this reason, these species have been separated out for assessment as individual receptors, separately from the farmland bird assemblage.

9.6.34 All receptor sites hosting breeding bird species, their distance from the Order Limits and screening for further assessment are summarised in Table 9.17. Where no potential impact pathways are identified, this is stated within the screening rationale, and these designated sites are not taken through to the residual effects assessment.

Table 9.17 – Summary of breeding species and designated sites hosting breeding species, and screening for further assessment

Species	Description and locations of habitat use within study area	Flight activity	Receptor Value	Screened in for assessment?	Rationale
Humber Estuary SPA and Ramsar site: Bittern	Up to 2 possible breeding pairs at one location. One possible breeding pair at a second location. Both locations outwith impact pathway buffers.	Negligible	International (birds nesting within the Humber Estuary SPA or immediately adjacent habitat)	No	No impact pathways identified due to spatial separation from the Order Limits.
Humber Estuary SPA and Ramsar site: Marsh harrier	Widespread foraging over farmland either side of the Rivers Ouse and Humber. Up to 2 breeding pairs at one location. One possible breeding pair at a second location.	233 flights. Widespread activity between Ellerker and Keadby. Peak activity between Market Weighton Canal and Garthorpe.	International (birds nesting within the Humber Estuary SPA or immediately adjacent habitat)	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Humber Estuary SSSI	See species accounts for Humber Estuary SPA and Ramsar site.	See species accounts for Humber Estuary SPA and Ramsar site.	National	Yes	See species accounts for Humber Estuary SPA and Ramsar site.
Bittern	One breeding pair within 500 m of the Order Limits	Negligible	County (birds nesting outside the Humber Estuary SPA)	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Species	Description and locations of habitat use within study area	Flight activity	Receptor Value	Screened in for assessment?	Rationale
Marsh harrier	Widespread foraging over farmland either side of the Rivers Ouse and Humber. Up to 2 breeding pairs at one location. One possible breeding pair at a second location.	233 flights. Widespread activity between Ellerker and Keadby. Peak activity between Market Weighton Canal and Garthorpe.	County (birds nesting outside the Humber Estuary SPA)	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Hobby	Confirmed breeding at one location. Probable breeding at one location.	Negligible	County	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Peregrine falcon	Up to 7 breeding pairs.	Widespread but low in volume between Creyke Beck and Garthorpe. Peak activity between Market Weighton Canal and the River Ouse.	County	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Barn owl	Up to 28 confirmed or potential breeding sites. 2 roost sites.	Negligible	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Turtle dove	Probable breeding (1 singing male) recorded on the banks of the River Idle.	None	County	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Species	Description and locations of habitat use within study area	Flight activity	Receptor Value	Screened in for assessment?	Rationale
Corn bunting	The estimated corn bunting population within 500 m of the Order Limits is up to 18 territories, six of which were across Misterton and Gringley Carrs. The key parts of the Project for this species are therefore Misterton and Gringley Carrs (River Idle to Chesterfield Canal, Route Section E) and Ousefleet to Crowle (Route Sections B and C)	N/A	District/County	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Bearded tit	Up to 3 breeding pairs at one location, likely in areas of extensive/dense reedbed.	None	County	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Lapwing	Widespread breeding on farmland across the study area includes up to 21 breeding pairs within the areas surveyed.	Negligible	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Quail	Singing males at 2 locations in farmland within the areas surveyed.	None	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Species	Description and locations of habitat use within study area	Flight activity	Receptor Value	Screened in for assessment?	Rationale
Avocet	Occurred on one occasion during the breeding season outside of the Humber Estuary only but did not breed. Breeds within the Humber Estuary SPA beyond 500 m from the Order Limits.	Negligible	Local	No	No impact pathways identified, as only occurrence of this species was beyond 500 m from the Order Limits.
Little ringed plover	Territorial birds occurred at start of breeding season at one location but were not recorded again thereafter (in consecutive years 2025-26).	Negligible	Local	No	No impact pathways identified as breeding did not occur within 500 m of the Order Limits; all recorded activity was temporary and short-term.
Red kite	Overflying birds occurring widely. No breeding recorded.	Negligible	Local	No	No impact pathways identified due to very few occurrences within survey area.
Kingfisher	Possible or probable breeding at up to 2 locations on the same watercourse. Present during the breeding season at two further watercourses that support suitable breeding habitat, indicative of possible breeding at these locations.	Negligible	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.

Species	Description and locations of habitat use within study area	Flight activity	Receptor Value	Screened in for assessment?	Rationale
Woodland bird assemblage: Socken Wood	Woodland bird assemblage of up to 27 breeding species collectively of Local value.	N/A	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Woodland bird assemblage: Brantingham Dale	Woodland bird assemblage of up to 36 breeding species collectively of Local value.	N/A	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Farmland bird assemblage	Project-wide assemblage of foraging and breeding species including starling, Cetti's warbler, linnet, meadow pipit, cuckoo, house martin, swallow, stock dove, reed bunting, skylark, yellow wagtail, yellowhammer, house sparrow, grey partridge, and a range of other common and widespread passerines, thrushes, corvids, pigeons and doves. Collectively of Local value.	N/A	Local	Yes	Impact pathways identified due to spatial overlap with and/or proximity to the Order Limits.
Greylag goose	Small breeding and foraging numbers tied to aquatic habitats adjacent to/within Oxmardyke	Widespread but negligible except at locations close to Market Weighton Canal (276	Site	No	Below threshold receptor value

Species	Description and locations of habitat use within study area	Flight activity	Receptor Value	Screened in for assessment?	Rationale
	Washlands, Broomfleet Tileworks, Blacktoft Sands RSPB Reserve and the River Humber. Few confirmed breeding records except on the banks of the River Ouse (2 confirmed breeding pairs).	flights combined) and the River Ouse (87 flights).			
Mallard	Widespread as a foraging and breeding species at Broomfleet Tileworks, the River Ouse, Warping Drain, the River Idle, Three Rivers and the Sheffield and South Yorkshire Navigation; also widely present on smaller drains and watercourses.	Negligible except at the River Ouse (343 flights), Luddington (142 flights) and close to Three Rivers (108 flights).	Site	No	Below threshold receptor value

Future Baseline

9.6.35 As detailed in **Application Document 6.5 Chapter 5 Environmental Impact Assessment Approach and Methodology**, a review has been carried out to determine whether the existing baseline conditions might change between the time of carrying out the assessment and the future years in which the Project is planned to be constructed and become operational.

9.6.36 Consideration has been given to the following types of change that could potentially alter the baseline environment associated with ecology:

- Climate change can lead to changes in the distribution and abundance of some ecological features (habitats and species) at the local level; however, any such changes are likely to occur over a relatively long period of time. It is unlikely that climate change would lead to any significant changes to ecologically important features, including bird populations and distribution, between the time of conducting the assessment and the future years in which the Project is planned to be constructed and become operational.
- Should there be any large-scale changes in agricultural policies and practices by 2031, these may result in changes to the land use within and surrounding the Order Limits, which could result in some changes in the extent of the agricultural land. Notwithstanding this, any such changes are unlikely to alter the importance of the ecological features (especially habitats) that support the birds recorded during surveys carried out to inform this assessment, given that planning policy will likely continue to seek to minimise the loss of biodiversity features and ensure no net loss.

9.6.37 The majority of the baseline conditions recorded between 2022 and 2026 are unlikely to change markedly by the anticipated start of construction in 2028. However, bird populations can and do fluctuate on a local, regional and national scale as evidenced by the changes to the rolling five-year peak mean counts published by BTO in the WeBS Report Online (Frost, et al., 2026) and the approximately five-yearly updates to the BoCC Red and Amber Lists and recent addition of species to the BoCC Red List (Stanbury, et al., 2021).

9.6.38 Additionally, BTO WeBS alerts are published on a roughly six-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 9.13.

9.6.39 The following observations focus on qualifying features of the designated sites, and are taken from the Wetland Bird Survey Alerts 2021/2022 (Caulfield, Feather, Frost, & Woodward, 2025):

- Lower Derwent Valley SPA – significant long term downward trends for Bewick's swan, golden plover, and 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.

9.6.40 Future developments that overlap the 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 overlap the Order Limits or would change the baseline conditions within and up to 500 m from the Order Limits are listed below and are detailed in **Application Document 6.21 Chapter 21 Inter-project Cumulative Effects**.

9.6.41 The following anticipated and committed developments are included:

- ID 544, application reference 21/01691/FULL, Hull City Council: Barnes Way Land to East of and Kingswood House, Ashcombe Road, Kingston Upon Hull (residential development);
- ID 578, application reference 23/01202/STPLF, East Riding of Yorkshire Council: Site Of Longcroft Lower School, Church Road, Molescroft, East Riding of Yorkshire, HU17 7EN (residential development);
- ID 592, application reference 16/02173/OUTM, Newark and Sherwood District Council: Former Thoresby Colliery, Ollerton Road, Edwinstowe, Nottinghamshire, NG21 9PS (residential, leisure and business development including open spaces and access);
- ID 649, application reference 25/01637/STPLFE, East Riding of Yorkshire Council: Grange Farm, New Road, Brandesburton Moor, East Riding Of Yorkshire (demolition and replacement of poultry units);
- ID 97, application reference 21/01311/STPLF, East Riding of Yorkshire Council: Erection of 204 dwellings, Land South Of Larkfield, 23 Great Gutter Lane, West Willerby, East Riding Of Yorkshire, HU10 6DP (residential development);
- ID 98, application reference 20/03207/STREM, East Riding of Yorkshire Council: Erection of 257 dwellings, Land Southwest Of Stone Cottage, Long Lane, Woodmansey, East Riding Of Yorkshire, HU17 0RN (residential development);
- ID 100, application reference 20/01027/STREM, East Riding of Yorkshire Council: Erection of 320 one and two storey dwellings, Land At Ings Lane And East Of Skillings Lane, Ings Lane, Elloughton, East Riding Of Yorkshire, HU15 1EN (residential development);
- ID 327, application reference 23/03527/PLF, East Riding of Yorkshire Council: Wind Turbine, York Grounds Farm, Riplingham Road, Raywell, East Riding Of Yorkshire (wind farm);
- ID 162, application reference PA/2022/869, North Lincolnshire Council: Erection of 40 affordable homes comprising flats and houses, former site of Ashby Market, Ashby High Street, Scunthorpe (residential); and
- ID 177, application reference PA/2021/1208, North Lincolnshire Council: Erection of 24 dwellings, land off Ashtree Close, Belton, DN9 1NH (residential).

9.6.42 Future developments within the Order Limits are likely to be limited, given the rural setting of most of the route, and are likely to be localised, industrial or agricultural-related developments, or renewable energy developments (for example solar farms or battery energy storage schemes), on land close to existing development. Such

developments are unlikely to alter the baseline conditions significantly or change the outcome of the assessment presented in this chapter.

9.7 Potential Effects

9.7.1 Based on the assessment scope (see section 9.3), the following sections describe how construction (C), operation (O), and maintenance (M) activities are likely to affect ornithological receptors in the study area. This takes account of the embedded mitigation measures which are defined in **Application Document 7.3 Register of Environmental Actions and Commitments**. This section first lists the impacts that could result from each phase of the Project and Table 9.18 to Table 9.20 set out the impact pathways that have the potential to result in an effect on the receptors identified in section 9.6.

Construction

9.7.2 The potential effects that could result from the construction of the Project are:

- Temporary disturbance and fragmentation of statutory designated sites through impacts on the habitats within those sites and/or the way birds are able to move within the sites.
- Permanent and temporary direct habitat loss and temporary disturbance and fragmentation of non-statutory designated sites. No permanent habitat loss will occur within the Humber Estuary SPA/Ramsar site/SSSI and Blacktoft Sands RSPB Reserve.
- 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 of protected or notable species from noise/vibration, visual and lighting.
- Pollution and dust impacts on designated sites, notable species and/or the habitats used by notable species.
- Loss of habitat or reduction in quality of habitats used by protected/notable birds from changes in groundwater levels, quality and flows arising from dewatering activities to reduce groundwater levels in areas of undergrounding of assets (relevant to diversion of third-party assets only).
- Introduction of INNS leading to the degradation of the habitat quality of designated sites and notable habitats, including those used by protected species.
- Permanent and temporary direct habitat loss and temporary disturbance and fragmentation of Priority Habitats, established woodland, woodlands present on the Ancient Woodland Inventory (Natural England, 2026) and veteran trees.

Operation

9.7.3 The potential effects that could result from the operation of the Project are:

- Reductions in bird populations arising through collision mortality of breeding and non-breeding birds due to permanent structures/barriers. This does not have the

potential to significantly affect birds with specific physical traits (small size, low wing loading, high manoeuvrability) including passerines, doves, pigeons, corvids, thrushes, starlings, small waders (those smaller than a snipe).

- Effects on protected and notable species caused by habitat fragmentation as a result of the proposed overhead line creating a barrier to species dispersal. This effect is considered only where the proposed overhead line is not in close parallel alignment with an existing overhead line, since an additional overhead line parallel to an existing one would present little difference from baseline conditions. It also does not have the potential to affect birds with specific physical traits (small size, low wing loading, high manoeuvrability) and behavioural traits (small foraging ranges or home/breeding territories tied to specific habitat blocks such as woodlands or hedgerows; tendency to perch on overhead line infrastructure). Such species would include passerines, doves, pigeons, corvids, thrushes, starlings and small waders, for example.

9.7.4 Aspects scoped out of the assessment are set out in paragraphs 9.3.10 and 9.3.11.

Maintenance

9.7.5 The potential impacts that could result from the maintenance of the Project are:

- Temporary direct disturbance of species, including those which occur within designated sites, through use of proposed maintenance access tracks;
- Disturbance to protected or notable bird species from noise/vibration, visual disturbance and lighting during maintenance activities, including vehicular access via maintenance access tracks; and,
- Use of maintenance access tracks resulting in dust and airborne pollution impacts on designated sites and habitats used by species.

9.7.6 Potential effects on important ecological features/receptors associated with refurbishment works or routine maintenance works (as described in **Application Document 6.4 Chapter 4 Description of the Project**) would be equivalent to, or less than, those which could result from the construction of the Project. Therefore, potential impacts and resulting effects associated with potential refurbishment and routine maintenance works are not assessed separately from construction in section 9.9, with the exception of maintenance access routes, where these differ from the routes that would be used during construction and/or where they could affect additional ornithological receptors.

Potential Effects

9.7.7 Table 9.18 to Table 9.20 set out the potential effects on the relevant receptors identified in section 9.6 (respectively statutory designated sites; non-statutory designated sites; and species assemblages) and show whether there is potential for effects during construction (C) operation (O) or maintenance (M) phases of the Project.

Table 9.18 – Summary of potential ornithological effects on statutory designated sites during construction (C), operation (O) and maintenance (M)

Receptor	Potential effect	Description	C	O	M
Humber Estuary SPA, Ramsar site, SSSI qualifying features: Non-breeding					
Pink-footed goose; Greylag goose; Lapwing, Golden plover; Curlew.	Reduction in the wintering population through elevation of mortality above baseline levels	Mortality of birds moving between roosts and feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).		✓	
	Temporary direct habitat loss: FLL only	Habitat, FLL, that is utilised by foraging birds predominantly between Ellerker in Route Section A and Luddington In Route Section B would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase. This would result in reduction of available foraging habitat amounting to a negligible percentage of the of suitable foraging habitat within the core foraging range of birds that roost on the Humber Estuary between Blacktoft Sands and Whitton Sands.	✓		
	Permanent habitat loss	Habitat that is occupied by proposed overhead line infrastructure (pylon bases) would be permanently lost as a foraging resource. Habitat 'islanded' between the proposed and existing overhead line where these are proposed to be in close parallel may also be effectively lost. This will affect the habitats predominantly between Broomfleet Tileworks in Route Section A and Garthorpe in Route Section B, affecting a small percentage of suitable foraging habitat available to birds overwintering within the Humber Estuary SPA/Ramsar site/SSSI.		✓	
	Temporary disturbance	Temporary disturbance of foraging geese and waders (lapwing and golden plover) could occur during construction as a result of noise emissions and visual disturbance from working areas. This is expected to be higher for foraging birds on FLL immediately	✓		✓

Receptor	Potential effect	Description	C	O	M
		west of Broomfleet Tileworks in Route Section A and near Garthorpe in Route Section B in the months of November to February. Works during these months on and between pylons 4AF65 to 4AF68 north of the River Ouse and, south of the River Ouse, pylons 4AF78 to 4AF79, pylons 4AF83 to 4AF86, pylons 4AF92 to 4AF94 and pylons 4AF97 to 4AF108 are likely to affect the species named above.			
	Degradation of habitats	Degradation of foraging habitat in specific locations due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by foraging birds within potential FLL.	✓		✓
Mallard	Temporary direct habitat loss -FLL only	FLL habitat that is utilised by foraging birds predominantly between Ellerker in Route Section A and Luddington in Route Section B would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase. This would result in potential reduction of available foraging habitat.	✓		
	Permanent habitat loss	Habitat 'islanded' between the proposed and existing overhead line where these are proposed to be in close parallel may effectively be lost as a foraging resource. This would affect the habitats predominantly between Ellerker in Route Section A and Garthorpe in Route Section B, although affecting only a negligible percentage of available foraging habitat available to birds overwintering within the Humber Estuary SPA/Ramsar site/SSSI.		✓	
	Temporary disturbance	Temporary disturbance of foraging birds would occur during construction as a result of noise emissions and visual disturbance from working areas, particularly at Broomfleet Tileworks and the River Ouse.	✓		✓

Receptor	Potential effect	Description	C	O	M
	Degradation of habitats	Degradation of habitat in specific locations of the designated sites due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by foraging birds within potential FLL.	✓		✓
Teal; Wigeon	Permanent habitat loss- FLL only	Foraging FLL habitat at Broomfleet Tileworks in Route Section A 'islanded' between the proposed and existing overhead line where these are proposed to be in close parallel may effectively be lost as a foraging resource, however this would occur at only one pool at the southern end of the Tileworks, which was used by very small numbers of teal and no wigeon. This effect is not expected to occur at the River Ouse crossing due to the increased height of the proposed overhead line (minimum 60 m above water level), which would not prevent birds from accessing the habitat beneath the existing and proposed overhead lines.		✓	
	Temporary disturbance	Temporary disturbance of foraging birds may occur during construction as a result of noise emissions and visual disturbance from working areas at two pools at the southern end of Broomfleet Tileworks (pools 4 and 5 shown in **Application Document 6.9. A9.2.17 Figure 9.17**) immediately adjacent to the Order Limits. Other pools are naturally screened from impacts by earth bunds and vegetation. The same impact could occur at the River Ouse crossing where birds were recorded in significant numbers on the river channel.	✓		✓
	Degradation of habitats	Degradation of habitat in specific locations of the designated sites due to dust and other pollution impacts.	✓		✓

Receptor	Potential effect	Description	C	O	M
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
Bittern	Reduction in the wintering population through elevation of mortality above baseline levels	Mortality of birds moving between roosts and feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire). Baseline observations data highlight a very low chance of this occurring.		✓	
	Temporary disturbance	Temporary disturbance of foraging birds could occur at Broomfleet Tileworks in Route Section A during construction from noise emissions and visual disturbance from working areas.	✓		✓
	Degradation of habitats	Degradation of habitat in specific locations where bittern occurred within potential FLL (Broomfleet Tileworks in Route Section A) due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within potential FLL.	✓		✓
Little egret; Shelduck	Temporary disturbance	Temporary disturbance of foraging birds may occur during construction as a result of noise emissions and visual disturbance from working areas, these effects being potentially significant (in terms of the presence of concentrations of significant numbers of birds) at the River Ouse. Elsewhere (wider farmland and Broomfleet Tileworks), the potential effects would be negated by a combination of natural screening (at the Tileworks) and distance from the proposed works.	✓		✓
	Degradation of habitats	Degradation of habitat in specific locations due to dust and other pollution impacts.	✓		✓

Receptor	Potential effect	Description	C	O	M
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the foraging habitats used both within and beyond the boundary of the designated site.	✓		✓
Snipe	Temporary disturbance	Temporary disturbance of foraging birds due to noise and visual disturbance from construction activities could occur within potential FLL up to 500 m either side of the Order Limits but is unlikely to be significant since this species was present only in ones and twos within the likely foraging range from the River Ouse. Disturbance of birds on the banks of the River Ouse is also possible.	✓		✓
Humber Estuary SPA, Ramsar site, SSSI qualifying features: breeding					
Marsh harrier	Reduction in the breeding population through elevation of mortality above baseline levels	Mortality of birds moving between nest sites within the Humber Estuary SPA/Ramsar site/SSSI and feeding areas in the vicinity of the River Ouse between Ellerker in Route Section A and Keadby in Route Section C due to collisions with permanent structures (principally the proposed overhead line earth wire). Risk is expected to be very low due to the number of observed flights and the height profile of flights, which are typically beneath the earth wire and conductors.		✓	
	Degradation of habitats	Degradation of habitat in specific locations of the designated sites due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
River Idle Washlands SSSI qualifying features: Non-breeding					

Receptor	Potential effect	Description	C	O	M
Whooper swan	Reduction in the wintering population through elevation of mortality above baseline levels	Mortality of birds moving between fields while foraging on Misterton Carrs due to collisions with permanent structures (principally the proposed overhead line earth wire).		✓	
	Temporary direct habitat loss	Habitat that is utilised by significant numbers of on Misterton Carrs in Route Section E would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat amounting to a negligible percentage of the available habitat across the wider Carrs. The Order Limits do not coincide with the locations most regularly used by the largest numbers of swans, which are over 500 m west of the Order Limits.	✓		
	Permanent habitat loss	Habitat on Misterton Carrs in Route Section E occupied by proposed overhead line infrastructure (pylon bases) and beneath and immediately adjacent to the proposed overhead line would be permanently lost as a foraging resource.		✓	
	Temporary disturbance	Temporary disturbance of significant numbers of foraging swans may occur during construction within 500 m of the Order Limits as a result of noise emissions and visual disturbance from working areas.	✓		✓
	Degradation of habitats	Degradation of foraging habitat in specific locations due to dust and other pollution impacts.	✓		✓

Table 9.19 – Summary of potential ornithological effects on non-statutory designated sites during construction (C), operation (O) and maintenance (M)

Receptor	Potential effect	Description of effect	C	O	M
Non-statutory designated sites					
Brantingham Dale Historic LWS (Route Section A)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Temporary direct habitat loss	Habitat that is utilised by protected and notable bird species would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat for nesting birds.	✓		
	Permanent habitat loss	Woodland canopy habitat beneath the proposed overhead line would be managed to maintain clearance beneath the proposed overhead line for the duration of the Project's operational phase, resulting in losses of nest sites in the upper tree canopy.		✓	
	Temporary disturbance	Temporary disturbance of breeding birds within the designated site could occur as a result of noise and visual disturbance, resulting in reduced breeding success and a reduction in the breeding bird population.	✓		✓
Blacktoft Sands RSPB Reserve (Route Section B)	Reduction in the function and integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
	Reduction in the function and integrity of the designated site through effects on qualifying features survival	Mortality of qualifying features due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).		✓	

Receptor	Potential effect	Description of effect	C	O	M
	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Degradation of habitats	Potential for degradation of habitat due to changes to water quality associated modification works to third party services, reducing the carrying capacity of the site for birds.	✓		✓
Woodale Historic LWS (Route Section A)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Temporary disturbance	Temporary disturbance of breeding birds within the designated site could occur as a result of noise and visual disturbance, resulting in reduced breeding success and a reduction in the breeding bird population.	✓		✓
Sedge Hole Close LWS and Wildlife Trust Reserve (Route Section D)	Temporary direct habitat losses	Removal of habitat to accommodate proposed pylon 4AF156 stringing area would result in reduction in available habitat and reduction in the carrying capacity of the site for birds.	✓		
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
	Degradation of habitats	Degradation of habitat in specific locations of the designated sites due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓

Receptor	Potential effect	Description of effect	C	O	M
	Degradation of habitats	Reduction in quality of habitats used by birds from changes in groundwater levels, quality and flows arising from dewatering activities to reduce groundwater levels when undergrounding adjacent third-party assets.	✓		
Stainforth and Keadby Canal Corridor LWS (Route Section C)	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
	Reduction in the functional integrity of the designated site	Habitat fragmentation caused by presence of the proposed overhead line reducing movement of species along the canal corridor as a result of the proposed overhead line creating a barrier to species dispersal.		✓	
	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
Warping Drain Corridor LWS (Route Section D)	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
	Reduction in the functional integrity of the designated site	Habitat fragmentation caused by presence of the proposed overhead line reducing movement of species along the drain as a result of the proposed overhead line creating a barrier to species dispersal.		✓	
	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓

Receptor	Potential effect	Description of effect	C	O	M
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
South Moor Covert and Fishpond Plantation LWS (Route Section D)	Temporary direct habitat losses	Removal of habitat for realignment of underground assets would result in reduction in available habitat and reduction in the carrying capacity of the site for birds.	✓		
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Degradation of habitats	Potential for degradation of habitat due to changes to water quality associated with modifications to third party works, reducing the carrying capacity of the site for birds.	✓		
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Three Rivers LWS (Route Section C)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓

Receptor	Potential effect	Description of effect	C	O	M
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Crowle Brick Pits LWS (Route Section C)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
Caddow Wood (Southern Assarts) LWS (Route Section E)	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Tongs and Dogholes Woods LWS (Route Section E)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓

Receptor	Potential effect	Description of effect	C	O	M
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Beckingham Woods LWS (Route Section E)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Wheatley Wood LWS (Route Section E)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Degradation of habitats	Potential for degradation of habitat due to changes to water quality associated with modifications to third party works, reducing the carrying capacity of the site for birds.	✓		
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Treswell Wood LWS and Wildlife Trust Site	Degradation of habitats	Degradation of habitat in specific locations of the designated sites due to dust and other pollution impacts.	✓		✓

Receptor	Potential effect	Description of effect	C	O	M
(Route Section E)	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Degradation of habitats	Potential for degradation of habitat due to changes to water quality associated with modifications to third party assets, reducing the carrying capacity of the site for birds.	✓		
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Shaw Ponds LWS (Route Section E)	Reduction in the functional integrity of the designated site	Habitat fragmentation caused by presence of the proposed overhead line reducing movement of species along the adjacent Stanforth and Keadby Canal corridor as a result of the proposed overhead line creating a barrier to species dispersal.		✓	
	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Caddow Wood (Northern Assart) LWS	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓

Receptor	Potential effect	Description of effect	C	O	M
(Route Section E)	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Bushstocks Lane Meadow LWS (Route Section E)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓
	Reduction in the functional integrity of the designated site	Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Headon Verges LWS (Route Section E)	Degradation of habitats	Degradation of habitat in specific locations of the designated site due to dust and other pollution impacts.	✓		✓
	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓

Table 9.20 – Summary of potential effects on ornithological species and species assemblages

Receptor	Potential effect	Description	C	O	M
Non-breeding species and non-breeding assemblages					
Bewick's swan	Reduction in the wintering population through elevation of mortality above baseline levels	Mortality of birds moving between feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).		✓	
	Temporary direct habitat loss	Habitat that is utilised by foraging birds adjacent to Broomfleet Tileworks in Route Section A would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat.	✓		
	Permanent habitat loss	Habitat that is occupied by proposed overhead line infrastructure (pylon bases) would be permanently lost as a foraging resource. Habitat 'islanded' between the proposed and existing overhead line where these are proposed to be in close parallel may also effectively be lost. This would affect very small numbers of Bewick's swan on no more than an occasional basis based on their observed occurrence.		✓	
	Temporary disturbance	Temporary disturbance of foraging birds will occur during construction as a result of noise emissions and visual disturbance from working areas. Based on observed occurrence of this species, this effect could occur at most on an occasional basis at any time during Winter and is likely to affect very small numbers of birds.	✓		✓

Receptor	Potential effect	Description	C	O	M
Goldeneye	Permanent habitat loss	Aquatic habitat at Broomfleet Tileworks in Route Section A 'islanded' between the proposed and existing overhead line where these are proposed to be in close parallel will also effectively be lost. This would affect very small numbers of goldeneye on one pool (pool 6, **Figure A9.2.17 in Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**) at the southern end of Broomfleet Tileworks.		✓	
	Temporary disturbance	Temporary disturbance of foraging goldeneye using several pools at Broomfleet Tileworks in Route Section A may occur during construction as a result of noise emissions and visual disturbance from working areas. Since most of the pools are screened by dense vegetation and earth bunds, disturbance would be unlikely across all parts of the Tileworks other than pools 4-7 at the southern end of the tileworks complex (**Figure A9.2.17 in Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**).	✓		✓
Marsh harrier	Temporary direct habitat loss	Habitat utilised occasionally by foraging birds widely between Ellerker in Route Section A and Garthorpe in Route Section B would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat across the wider Humberhead Levels.	✓		
	Permanent habitat loss	Habitat that is occupied by the proposed overhead line infrastructure (pylon bases) and that is 'islanded' between the proposed and existing overhead line where these are proposed to be in close parallel may be permanently lost if it is not used by marsh harriers, however this is unlikely since small mammals and ground nesting birds are		✓	

Receptor	Potential effect	Description	C	O	M
		unlikely to be deterred by the proposed infrastructure. Therefore, this potential effect is expected to be very limited.			
	Temporary disturbance	Temporary disturbance of foraging marsh harriers may occur during construction as a result of noise emissions and visual disturbance from working areas. Based on observed occurrence of this species, this effect could occur at most on an occasional basis at any time during Winter and is likely to affect very small numbers of birds.	✓		✓
Whooper swan	Reduction in the wintering population through elevation of mortality above baseline levels	Mortality of birds moving between fields while foraging close to Broomfleet Tileworks in Route Section A due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).		✓	
	Temporary direct habitat loss	Foraging habitat adjacent to Broomfleet Tileworks in Route Section A would be cleared to make way for construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat amounting to a negligible percentage of the available habitat across the wider Humberhead Levels.	✓		
	Permanent habitat loss	Habitat 'islanded' between the close parallel section of proposed and the existing overhead line adjacent to Broomfleet Tileworks in Route Section A may be effectively lost from the wider foraging resource across the Humberhead Levels. This amounts to a negligible proportion of the available habitat.		✓	
	Temporary disturbance	Temporary disturbance of foraging swans near Broomfleet Tileworks and on the River Ouse could occur during	✓		✓

Receptor	Potential effect	Description	C	O	M
		construction as a result of noise emissions and visual disturbance from working areas.			
Water rail	Temporary disturbance	Temporary disturbance of foraging water rail could occur during construction as a result of noise emissions and visual disturbance from working areas close to Broomfleet Tileworks in Route Section A.	✓		✓
Pink-footed goose	Reduction in the wintering population through elevation of mortality above baseline levels	Mortality of pink-footed geese moving between roosts and feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire) when foraging on Misterton Carrs.		✓	
	Temporary direct habitat loss	Habitat that is utilised by foraging pink-footed geese on Misterton Carrs in Route Section E would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of foraging habitat available in the wider area south and east of Hatfield Moor.	✓		
	Permanent habitat loss	Habitat across Misterton Carrs in Route Section E that is occupied by proposed overhead line infrastructure (pylon bases) and that is directly beneath and adjacent to the proposed overhead line, would be permanently lost as a foraging resource, amounting to a negligible percentage of suitable foraging habitat available in the wider area south and east of Hatfield Moor.		✓	
	Temporary disturbance	Temporary disturbance of foraging geese may occur during construction as a result of noise emissions and visual disturbance from working areas.	✓		✓
Golden plover	Permanent habitat loss	Habitat across Misterton Carrs in Route Section E that is occupied by the proposed overhead line infrastructure (pylon bases) and that is directly beneath and adjacent to		✓	

Receptor	Potential effect	Description	C	O	M
		the proposed overhead line, would be permanently lost as a foraging resource, amounting to a negligible percentage of suitable foraging habitat available in the wider area.			
	Temporary disturbance	Temporary disturbance of foraging golden plover on Misterton Carrs and in fields close to Warping Drain in Route Section D may occur during construction as a result of noise emissions and visual disturbance from working areas, affecting foraging golden plover, which were recorded in small numbers in this area.	✓		✓
Lapwing	Reduction in the wintering population through elevation of mortality above baseline levels	Mortality of wintering lapwing moving between feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire) when foraging on Misterton Carrs in Route Section E and close to Warping Drain in Route Section D.		✓	
	Permanent habitat loss	Habitat across Misterton Carrs in Route Section E that is occupied by proposed overhead line infrastructure (pylon bases) and that is directly beneath and adjacent to the proposed overhead line, would be permanently lost as a foraging resource, amounting to a negligible percentage of suitable foraging habitat available in the wider area.		✓	
	Temporary disturbance	Temporary disturbance of foraging lapwing on Misterton Carrs in Route Section E and in fields close to Warping Drain in Route Section D would occur during construction as a result of noise emissions and visual disturbance from working areas, affecting feeding flocks of lapwing.	✓		✓

Receptor	Potential effect	Description	C	O	M
Gadwall	Temporary disturbance	Temporary disturbance of foraging gadwall could occur during construction as a result of noise emissions and visual disturbance from working areas at Broomfleet Tileworks in Route Section A.	✓		✓
Little egret	Temporary disturbance	Temporary disturbance of foraging birds on Misterton Carrs in Route Section E and close to the River Idle on the boundary between Route Sections D and E could occur during construction as a result of noise emissions and visual disturbance from working areas, affecting small numbers of birds.	✓		✓
Shoveler	Temporary disturbance	Temporary disturbance of foraging birds at Broomfleet Tileworks in Route Section A could occur during construction as a result noise emissions and visual disturbance from working areas, however this is expected to be limited by natural visual and acoustic screening provided by mature habitats and earth bunds present on-site.	✓		✓
Snipe	Temporary disturbance	Temporary disturbance of foraging birds occurring as singles and pairs and close to Garthorpe in Route Section B and the River Idle on the boundary of Route Sections D and E could occur during construction as a result of noise emissions and visual disturbance from working areas.	✓		✓
Farmland bird assemblage	Temporary direct habitat loss	Habitat that is utilised by protected and notable bird species would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat for birds.	✓		
	Permanent habitat loss	Habitat that is occupied by proposed overhead line infrastructure (pylon bases) would be permanently lost,		✓	

Receptor	Potential effect	Description	C	O	M
		although it is assumed that farmland assemblage species would be capable of feeding beneath the pylons.			
	Temporary disturbance	Temporary disturbance or degradation of habitats on protected and notable species could occur as a result of noise, visual disturbance, obstructions and habitat alteration. This also includes effects as a result of noise, and dust generation and deposition.	✓		✓
	Reduction in habitat quality and reduced carrying capacity of habitats used by birds	Potential localised degradation of habitat due to changes to water quality associated with works on underground assets.	✓		
Bewick's swan; and Whooper swan	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by foraging birds within potential FLL.	✓		✓
Bewick's swan; Goldeneye; Marsh harrier; Whooper swan; Water rail; Pink-footed goose; Golden plover; Lapwing; Gadwall; Little egret; Shoveler; Snipe; and Farmland bird assemblage	Degradation of habitats	Degradation of foraging habitat in specific locations due to dust and other pollution impacts.	✓		

Receptor	Potential effect	Description	C	O	M
Goldeneye; Marsh harrier; Whooper swan; Water rail; Pink-footed goose; Golden plover; Lapwing; Gadwall; Little egret; Shoveler; Snipe; and Farmland bird assemblage	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by foraging birds.	✓		
Breeding species/breeding assemblages					
Bittern	Temporary disturbance	One breeding pair could be affected by noise and visual disturbance within 500 m of the Order Limits during construction only. This is likely to be limited by natural screening of the nest site from works areas by dense scrub, and the nest site is estimated to be at least 290 m from any construction works given the distribution of suitable nesting habitat at the breeding location.	✓		
Marsh harrier	Reduction in the breeding population through elevation of mortality above baseline levels	Mortality of birds moving between nest sites outside of the Humber Estuary SPA/Ramsar site/SSSI and foraging areas across farmland principally north of the River Ouse due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire). Risk is expected to be very low due to the number of observed flights and the height profile of flights, which are typically beneath the earth wire.		✓	

Receptor	Potential effect	Description	C	O	M
	Temporary disturbance	One breeding pair could be affected by noise and visual disturbance within 500 m of the Order Limits. This is likely to be limited by natural screening of the nest site from works areas by dense scrub and/or earth bunds. This impact pathway is unlikely to be significant during maintenance activities and given baseline levels of disturbance.	✓		
Barn owl	Temporary habitat loss	Loss of nest sites due to accidental damage of nest boxes and removal of habitat within the Order Limits during construction. This could affect up to 6 nest sites and 2 roost sites.	✓		
	Temporary disturbance	Disturbance of nest sites or potential nest sites due to noise emissions and visual disturbance during construction. This is unlikely to be significant during maintenance activities. This could affect up to 28 nest sites.	✓		
Hobby	Temporary disturbance	Disturbance of 2 nest sites or potential nest sites due to noise emissions and visual disturbance during construction.	✓		✓
Peregrine falcon	Reduction in population	Mortality of birds when hunting and flying to and from nest sites due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).		✓	
	Temporary disturbance	Disturbance of up to 7 nesting pairs due to noise emissions and visual disturbance during construction and maintenance.	✓		✓

Receptor	Potential effect	Description	C	O	M
Turtle dove	Temporary habitat loss	Loss of nesting habitat within the Order Limits along the banks of the River Idle on the boundary between Route Sections D and E and Warping Drain in Route Section D during construction.	✓		
	Temporary disturbance	Disturbance of nest sites or potential nest sites due to noise emissions and visual disturbance during construction. This is unlikely to be significant for the maintenance phase.	✓		
Corn bunting	Temporary habitat loss	Loss of nesting habitat due to site clearance within the Order Limits during construction, affecting a negligible percentage of the available nesting habitat. Whilst recorded over all sections the main concentration of corn bunting breeding is in Section E and particularly Misterton and Gringley Carrs	✓		
	Temporary disturbance	The estimated corn bunting population within 500 m of the Order Limits is up to 18 territories, six of which were across Misterton and Gringley Carrs. These breeding pairs could be affected by noise and visual disturbance within 500 m of the Order Limits	✓		
Bearded tit	Temporary disturbance	Up to three breeding pairs could be affected by noise and visual disturbance within 500 m of the Order Limits at one location. This is likely to be limited by natural screening of the nest site from works areas by dense scrub and/or earth bunds.	✓		
Lapwing	Temporary habitat loss	Loss of nesting habitat due to site clearance within the Order Limits during construction, affecting a tiny percentage of the available nesting habitat.	✓		

Receptor	Potential effect	Description	C	O	M
	Temporary disturbance	At least 13 breeding pairs could be affected by noise and visual disturbance within 500 m of the Order Limits at one location.	✓		
Quail	Temporary habitat loss	Loss of nesting habitat due to site clearance within the Order Limits during construction, affecting a tiny percentage of the available nesting habitat.	✓		
	Temporary disturbance	Singing males were recorded in Route Sections B and E. At least two breeding pairs could be affected by noise and visual disturbance within 500 m of the Order Limits.	✓		
Kingfisher	Temporary disturbance	Up to two breeding pairs could be affected by noise and visual disturbance within 100 m of the Order Limits at one location. This is likely to be limited by natural screening of the nest site from works areas by dense scrub and earth bunds alongside the watercourse on which nesting was recorded. This effect is unlikely to occur during maintenance.	✓		
Woodland bird assemblage: Socken Wood	Temporary direct habitat loss	Habitat that is utilised by protected and notable bird species would be cleared to make way for the proposed overhead line for the duration of the construction phase, resulting in reduction of available foraging habitat for birds.	✓		
	Permanent habitat loss	Woodland canopy habitat beneath the proposed overhead line would be managed to maintain clearance beneath the proposed overhead line, resulting in losses of nest sites in the upper tree canopy within an area of 0.43 ha (removed), plus 0.15 ha (managed),		✓	

Receptor	Potential effect	Description	C	O	M
	Temporary disturbance	Temporary disturbance or degradation of habitats on protected and notable species could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Woodland bird assemblage: Brantingham Dale	Temporary direct habitat loss	Habitat that is utilised by protected and notable bird species would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat for nesting birds.	✓		
	Permanent habitat loss	Woodland canopy habitat beneath the proposed overhead line would be managed to maintain clearance beneath the proposed overhead line, resulting in losses of nest sites in the upper tree canopy.		✓	
	Temporary disturbance	Temporary disturbance or degradation of habitats on protected and notable species could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	✓		✓
Farmland bird assemblage	Temporary direct habitat loss	Habitat that is utilised by protected and notable bird species would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat for birds.	✓		
	Permanent habitat loss	Habitat that is occupied by the proposed overhead line infrastructure (pylon bases) for the would be permanently lost, although it is assumed that farmland assemblage species would be capable of feeding beneath the pylons.		✓	
	Temporary disturbance	Temporary disturbance or degradation of habitats used by protected and notable species could occur as a result	✓		✓

Receptor	Potential effect	Description	C	O	M
		of noise, visual disturbance, obstructions and habitat alteration.			
	Reduction in habitat quality and reduced carrying capacity of habitats used by birds	Potential localised degradation of habitat due to changes to water quality associated with works on underground assets.	✓		
	Degradation of habitats	Degradation of habitat in specific locations of the designated sites due to dust and other pollution impacts.	✓		✓
Marsh harrier; Barn owl; Hobby; Peregrine falcon; Turtle dove; Corn bunting; Bearded tit; Lapwing; Quail; Avocet; Little ringed plover; Kingfisher; Woodland bird assemblage: Socken Wood; Woodland bird assemblage: Brantingham Dale; and Farmland bird assemblage	Degradation of habitats	Introduction of INNS at working locations leading to the degradation of the habitats used by qualifying features within the designated site.	✓		✓

Receptor	Potential effect	Description	C	O	M
Marsh Harrier; Barn Owl; Turtle dove; Corn bunting; Bearded tit; Lapwing; Quail; Little ringed plover; Avocet; Kingfisher; Woodland bird assemblage: Socken Wood; Woodland bird assemblage: Brantingham Dale; and Farmland bird assemblage.					

9.8 Mitigation

Embedded Measures

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

9.8.2 Embedded measures are those that are intrinsic to and built into the design of the Project; these are presented in **Application Document 7.3 Register of Environmental Actions and Commitments**. Embedded measures of relevance to the ornithology assessment are:

- EDM01- Sensitive routeing and siting was undertaken to develop the proposed overhead line alignment and draft Order Limits. The routeing and siting avoids and reduces, as far as practicable, impacts on identified receptors, in line with the Overarching National Policy Statement for Energy (EN-1) (Department for Energy Security and Net Zero, 2025) and National Policy Statement for Electricity Networks Infrastructure (EN-5) (Department for Energy Security and Net Zero, 2025) as well as the Holford Rules (Holford, 1959).
- EDM02 - Where possible, the proposed overhead line has been designed to be parallel to or close parallel with the existing overhead lines. Route Sections where close parallel and pylon synchronicity has been achieved, considering constraints present along the existing overhead lines as well as technical complexity, include:
  - Sections within Route Sections A and B to reduce effects on the Yorkshire Wolds Important Landscape Area and potential effects of collision risk, habitat loss and disturbance of interest features of the Humber Estuary Special Protection Area (SPA) and Ramsar site; and
  - Route Section D to reduce effects on the Isle of Axholme Area of Special Historic Landscape Interest.
  - EDM06 - Construction effects have been designed out/ minimised as far as practicable through, for example, minimising land-take/habitat loss and locating construction access tracks and temporary construction compounds/ material storage areas outside of ecologically sensitive sites/ habitats (such as statutory and non-statutory designated sites, priority habitats and wetlands).
- DE1: The Project will be delivered and operated in compliance with all relevant legislation, consents and permits.
- DE3: The Project will seek to retain the pylon positions as shown on **Application Document 2.4 Works Plans** unless following detailed design there are engineering, safety, environmental or other reasons to move a pylon within the Limits of Deviation.
- DE5: To reduce potential for audible noise and tones to occur from all types of fittings the pylon fittings, such as insulators, dampers, spacers and clamps, will be designed and procured in accordance with a series of National Grid Technical

Specifications and must be type registered (rigorously tested) to ensure the fittings conform to the specifications

- DE10: Clearly demarcated, dedicated access routes will be provided during construction.
- DE12: The conductor bundle for the proposed overhead line will be Triple Araucaria (700 mm² All Aluminium Alloy Conductor (AAAC)) or alternative technology that performs to the same or better standard in relation to noise on standard lattice pylons.
  - Flexibility on conductor type is required at the River Ouse crossing between proposed pylons 4AF76 and 4AF80 as further work would be required during detailed design to confirm the conductor type for this section.
  - The conductor bundle for the proposed replacement and re-alignment of a section of the existing 400 kV ZDA overhead line route between Ealand and west of Keadby will be Twin Rubus (500 mm² AAAC), or alternative technology that performs to the same or better standard in relation to noise on standard lattice pylons.
- DE16: All trees within the Functionally Linked Land mitigation area as shown on **Application Document 6.4.F1 Figure 4.1 Proposed Project Design** will be retained.
- GG01: The final versions of the outline environmental management plans will be submitted for approval in accordance with Requirement 4 (construction management plans) of **Application Document 3.1 Draft Development Consent Order** prior to commencement of development and will reflect the final construction methodologies produced by the Main Works Contractor(s). The following will be produced prior to construction:
  - Code of Construction Practice (CoCP);
  - Construction Traffic Management Plan (CTMP);
  - Soil Management Plan;
  - Public Right of Way Management Plan;
  - Noise and Vibration Management Plan;
  - Landscape and Ecology Management Plan;
  - Archaeological Written Scheme of Investigation; and
  - Cultural Heritage Management Plan.
  - Framework Construction Surface Water Management Plan (CSWMP)
- All construction works will be undertaken in general accordance with these plans and all referenced subordinate plans.

9.8.3 In addition to the embedded mitigation measures set out in **Application Document 7.3 Register of Environmental Actions and Commitments**, the following considerations were an integral part of the Project's iterative design process and will mitigate the potential effects of the Project on ornithology receptors:

- The crossing of the River Ouse has been designed to be upstream of its confluence with the River Trent, Blacktoft Sands RSPB Reserve and the Humber

Wildfowl Refuge area (including Alkborough Flats) to minimise the width of the crossing of the Humber Estuary SAC, SPA, Ramsar site and SSSI and to avoid the most sensitive parts of the Humber Estuary SPA/Ramsar site/SSSI as much as possible. Installation of the proposed overhead line and erection of pylons will avoid direct impacts on habitats inside the designated sites.

- A close parallel design through the most potentially sensitive parts of the wider Project area. This has been a particular design focus where the Project passes through farmland used regularly by qualifying features of the Humber Estuary SPA and Ramsar designations (potential FLL), which occurs for most species between Ellerker and Luddington, with the greatest levels of activity for most species between Broomfleet and Garthorpe. Close parallel has also been achieved across the Yorkshire Wolds and a section of the alignment between Beltoft and Owston Ferry. In total, the close parallel design is achieved across approximately 41.5 km (46%) of the proposed overhead line and this covers all parts of the alignment that pass-through areas of land that are potentially functionally linked to the Humber Estuary SPA and Ramsar site designations.
- Where the proposed overhead line is in parallel or close parallel with existing overhead lines the design has sought to synchronise the pylons as far as possible taking account of all other technical, environmental and lands constraints to minimise the potential for habitat fragmentation caused by what birds might perceive as an additional barrier to their unimpeded movement, and to minimise collision mortality of birds.
- Within the farmland either side of the River Ouse where the majority of Humber Estuary Ramsar/SPA/SSSI qualifying features occurred, new pylons have been placed close to field boundaries wherever possible. This can reduce the potential habitat losses to SPA qualifying features that forage on farmland away from the Humber Estuary Ramsar/SPA/SSSI (predominantly pink-footed goose, greylag goose, lapwing, golden plover) and other species not associated with designated sites (whooper swan, Bewick's swan, several species of the farmland breeding bird assemblage including lapwing, skylark, yellow wagtail) because these species occur in open spaces away from field boundaries.
- The design includes strategically located and optimised temporary haul roads along the Project alignment to support construction of the Project. Where possible, the design of the temporary haul roads has sought to use existing bridges and culverts.
- Large or sensitive watercourses, for example those designated as a main river and those with Water Framework Directive (WFD) status, will be crossed by the temporary haul road using temporary clear span bridges. This will reduce the effects on watercourses, their banks, and water quality as a result of removing works from within the watercourse.
- The Project will install clear span bridges (or suitably assessed and approved alternatives) in all locations where pre-construction surveys identify the presence of water voles, where possible to install a bridge. The span length of the bridge or alternative will be such that it avoids impacts to vegetation 5 m on each side of the bank from the top of the bank.
- Siting of the proposed infrastructure within the Order Limits to minimise potential impacts on protected habitats and species. Siting of pylons has taken into account swing of the proposed overhead lines to avoid or minimise loss of

woodland and trees as far as practicable and, where possible, to match the cable span profile of the existing and proposed overhead lines, such that collision risk to overflying birds is minimised.

- Appropriate stand-off distances have been applied to designated sites and Priority Habitats (including ancient woodland and long-established woodland) and watercourses to avoid direct effects where practicable, with benefits to birds reliant on such sites and habitats.
- Adoption of the Triple Araucaria cable arrangement into the proposed overhead line design, which groups conductor cables in clusters of three wires. This is more visible than some alternative arrangements, which space conductor cables further apart from each other or as single wires on each pylon arm.

Control and Management Measures

9.8.4 Control and management measures comprise management activities and techniques that will be implemented during construction and reinstatement to limit effects, through adherence to good site practices and ensuring legal compliance.

9.8.5 Measures relevant to the control and management of impacts during construction have been included within **Application Document 7.2 Outline Code of Construction Practice** and **Application Document 7.3 Register of Environmental Actions and Commitments** secured by **Requirement 5 of Application Document 3.1 Draft Development Consent Order.** These outline management plans and the following measures in **Application Document 7.3 Register of Environmental Actions and Commitments** have been taken into account in assessing the ornithological effects of the Project:

- GG02: The Mains Works Contractor(s) will undertake site inspections to check conformance to the measures set out within each of the management plans and their subordinate plans as set out within GG01
- GG04: Construction workers will undergo training to increase their awareness of environmental issues as applicable to their role on the Project as set out within **Application Document 7.2 Outline Code of Construction Practice**.
- GG10: As far as reasonably practicable and safe to do so, any activity carried out or equipment located within a construction compound that may produce dust, noise, vibration and lighting emissions, will be located away from sensitive receptors such as residential properties or designated ecological sites.
- GG23: Construction lighting will be of the lowest luminosity necessary to perform each task safely. It will be designed, positioned and directed to reduce the intrusion into adjacent properties, moored boats on canals, and protected species and habitats including designated sites. Lighting used for construction will be switched off when not in use and positioned to minimise spill onto adjacent land or retained vegetation.
  - All lighting will also be designed following Guidance Note 08/23 Bats and Artificial Lighting (Institution of Lighting Professionals and Bat Conservation Trust, 2023) and Guidance Note 01/21 The Reduction of Obtrusive Light (Institution of Lighting Professionals, 2021).
- E02: Where notable species have been identified or where there is potential for them to be present at the time of construction, and effects cannot be avoided

through design, Reasonable Avoidance Measures and/or Precautionary Working Methods, will also be developed and implemented and overseen by an ECoW, along with appropriate training for the Main Works Contractor on working in proximity to notable species and or habitat.

- E20: The Project is committed to adopting a sustainable approach to development by proactively exploring measures to ensure that the Project leaves the environment in a better condition than it was before development (including but not limited to delivering 10% Biodiversity Net Gain (BNG) with environmental and societal benefits). The Project will seek to provide strategic habitat enhancement and creation, aiming to identify and implement opportunities to improve habitat quality and connectivity and align with national nature recovery objectives and projects. Such measures may include specific habitat creation and enhancement measures and additional receptor-specific measures such as the creation of habitat piles and installation of bird and bat boxes.
- E29: Caddow Wood (Southern Assarts) Local Wildlife Site. Stringing activities will maintain a 15 m buffer to eastern boundary of the woodland.
- E49: The Chesterfield Canal Site of Special Scientific Interest (SSSI) will be crossed using a clear span bridge or other suitably assessed alternative. The scaffolding either side of the SSSI will be set back from the boundary of the SSSI to retain bankside vegetation. Hedgerows and a tree (T170) within the SSSI will be managed to reduced height only and not removed.
- NV01: **Application Document 7.7 Outline Noise and Vibration Management Plan** has been prepared to set out the framework for how noise and vibration will be controlled and managed. The Main Works Contractor(s) will conduct detailed construction noise and vibration assessments to determine whether any additional measures, including site-specific best practicable means (BPM) and monitoring, may be required. A Noise and Vibration Management Plan will be prepared by the Main Works Contractor(s) substantially in accordance with the **Application Document 7.7 Outline Noise and Vibration Management Plan** and submitted for approval by the relevant local planning authority prior to the commencement of construction and updated and managed during the construction phase as appropriate.
- NV02: The Contractor(s) will be required to follow good construction practices (referred to as best practicable means (BPM)) as outlined in BS 5228-1 (British Standards Institution, 2009) and BS 5228-2 (British Standards Institution, 2009) 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 (HM Government, 1974), as enacted under The Control of Noise (Code of Practice for Construction and Open Sites) (England) Order 2015 (HM Government, 2015). Compliance with the good practice noise and vibration requirements stated therein are a statutory obligation under the Control of Pollution Act 1974 (HM Government, 1974).
- NV03: In certain instances where construction noise and/or vibration may cause a significant adverse effect at nearby noise sensitive receptors (NSRs), applications for prior consent under Section 61 of the Control of Pollution Act 1974 (HM Government, 1974) may be submitted to the relevant local authority to ensure that BPM are applied to control noise and vibration.

- NV18: For the construction of pylon foundations, non-percussive piling methods would be used where practicable.
- NV19: Where bird diverters are installed (see also commitment ON08), a specification will be selected that takes into consideration noise generated from atmospheric conditions.
- NV20: If percussive piling is required for pylon foundations near the River Ouse (see also commitment NV18), appropriate control measures to reduce potential effects on the aquatic environment will be identified by the Main Works Contractor(s) and implemented in accordance with Commitments NV01 and NV02.
- ON01**:** All semi-natural vegetation will be retained as far as is reasonably practicable. This will be extended to include any feature that could support nesting birds such as existing infrastructure such as buildings, walls or any other structure with a ledge or cavity suitable for nesting birds. Where these measures are not reasonably practicable and works need to be carried out during the bird breeding season, all affected areas will be checked by the ECoW for evidence of nesting birds 24 hours (as standard) prior to all vegetation removal works taking place. There may be some instances where 24 hours is not practical, therefore a maximum period of 48 hours is permitted. In such cases, vegetation removal will be overseen by the ECoW (or a suitably experienced taxon specialist supporting the ECoW if required). If any active bird nests are discovered, these will be given a minimum standoff of 5 m (this may increase depending on species, proposed works and location) where no potentially disturbing works will take place until the young have fledged and the nest is vacated. A second nesting bird check would then be undertaken to ensure the tree or vegetation does not contain any further active nests prior to felling or removal works taking place.
- ON02: Pre-works checks for nesting birds listed in Schedule 1 of the Wildlife and Countryside Act 1981 (HM Government, 1981) 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, ground vegetation, reedbeds, scrub, aquatic habitat and trees with potential to support nesting birds. The ECoW will apply pre-construction measures on a case-by-case basis, as required.
- ON03: 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. This will be carried out in the winter prior to the commencement of the relevant works to determine occupation of the site such that any locations occupied in winter will be assumed to be potential nest sites during the period of spring – autumn, when most breeding takes place by this species. Known barn owl nest sites (as identified in **Application Document 6.9.A4 Appendix 9.4** 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. This will be carried out in the winter prior to the commencement of the relevant works to determine occupation of the site such that any locations occupied in winter will be assumed to be potential nest sites during the period of spring – autumn, when most breeding takes place by this species.
  - Known barn owl nest sites (as identified in **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report**) or any other sites with the potential to support breeding barn owls within 175 m of the pylon

working areas, stringing locations, site compounds, or construction access tracks will be soft blocked prior to works once it has been established that they are not occupied. For each soft blocked site, an alternative nest box will be erected in a location that is not vulnerable to disturbance from the proposed works.

  - Soft blocking will be removed upon completion of the works.
  - Any barn owl nest sites identified during pre-construction surveys or within **Application Document 6.9.A4 Appendix 9.4 Confidential Ornithology Baseline Report** that will require permanent removal to facilitate construction will be replaced on a like for like basis by erecting additional barn owl boxes either on unaffected trees, on poles, or in suitable farm buildings with the agreement of all relevant landowners. Advance consultation will be made with any conservation or monitoring organisations prior to the removal of any existing barn owl boxes that are monitored or managed by a third-party organisation such as (but not necessarily limited to (a local barn owl group, the Barn Owl trust (BOT) or the Wildlife Conservation partnership (WCP)).
  - Replacement boxes will be placed, under advisement of the ECoW or a specialist advising the ECoW, in suitable locations that will not be disturbed by construction activity.

- ON04: For works within 10 m of the Market Weighton Canal, pre-construction surveys will be undertaken to identify kingfisher nest holes as a minimum within the Order Limits where these cross the watercourse, and whether they are occupied.
  - All works that involve the use of plant, vehicles or the installation of heavy structures close to (within 10 m of) the top of the bank can lead to destruction of the nest chamber below with a risk of mortality of live birds, which would be an offence under the Wildlife and Countryside Act.
  - If potential nest holes are identified, all works will be prohibited within 10 m from the bank of the Market Weighton Canal, and if breeding activity is identified, all works at this location will be undertaken outside of the kingfisher breeding season (March to August inclusive).
- ON05: Pre-construction surveys for nesting kingfisher will be undertaken along:
  - North Soak Drain;
  - South Soak Drain;
  - South Engine Drain;
  - Market Weighton Canal; and
  - The River Idle
- ON08: Screening of the construction access track and scaffold on south bank of River Idle will be installed to protect nesting kingfisher, should pre-construction surveys identify these measures as necessary to prevent disturbance of occupied nests. Screening type will be discussed with the ECoW.
- ON11: Ground conditions permitting, non-percussive piling techniques (e.g., augered piling) should be used wherever piling operations are required, as these are associated with much lower noise profiles.

- ON12: In all cases where piling or other noisy operations are required, soft startup of plant should be implemented such that noise levels build gently rather than suddenly. This will be particularly important where percussive piling cannot be avoided and would involve progressively building the piling impact force to the level required rather than starting at the maximum impact force required to complete the works. This will make some allowance for birds and other protected species that are present in the vicinity of the works to adjust to the noise generated during construction.
- ON13: If impact piling is needed for the construction of the four pylon foundations closest to the River Ouse (4AF76 – 4AF79 inclusive), dampening of the hammer or reducing the velocity with which this operates will be adopted to reduce the peak noise emissions from piling activities.
- ON14: Any construction activities occurring at height (e.g., erection of pylons, stringing of conductors and works at the River Ouse crossing) that cannot realistically be mitigated will take place where practicable outside the most sensitive periods for qualifying features. A 12-week window for this activity has been identified between the beginning of August and the End of October, which avoids the breeding period for nesting peregrine on a nearby pylon, the peak numbers of Humber Estuary qualifying species that occur within 500m of the River Ouse crossing and the onset of inclement winter conditions when any disturbance of foraging birds would have a greater adverse effect on foraging rates and species survival.

Additional Measures

9.8.6 Additional measures comprise mitigation measures over and above any embedded and control and management measures, for which assessment within this ES has identified a requirement to further reduce significant environmental effects.

9.8.7 The following additional measures in **Application Document 7.3 Register of Environmental Actions and Commitments** have been taken into account in assessing the ornithological effects of the Project:

- ON06: In the event that kingfisher is identified to be nesting within 100 m of any construction access track or construction related activities adjacent to those drains listed in ON05, visual and acoustic screens will be installed along the adjacent banks (as per agreement with the ECoW), to prevent disturbance from works activities and construction traffic
- ON07: In the event that pre-construction surveys identify the presence of kingfisher along the following drains:
  - North Soak Drain;
  - South Soak Drain; and/or
  - South Engine Drain (north and south banks).
  - To avoid the disturbance of kingfisher habitat, any scaffolding structure within 10 m will be constructed in a way that does not break ground
- ON09: Bird diverters will be installed on the following sections of overhead line to minimise the potential risk of collision mortality for qualifying species of the Humber Estuary SSSI/Ramsar/SPA and the River Idle Washlands SSSI:

- Between pylons 4AF62 and 4AF70 adjacent to Broomfleet Tileworks;
- Between pylons 4AF77 and 4AF96 that cross the River Ouse; and
- Between pylons 4AF171 and 4AF180 between the River Idle and the Chesterfield Canal.

- ON10: To reduce the magnitude and spatial extent of noise and visual disturbance in key areas visual/noise fencing/acoustic barriers will be installed around all relevant construction activities to be determined by the ECoW, at the following locations during key sensitivity periods, prior to the onset of any construction activities at ground level (including site clearance and preparation of working areas as well as the works themselves):
  - within 500 m of the Humber Estuary SPA/Ramsar site boundary (pylons 4AF76 – 4AF80);
  - where works pass the southern edge of Broomfleet Tileworks, as far as Staddlethorpe Broad Lane (pylons 4AF62 – 4AF70); and
  - west of Garthorpe (pylons 4AF83 – 4AF86);
  - between Garthorpe and Luddington (4AF91 – 4AF95); and
  - any further locations to be confirmed by the ECoW as required during construction and/or through pre-construction surveys.
  - Outside of the Humber Estuary SPA/Ramsar site boundary, the locations listed above are those where baseline surveys identified qualifying species occurring at levels of over one percent of the designated site qualifying population. Additional locations as required in the final bullet above would be determined by the presence of qualifying species only within 500 m of locations where their numbers reach this population threshold.
  - The fencing will be in use for the duration of the seasonal presence of the affected qualifying species of the Humber Estuary SPA and Ramsar Site. In all cases, the fencing should be used between and including the last two weeks in September and the end of the first week of April.
- ON15: Alternative foraging habitat within arable farmland has been provided in Route Section B as illustrated on Application Document 6.4.F1 Figure 4.1 Proposed Project Design.
  - This land has been provided for use by pink-footed goose, golden plover, lapwing and curlew and has been secured exclusively for the creation and management of this supporting habitat, covering 46ha of farmland under an adequate, guaranteed inter-annual cropping regime.
  - The habitat has been provided within the geographic range currently utilised by the Humber Estuary SPA/Ramsar site qualifying species to ensure that birds will use this new foraging resource.
  - Since the Project will be constructed in phases (with different areas of potential functionally linked land being subject to disturbance at different points in time), this supporting habitat would be made available over the entire construction phase of the Project. and, as a maximum, for the lifetime of the Project to account for any potential loss of foraging habitat associated with displacement of birds from the immediate surrounds of the proposed overhead line during operation

9.9 Residual Effects Assessment

9.9.1 Table 9.21 to Table 9.23 present the residual effects of the Project after mitigation for statutory designated sites, non-statutory designated sites and species, respectively.

9.9.2 Table 9.23 presents the residual effects for species and species assemblages in their own right; in other words, the effects are assessed for species and species assemblages where their occurrence is not linked to a qualifying population of a designated site.

9.9.3 For all residual effects tables, the impact pathways identified in section 9.7 (Table 9.18 to Table 9.20) are listed, excluding any impact pathways that are completely eliminated by a combination of any or all of the embedded mitigation measures, control and management measures and additional mitigation measures set out in section 9.8 and **Application Document 7.3 Register of Environmental Actions and Commitments** and that can be accordingly screened out of the assessment of residual effects. The following impact pathways would be effectively eliminated for all receptors by the measures set out in section 9.8 and are screened out of the assessment of residual effects:

- Degradation of habitats at specific locations within or outside of designated sites, due to dust and other pollution impacts.
- Degradation of habitats used by qualifying features within or outside of designated sites due to the introduction of INNS at working locations.
- Degradation of habitats, within or outside of designated sites, used by foraging, nesting or roosting birds from changes in groundwater levels, quality and flows arising from dewatering activities to reduce groundwater levels when undergrounding adjacent third-party assets.
- Mortality of birds during site clearance due to killing of live birds and/or destruction of nests and eggs.

Table 9.21 – Assessment of residual effects on statutory designated sites

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
Humber Estuary SPA, Ramsar site, SSSI qualifying features: Non-breeding					
Pink-footed goose; Greylag goose; Lapwing, Golden plover; Curlew	International (all receptors) National (lapwing, golden plover, curlew only)	Reduction in the wintering population through elevation of mortality above baseline levels: Mortality of birds moving between roosts and feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).	Embedded mitigation: close parallel design of the proposed overhead line with the existing 4ZQ overhead line between Ellerker in Route Section A and south of Luddington in Route Section C to minimise the potential hazard of the proposed overhead line as a 'new' feature within the landscape. Embedded mitigation: Where the proposed overhead line is in parallel or close parallel with existing overhead lines the design has sought to synchronise the pylons as far as possible taking account of all other technical, environmental and lands to avoid increasing the size of the 'barrier' presented to birds approaching the proposed overhead line in flight. Embedded mitigation: Use of the Triple Araucaria design, which is characterised by 3 conductor wires in a bundle on each pylon arm. This makes the conductor bundles more visible than a single or double bundle design. Flexibility on conductor type is required at the River Ouse crossing between proposed pylons 4AF76 and 4AF80 as further work would be required during detailed design to confirm the conductor type for this section however optionality for a double wire bundle design at the River Ouse crossing is unlikely to make a material difference to collision risk or avoidance of the proposed overhead line by birds for the reasons set out	Small	Minor adverse **(not significant)**

[19] All codes correspond to those presented in **Application Document 7.3 Register of Environmental Actions and Commitments**.

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
			in section 3 of **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**. Use of diverters/line markers attached to the earth wire: • Between pylons 4AF62 and 4AF70 adjacent to Broomfleet Tileworks; • Between pylons 4AF77 and 4AF96 that cross the River Ouse; and • Between pylons 4AF171 and 4AF180 between the River Idle and the Chesterfield The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09		
		Temporary direct habitat loss: FLL habitat that is utilised by foraging birds predominantly between Ellerker in Route Section A and Luddington in Route Section B would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase. This would result in reduction of available foraging habitat amounting to a negligible percentage of suitable	Project design has sought to minimise habitat losses: Construction access tracks have been aligned with field boundaries/edges wherever practicable, which minimises potential losses of foraging resource since these species are attracted to the open spaces within fields, away from boundary features. Construction compounds within FLL have been placed close to field edges and existing infrastructure features (roads and tracks) wherever practicable, which minimises the effective loss of foraging habitat. There would be no direct habitat losses within wetlands. Provision of alternative arable farmland for use by pink-footed goose, golden plover, lapwing and curlew. Approximately 46 ha of supporting habitat under an inter-annual cropping regime has been secured. This	Negligible	Negligible **(not significant)**

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		foraging habitat within the core foraging range of birds that roost on the Humber Estuary.	habitat would be provided within the Order Limits and within the geographic range currently utilised by the Humber Estuary SPA/Ramsar site qualifying features. Since the Project would be constructed in phases (with different areas of potential FLL being subject to disturbance at different points in time), this supporting habitat would be made available over the entire construction phase of the Project and is proposed principally to mitigate effects on pink-footed goose, lapwing and golden plover. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON15.		
		Permanent habitat loss: Habitat that is occupied by proposed overhead line infrastructure (pylon bases) would be permanently lost as a foraging resource. Habitat 'islanded' between the proposed and existing overhead line may also effectively be lost. This will affect the habitats predominantly between Broomfleet Tileworks in Route Section A and Garthorpe in Route Section B, affecting a small percentage of suitable foraging habitat available to	Provision of alternative arable farmland for use by pink-footed goose, golden plover, lapwing and curlew, for the lifetime of the Project or until it is demonstrated through monitoring that the land is no longer required. Approximately 46 ha of supporting habitat under an adequate, guaranteed inter-annual cropping regime has been secured. This habitat is within the Order Limits, at a location within the geographic range currently utilised by the Humber Estuary SPA/Ramsar site qualifying features, principally to mitigate effects on pink-footed goose, lapwing and golden plover. This supporting habitat would be made available over the entire construction and operational phases of the Project to account for any potential loss of FLL associated with displacement from the immediate surrounds of the proposed overhead line during operation.	Negligible	Negligible **(not significant)**

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		birds overwintering within the Humber Estuary SPA/Ramsar site/SSSI.	The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON15.		
		Temporary disturbance: Temporary disturbance of foraging geese and waders (lapwing and golden plover) could occur during construction as a result of noise emissions and visual disturbance from working areas. This is expected to be higher for foraging birds on FLL immediately west of Broomfleet Tileworks in Route Section A and near Garthorpe in Route Section B in the months of November to February. Works during these months on and between pylons 4AF65 to 4AF68 north of the River Ouse and, south of the River Ouse, pylons 4AF78 to 4AF79, pylons 4AF83 to 4AF86, pylons 4AF92 to 4AF94 and pylons 4AF97 to 4AF108 are likely to affect the species named above.	Additional mitigation measures to reduce disturbance are fully detailed in section 9.8, and include acoustic barriers, noise reduction work method statements, visual ground level works screening, seasonal work windows, provision of alternative enhanced foraging areas and working at height measures. Implementation of these measures will considerably reduce any potential disturbance from noise and visual pathways. In addition to the disturbance minimisation mitigation measures, alternative arable farmland habitat would be provided during the construction phase for use by pink-footed goose, golden plover, lapwing and curlew. Approximately 46 ha of supporting enhanced farmland habitat would be secured under an inter-annual cropping regime. This habitat is within the Order Limits, at a location within the geographic range currently utilised by the Humber Estuary SPA/Ramsar site qualifying features and available over the entire construction phase of the Project. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON14, ON15	Negligible	Negligible **(not significant)**
Mallard	International	Temporary direct habitat loss:	Mitigation measures for mallard follow those detailed for pink-footed goose, greylag goose, lapwing, golden	Negligible	**(Not significant)**

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		Habitat that is utilised by foraging birds predominantly between Ellerker in Route Section A and Garthorpe in Route Section B would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase. This would result in potential reduction of available foraging habitat.	plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON15.		
		Permanent habitat loss: Habitat 'islanded' between the proposed and existing overhead lines where they are proposed to be in close parallel may effectively be lost as a foraging resource. This will affect the habitats used by non-breeding mallard predominantly between Ellerker in Route Section A and Garthorpe in Route Section B, although potentially only affecting a small percentage of suitable foraging habitat available to this species overwintering	Mitigation measures for mallard follow those detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON15.	Negligible	Negligible **(not significant)**

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		within the Humber Estuary SPA/Ramsar site/SSSI.			
		Temporary disturbance: Temporary disturbance of foraging birds may occur during construction as a result of noise emissions and visual disturbance from working areas, particularly at Broomfleet Tileworks in Route Section A and the River Ouse in Route Section B.	Mitigation measures for mallard follow those detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON14, ON15.	Negligible	Negligible **(not significant)**
Teal; Wigeon	International and national	Permanent habitat loss: Foraging habitat at Broomfleet Tileworks in Route Section A will be 'islanded' between the proposed and existing overhead lines where the proposed overhead line oversails a pool at the southern end of the tileworks (Pool 6 as shown in **Figure A9.2.17 in Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report.** However, this pool supported very small numbers of teal and no wigeon and there is no	None required.	Negligible	Negligible **(not significant)**

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		reason to believe that the overhead line will prevent short distance movements of birds to this pool from other parts of the tileworks. Therefore, this effect will be negligible at Broomfleet Tileworks. This effect is not expected to occur at the River Ouse crossing due to the increased height of the proposed overhead line (minimum 60 m above water level).			
		Temporary disturbance: Temporary disturbance of foraging birds may occur during construction as a result of noise emissions and visual disturbance from working areas at Broomfleet Tileworks in Route Section A Pools 4 and 5 (**Figure A9.2.17 in Application Document A9.2 Appendix 9.2 Ornithology Baseline Report**) immediately adjacent to the Order Limits. Other pools are naturally	Mitigation measures for teal and wigeon follow those detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON14, ON15.	Negligible	Negligible **(not significant)**

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		screened from impacts by earth bunds and vegetation. The same effect would occur at the River Ouse crossing where birds were present in significant numbers on the river channel.			
Bittern	International and national	Reduction in the wintering population through elevation of mortality above baseline levels: Mortality of birds moving between roosts and feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).	Collision minimisation measures for bittern follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09	Negligible	Negligible (**not significant**)
		Temporary disturbance: Temporary disturbance of foraging birds could occur at Broomfleet Tileworks in Route Section A during construction from noise emissions and visual disturbance from working areas.	The key habitat for this species occurs within an extensive reedbed at least 290 m, northwest of the Order Limits bordered by dense scrub, therefore there is a high degree of visual screening and noise attenuation afforded by habitat features and distance from the Order Limits. Disturbance minimisation mitigation for other species (pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI) will also benefit this species, reducing any potential effects to negligible levels.	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
			The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON14, ON15.		
Little egret; Shelduck	International (both species) National (shelduck only)	Temporary disturbance: Temporary disturbance of foraging birds may occur during construction as a result of noise emissions and visual disturbance from working areas, these effects being potentially significant (in terms of the presence of concentrations of significant numbers of birds) at the River Ouse in Route Section B. Elsewhere (wider farmland and Broomfleet Tileworks in Route Section A) the potential effects are negated by a combination of natural screening (at the Tileworks) and distance from the proposed works.	Mitigation measures for little egret and shelduck follow those detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON13, ON14, ON15.	Negligible	Negligible (**not significant**)
Snipe	International	Temporary disturbance: Temporary disturbance of foraging birds due to noise and visual disturbance from construction activities could occur within potential FLL up to 500 m either side of the	Mitigation measures for snipe follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments**	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		Order Limits but is unlikely to be significant since this species was present only in ones and twos within the likely foraging range from the River Ouse. Disturbance of birds on the banks of the River Ouse is also possible	ornithology specific measures will be applied:, ON10, ON11, ON13, ON14, ON15.		
Humber Estuary SPA, Ramsar site, SSSI qualifying features: breeding					
Marsh harrier	International	Reduction in the breeding population through elevation of mortality above baseline levels: Mortality of birds moving between nest sites within the Humber Estuary SPA/Ramsar site/SSSI and feeding areas in the vicinity of the River Ouse between Ellerker in Route Section A and Keadby in Route Section C due to collisions with permanent structures (principally the proposed overhead line earth wire). Risk is expected to be very low due to the low number of observed flights and the observed height profile of flights, which are typically	Collision risk mitigation (as set out in **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**) for non-breeding pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI will further reduce the collision risk to this species. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09,	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		beneath the earth wire and the conductors.			
River Idle Washlands SSSI: Non-breeding					
Whooper swan	National	Reduction in the wintering population through elevation of mortality above baseline levels: Mortality of birds moving between fields while foraging on Misterton Carrs in Route Section E due to collisions with permanent structures (principally the proposed overhead line earth wire).	Embedded mitigation: Use of the Triple Araucaria design, which groups conductor wires in a three-cable arrangement on each pylon arm. Embedded mitigation: Routeing of the Project east of the most intensively used foraging areas, which lie at least 500 m west of the Order Limits. Additional mitigation: Use of bird diverters attached to the earth wire between pylons 4AF171 and 4AF180 between the River Idle and the Chesterfield Canal. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09	Small	Minor adverse (**not significant**)
		Temporary direct habitat loss: The Order Limits do not coincide with the locations most regularly used by the largest numbers of whooper swan, which are over 500 m west. However, habitat within the Order Limits on Misterton Carrs in Route Section E would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the	No mitigation required	Small	Minor adverse (**not significant**)

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		construction phase. Since significant numbers of foraging wild swans have been recorded within 500 m of the Order Limits, this may result in reduction of available foraging habitat amounting to a small percentage of the available habitat across the wider Carrs.			
		Permanent habitat loss: Habitat on Misterton Carrs in Route Section E occupied by proposed overhead line infrastructure (pylon bases) and beneath and immediately adjacent to the proposed overhead line, would be permanently lost as a foraging resource. The proposed overhead line infrastructure does not intersect the locations most regularly used by the largest numbers of whooper swan, which are over 500 m west of the Order Limits.	No mitigation required	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[19]	Magnitude of impact	Residual effect
		Temporary disturbance: Temporary disturbance of foraging swans may occur during construction as a result of noise emissions and visual disturbance from working areas. This may occur for foraging swans within 500 m of the Order Limits, however the greatest numbers and most regular occurrences of this species were beyond 500 m west of the Order Limits.	Disturbance mitigation measures for whooper swan follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat, which is not required in this case. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)

Table 9.22 – Assessment of residual effects on non-statutory designated sites

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
Brantingham Dale Historic LWS (Route Section A)	County	Temporary direct habitat loss: Habitat that is utilised by protected and notable bird species would be cleared to make way for all construction, working and storage areas and access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat for nesting birds.	Works within all Brantingham woodland areas will restrict tree loss to what is essential for the proposed overhead line and pylon installation/construction (modelled to the topography), and essential working areas such as pylon working areas where pylons are unavoidably located within the woodland. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology measures would be applied: ON01, ON10, ON11, ON12	Small	Minor adverse (**not significant**)
		Permanent habitat loss: Woodland canopy habitat beneath the proposed overhead line would be managed to maintain clearance beneath the proposed overhead line for the duration of the Project's operational phase, resulting in losses of nest sites in the upper tree canopy.	New trees will be planted in proposed mitigation planting areas, outside the established woodland, which are shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. These areas have been chosen with a view to extend existing woodland areas and/or provide links between existing areas of woodland. The following non-ornithology specific **Application Document 7.3 Register of Environmental Actions and Commitments** measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, ARB01,	Negligible	Negligible (**not significant**)

[20] All codes correspond to those presented in **Application Document 7.3 Register of Environmental Actions and Commitments**.

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
			ARB02, ARB03, ARB04, ARB06, ARB10, E17, E18, E20, E22, E45, E52, LV02, LV03, LV04.		
		Temporary disturbance: Temporary disturbance of breeding birds within the designated site could occur as a result of noise and visual disturbance, resulting in reduced breeding success and a reduction in the breeding bird population.	Disturbance minimisation mitigation measures for the bird assemblage on this site follow those previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, other than the provision of alternative habitat during construction. Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, . The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Blacktoft Sands RSPB Reserve (Route Section B)	National	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in displacement of qualifying features could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
		Reduction in the function and integrity of the designated site through effects on qualifying features survival: Mortality of qualifying features due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire)	Collision minimisation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON09.	Small	Minor adverse (**not significant**)
Woodale Historic LWS (Route Section A)	County	Temporary disturbance: Temporary disturbance of breeding birds within the designated site could occur as a result of noise and visual disturbance, resulting in reduced breeding success and a reduction in the breeding bird population	The closest haul road is c. 50m from the designated site and the closest working area at pylon 4AF38 is c. 125m from the southern end of the designated site. The designated site sits in a steep sided valley and the local topography provides significant visual screening of the site from proposed works. Taking these factors into consideration only those birds nesting within the southern woodland margins of the designated site are likely to be affected. Furthermore, the baseline conditions here include the presence of a private residence (Woodale Farm) with vehicular access and an immediately adjacent public right of way that skirts the western edge of the woodland, which means that some level of anthropogenic disturbance is already experienced by birds breeding within the designated site.	Negligible	Negligible adverse (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
			The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.		
Sedge Hole Close LWS and Wildlife Trust Reserve (Route Section D)	County	Temporary direct habitat loss: Removal of habitat to accommodate proposed pylon 4AF156 stringing area would result in reduction in available habitat and reduction in the carrying capacity of the site for birds.	No mitigation required although, the following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure ON01 would mitigate any loss to breeding bird nest sites	Negligible	Negligible (**not significant**)
		Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Stainforth and Keadby Canal Corridor LWS	County	Reduction in the functional integrity of the designated site:	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
(Route Section C)		Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration	Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.		
		Reduction in the functional integrity of the designated site: Habitat fragmentation caused by the presence of the proposed overhead line reducing movement of species along the canal corridor as a result of the proposed overhead line creating a barrier to species dispersal. Birds moving along the canal are highly likely to do so at low level below the proposed overhead line and are likely to be attracted to habitats at water level or on the canal banks. Furthermore, baseline conditions include an existing overhead line	No mitigation required	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
		and an access bridge to the east of the proposed overhead line.			
Warping Drain Corridor LWS (Route Section D)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
		Reduction in the functional integrity of the designated site: Habitat fragmentation caused by presence of the proposed overhead line reducing movement of species along the drain as a result of the proposed overhead line creating a barrier to species dispersal. There was little bird flight recorded along the drain above the height of the	No mitigation required	Negligible/ small	Negligible/minor adverse (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
		banks and birds moving along the channel are capable of negotiating a clear span road bridge close to where the proposed overhead line would be constructed. Baseline conditions also include an existing set of parallel overhead lines (4TM and ZDA) less than 1 km east of the Order Limits.			
South Moor Covert and Fishpond Plantation LWS (Route Section D)	County	Temporary direct habitat loss: Removal of habitat for third party modifications would result in reduction in available habitat and reduction in the carrying capacity of the site for birds	Although the horizontal LoD associated with undergrounding the overhead third-party asset does encroach into the boundary of the LWS, it is currently proposed that the underground asset (NPG-25) will be outside of the LWS boundary, to the south of the woodland. Some temporary habitat disturbance/removal inside the LWS may occur during the dismantling of the existing asset, but this will be kept to the minimum required. Habitats would be reinstated to their original condition (or better) post-construction. The following **Application Document 7.3 Register of Environmental Actions and Commitments** non-ornithology specific measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, LV02, ARB01, ARB02, ARB03, ARB04, ARB06,	Small	Minor adverse (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
			ARB10, ARB18, E12, E17, E18, E20, E22, E45, E52		
		Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible/ small	Negligible/minor adverse (**not significant**)
Three Rivers LWS (Route Section C)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Crowle Brick Pits LWS	County	Reduction in the functional integrity of the designated site:	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
(Route Section C)		Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.		
Caddow Wood (Southern Assarts) LWS (Route Section E)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Tongs and Dogholes Woods LWS (Route Section E)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and**	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
		noise, visual disturbance, obstructions and habitat alteration	**Commitments** ornithology specific measures will be applied: ON10, ON11, ON12		
Beckingham Woods LWS (Route Section E)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Wheatley Wood LWS (Route Section E)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Treswell Wood LWS and	County	Reduction in the functional integrity of the designated site:	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
Wildlife Trust Reserve (Route Section E)		Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration	and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12		
Shaw Ponds LWS (Route Section E)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12	Negligible	Negligible (**not significant**)
		Reduction in the functional integrity of the designated site: Habitat fragmentation caused by presence of the proposed overhead line reducing movement of species along the adjacent Stanforth and Keadby	Movement of birds along the Stainforth and Keadby Canal corridor is not expected to the impeded significantly by the presence of the proposed overhead line given the baseline conditions which include the presence of existing infrastructure including and existing overhead line to the east and access bridges across the canal.	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
		Canal corridor as a result of the proposed overhead line creating a barrier to species dispersal.	No mitigation measures are proposed specifically for this effect.		
Caddow Wood (Northern Assart) LWS (Route Section E)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12	Negligible	Negligible (**not significant**)
Bushstocks Lane Meadow LWS (Route Section E)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12	Negligible	Negligible (**not significant**)

Receptor	Importance	Description of impact	Mitigation[20]	Magnitude of impact	Residual effect
Headon Verges LWS (Route Section E)	County	Reduction in the functional integrity of the designated site: Temporary disturbance of birds within the designated site resulting in their displacement from regularly used habitats could occur as a result of noise, visual disturbance, obstructions and habitat alteration	Disturbance mitigation measures for this site follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)

Table 9.23 – Assessment of residual effects on species and species assemblages that are not qualifying features of designated sites

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
Non-breeding					
Bewick's swan	Local	Reduction in the wintering population through elevation of mortality above baseline levels: Mortality of birds moving between feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).	Collision minimisation mitigation measures for Bewick's swan follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09.	Negligible	Negligible (**not significant**)
		Temporary direct habitat loss: Habitat that is utilised by foraging birds adjacent to Broomfleet Tileworks in Route Section A would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat.	Habitat loss mitigation measures for Bewick's swan follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON15	Negligible	Negligible (**not significant**)

[21] All codes correspond to those presented in **Application Document 7.3 Register of Environmental Actions and Commitments**.

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		Permanent habitat loss: Habitat that is occupied by proposed overhead line infrastructure (pylon bases) would be permanently lost as a foraging resource. Habitat 'islanded' between the proposed and existing overhead line may also effectively be lost. This would affect very small numbers of Bewick's swan on no more than an occasional basis based on their observed occurrence.	Habitat loss mitigation measures for Bewick's swan follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON15	Negligible	Negligible (**not significant**)
		Temporary disturbance: Temporary disturbance of foraging geese would occur during construction as a result of noise emissions and visual disturbance from working areas. Based on observed occurrence of this species, this effect could occur at most on an occasional basis at any time during Winter and is likely to affect very small numbers of birds.	Disturbance minimisation mitigation measures for Bewick's swan follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
Goldeneye	District	Permanent habitat loss: Aquatic habitat at Broomfleet Tileworks in Route Section A 'islanded' between the proposed and existing overhead lines may also effectively be lost. This would affect very small numbers of goldeneye on one pool at the southern end of Broomfleet Tileworks, which is suboptimal due to disturbance from clay extraction activity within Broomfleet Tileworks.	No mitigation requirement.	Negligible	Negligible (**not significant**)
		Temporary disturbance: Temporary disturbance of foraging goldeneye using several pools at Broomfleet Tileworks in Route Section A may occur during construction as a result of noise emissions and visual disturbance from working areas. Since most of the pools are screened by dense vegetation and earth bunds, disturbance would be unlikely across	Disturbance minimisation mitigation measures for goldeneye follow those previously detailed for pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		all parts of the Tileworks other than pools 4-7 (**Figure A9.2.17 in Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**) at the southern end of the tileworks complex, where conditions are suboptimal due to disturbance from clay extraction activities.			
Marsh harrier	District	Temporary direct habitat loss: Habitat utilised occasionally by foraging birds widely between Ellerker in Route Section A and Garthorpe in Route Section B would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase, resulting in a reduction of available foraging habitat across the wider Humberhead Levels.	Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, . The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON15.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		Permanent habitat loss: Habitat that is occupied by the proposed overhead line infrastructure (pylon bases) and that is 'islanded' between the proposed and existing overhead lines may be permanently lost if it is not used by marsh harriers, however this is unlikely since small mammals and ground nesting birds, on which marsh harriers feed, are unlikely to be deterred by the proposed infrastructure. Therefore, this potential effect is expected to be very limited.	Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, . The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON15.	Negligible	Negligible (**not significant**)
		Temporary disturbance: Temporary disturbance of foraging marsh harriers may occur during construction as a result of noise emissions and visual disturbance from working areas. Based on observed occurrence of this species, this effect could occur at most on an occasional	Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON14, ON15.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		basis at any time during Winter and is likely to affect very small numbers of birds.			
Whooper swan	District	Reduction in the wintering population through elevation of mortality above baseline levels: Mortality of birds moving between fields while foraging close to Broomfleet Tileworks in Route Section A and fields close to the Rivers Ouse and Trent in Route Sections A and B respectively due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire).	Mitigation measures for this species follow those previously detailed for minimising collision mortality where this would affect qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09.	Small	Negligible (**not significant**)
		Temporary direct habitat loss: Foraging habitat adjacent to Broomfleet Tileworks in Route Section A utilised by whooper swans would be cleared to make way for construction, working and storage areas and construction access tracks	Mitigation measures for this species follow those previously detailed for habitat qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, specifically the provision of alternative foraging habitat, which will also serve the foraging requirements of this species. The following **Application Document 7.3 Register of Environmental Actions and**	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		for the duration of the construction phase, resulting in reduction of available foraging habitat amounting to a negligible percentage of the available habitat across the wider Humberhead Levels.	**Commitments** ornithology specific measures will be applied: ON10, ON11, ON14, ON15.		
		Permanent habitat loss: Habitat 'islanded' between the proposed and the existing overhead line adjacent to Broomfleet Tileworks in Route Section A may be effectively lost from the wider foraging resource across the Humberhead Levels. This amounts to a negligible proportion of the available habitat.	Mitigation measures for this species follow those previously detailed for habitat qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, specifically the provision of alternative foraging habitat, which will also serve the foraging requirements of this species. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON14, ON15.	Negligible	Negligible (**not significant**)
		Temporary disturbance: Temporary disturbance of foraging swans near Broomfleet Tileworks in Route Section A on the River Ouse in Route Section B would occur during construction as a result of noise emissions	Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, . The following **Application Document 7.3 Register of Environmental Actions and**	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		and visual disturbance from working areas.	**Commitments** ornithology specific measures will be applied: ON10, ON11, ON14, ON15.		
Pink-footed goose	County	Reduction in the wintering population through elevation of mortality above baseline levels: Mortality of pink-footed geese moving between roosts and feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire) when foraging on Misterton Carrs in Route Section E. The overwhelming majority of flight activity was recorded more than 500 m west of the Order Limits.	Mitigation measures for this species follow those previously detailed for the mitigation of collision mortality where this would affect qualifying Winter swan populations of the River Idle Washlands SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09.	Small	Minor adverse (**not significant**)
Water rail	Local	Temporary disturbance: Temporary disturbance of foraging water rail could occur during construction as a result of noise emissions and visual disturbance from working areas close to Broomfleet Tileworks.	Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and**	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
			Commitments ornithology specific measures will be applied: ON10, ON11, ON12.		
		Temporary direct habitat loss: Habitat that is utilised by foraging pink-footed geese on Misterton Carrs in Route Section E would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase, resulting in a reduction of foraging habitat available in the wider area south and east of Hatfield Moor. This is not predicted to be a significant effect because the overwhelming majority of foraging activity was recorded more than 500 m west of the Order Limits.	Mitigation measures for this species follow those previously detailed for pink-footed goose as a qualifying feature of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
		Permanent habitat loss: Habitat across Misterton Carrs that is occupied by proposed overhead line infrastructure (pylon	No mitigation required	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		bases) and that is directly beneath and adjacent to the proposed overhead line, would be permanently lost as a foraging resource, amounting to a negligible percentage of suitable foraging habitat available in the wider area south and east of Hatfield Moor.			
		Temporary disturbance: Temporary disturbance of foraging geese may occur during construction as a result of noise emissions and visual disturbance from working areas.	Mitigation measures for this species follow those previously detailed for pink-footed goose as a qualifying feature of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Golden plover	Local	Permanent habitat loss: Habitat across Misterton Carrs in Route Section E that is occupied by proposed overhead line infrastructure (pylon bases) and that is directly beneath and adjacent to the proposed overhead line, would be permanently	No mitigation required	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		lost as a foraging resource, amounting to a negligible percentage of suitable foraging habitat available in the wider area.			
		Temporary disturbance: Temporary disturbance of foraging golden plover on Misterton Carrs in Route Section E and in fields close to Warping Drain in Route Section D may occur during construction as a result of noise emissions and visual disturbance from working areas.	Mitigation measures for this species follow those previously detailed for golden plover as a qualifying feature of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Lapwing	Local	Reduction in the wintering population through elevation of mortality above baseline levels: Mortality of wintering lapwing moving between feeding areas due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire) when foraging on Misterton Carrs in Route Section E and close to	Mitigation measures for this species follow those previously detailed for the mitigation of collision mortality where this would affect qualifying Winter swan populations of the River Idle Washlands SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09.	Small	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		Warping Drain in Route Section D.			
		Permanent habitat loss: Habitat across Misterton Carrs in Route Section E that is occupied by the proposed overhead line infrastructure (pylon bases) and that is directly beneath and adjacent to the proposed overhead line, would be permanently lost as a foraging resource, amounting to a negligible percentage of suitable foraging habitat available in the wider area.	No mitigation requirements	Negligible	Negligible (not significant)
		Temporary disturbance: Temporary disturbance of foraging lapwing on Misterton Carrs in Route Section E and in fields close to Warping Drain in Route Section D would occur during construction as a result of noise emissions and visual disturbance.	Mitigation measures for this species follow those previously detailed for lapwing as a qualifying feature of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Gadwall	Local	Temporary disturbance:	Mitigation measures for this species follow those previously detailed for disturbance	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		Temporary disturbance of foraging gadwall could occur during construction as a result of noise emissions and visual disturbance from working areas at Broomfleet Tileworks in Route Section A.	minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.		
Little egret	Local	Temporary disturbance: Temporary disturbance of foraging birds on Misterton Carrs in Route Section E and close to the River Idle on the boundary between Route Sections D and E could occur during construction as a result of noise emissions and visual disturbance from working areas, affecting small numbers of birds (likely one or two birds base on observed numbers and distribution reported in **Application Document 6.9.A2 Appendix 9.2 Ornithology Baseline Report**)at any given time.	Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
Shoveler	Local	Temporary disturbance: Temporary disturbance of foraging birds at Broomfleet Tileworks in Route Section A could occur during construction as a result of noise emissions and visual disturbance from working areas, however this is expected to be limited by natural visual and acoustic screening provided by habitats and earth bunds present on-site.	Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Snipe	Local	Temporary disturbance: Temporary disturbance of foraging birds occurring as singles and pairs and close to Garthorpe in Route Section B and the River Idle on the boundary of Route Sections D and E could occur during construction as a result of noise emissions and visual disturbance from working areas.	Mitigation measures for this species follow those previously detailed for disturbance minimisation for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative foraging habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Farmland bird assemblage	Local	Temporary direct habitat loss:	Mitigation for losses of foraging resource are addressed by a combination of measures to	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		Habitat that is utilised by foraging protected and notable farmland bird species would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat for birds including predominantly arable, grassland, scrub and hedgerow habitats. Since the majority of habitat losses would affect arable farmland, this impact pathway would affect a tiny proportion of the wider foraging resource, which is in any case utilised opportunistically by birds that generally move freely between feeding locations, rather than being tied to habitats within limited home ranges or territories.	minimise habitat loss and additional mitigation measures that relate to the provision of favourable habitat for the farmland bird assemblage that are provided within mitigation for the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON15.		

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		Permanent habitat loss: Habitat that is occupied by the proposed overhead line (pylon bases) would be permanently lost, although farmland assemblage species would be capable of feeding beneath the pylons, and the amount of habitat lost to the pylon feet would be a negligible proportion of the available foraging habitat.	No mitigation measures required although the **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure ON15 would benefit the farmland bird assemblage.	Negligible	Negligible (**not significant**)
		Temporary disturbance: Temporary disturbance or degradation of habitats on protected and notable species could occur as a result of noise, visual disturbance, obstructions and habitat alteration. This also includes effects as a result of noise, and dust generation and deposition.	No mitigation measures required although the **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures ON010, ON11, ON12, ON15 would benefit the farmland bird assemblage.	Negligible	Negligible (**not significant**)
Breeding					
Bittern	County	Temporary disturbance: One breeding pair could be affected by noise and visual disturbance within	Mitigation for this species follows disturbance minimisation measures previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		500 m of the Order Limits during construction only. This is likely to be limited by natural screening of the nest site from works areas by dense scrub, and the nest site is estimated to be at least 290 m from any construction works given the distribution of suitable nesting habitat at the breeding location.	The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.		
Marsh harrier	County	Reduction in the breeding population through elevation of mortality above baseline levels Collision mortality due to collisions of birds in flight with permanent structures (principally the proposed overhead line earth wire) is predicted to be negligible for this species (see section 6 of **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment**), although poor weather conditions might periodically elevate the risk level above baseline levels for marsh	Collision risk mitigation is not strictly required for this species, however the mitigation set out in **Application Document 6.9.A3 Appendix 9.3 Flight Activity Assessment** for non-breeding pink-footed goose, greylag goose, lapwing, golden plover and curlew as qualifying features of the Humber Estuary SPA, Ramsar site and SSSI will further reduce the collision risk to this species. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON09.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		harriers, which could lead to a reduction in the breeding population or marsh harriers as individuals move between nest sites outside of the Humber Estuary SPA/Ramsar site/SSSI and foraging areas across farmland principally north of the River Ouse.			
		Temporary disturbance	One breeding pair could be affected by noise and visual disturbance within 500 m of the Order Limits. This is likely to be limited by natural screening of the nest site from works areas by dense scrub and/or earth bunds. This impact pathway is unlikely to be significant during maintenance activities and given baseline levels of disturbance. Whilst no mitigation measures are required the **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures ON10, ON11, ON1, would minimise any disturbance.	Negligible	Negligible (**not significant**)
Barn owl	County	Temporary direct habitat loss: Loss of nest sites due to removal of habitat within the Order Limits during construction. This could	All potential nest and, for the purposes of this assessment, roost sites at risk of being damaged or that require removal during habitat clearance will be inspected by an ornithologist working alongside the appointed EnvCoW ahead of the onset of works during the non-breeding season. This may require	Small	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		affect up to seven nest sites and two roost sites within the Order Limits.	sites to be checked several months in advance of works, and multiple checks to be carried out if potential nest sites are occupied on the first check. Potential nest and roost sites will be removed or soft blocked when it has been confirmed that they are vacant, and replacement sites (pole or tree-mounted boxes) will be installed on a like-for-like basis at locations away from working areas. Completing these pre-works checks well in advance will allow time for barn owls to locate the new nest boxes. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON03.		
		Temporary disturbance: Disturbance of nest sites or potential nest sites due to noise emissions and visual disturbance during construction. This is unlikely to be significant during maintenance activities. This could affect up to 20 nest sites.	All potential nest sites at risk of being disturbed by construction activities will be inspected by an ornithologist working alongside the appointed EnvCoW ahead of the onset of works and during the breeding season. All sites that are confirmed as occupied or deemed as suitable for nesting at the time of the checks, and that are at risk of disturbance based on the specific situation of the nest site and the precise nature of the works being caried out that might affect it, will be soft-blocked when they are confirmed as not in use. This will be carried out outside of the typical breeding season for this species	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
			and several months ahead of construction if necessary. Potential nest sites likely to be disturbed will be soft-blocked and replacement pole or tree mounted nest boxes will be erected at suitable locations identified by the ornithologist and EnvCoW on a like-for-like basis. At the end of the construction phase the original nest sites will be unblocked and the new nest boxes will be left in place. Completing these pre-works checks well in advance will allow time for barn owls to locate the new nest boxes. As a WCA Schedule 1 species, barn owl is legally protected from disturbance when nesting. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON03.		
Hobby	County	Temporary disturbance: Disturbance of two (known) nest sites or potential nest sites due to noise emissions and visual disturbance during construction.	Disturbance minimisation mitigation measures for hobby follow those previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative habitat. Pending habitat checks by an ornithologist working alongside the EnvCoW, where the timing of works requires localised adjustment to avoid disturbing nesting hobbies, works will be suspended for the duration of the nesting period in which eggs and dependent young are present, which is likely to be between May	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
			and the end of July, to be confirmed by a specialist ornithologist working alongside the EnvCoW. As a WCA Schedule 1 species, hobby is legally protected from disturbance when nesting. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON02.		
Peregrine falcon	County	Temporary disturbance: Disturbance of up to seven nesting pairs due to noise emissions and visual disturbance during construction and maintenance.	Pending habitat checks by an ornithologist working alongside the EnvCoW, where the timing of works requires localised adjustment to avoid disturbing nesting peregrines, works will be suspended for the duration of nesting, which is likely to be between March and mid-July, to be confirmed by a specialist ornithologist working alongside the EnvCoW. This would be necessary only for works occurring at height, since baseline levels of farming activity beneath existing pylons are clearly tolerated at the recorded nesting locations. As a WCA Schedule 1 species, peregrine falcon is legally protected from disturbance when nesting. This is reflected in the . The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON02.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
Turtle dove	County	Temporary direct habitat loss: Loss of nesting habitat in dense scrub within the Order Limits along the banks of the River Idle on the boundary of Route Sections D and E and Warping Drain in Route Section D during construction.	Embedded mitigation has sought to design the Project such that there would be no loss of scrub habitat where this species was recorded on the banks of the River Idle, or at Warping Drain, and effects on this habitat type across the Project have been avoided wherever possible.	Negligible	Negligible (not significant)
		Temporary disturbance: Disturbance of nest sites or potential nest sites due to noise emissions and visual disturbance during construction.	The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Corn bunting	District/ County	Temporary direct habitat loss: Loss of nesting habitat due to site clearance within the Order Limits during construction, affecting a negligible percentage of the available nesting habitat within arable fields in Route Section E and particularly Misterton and Gringley Carrs.	No mitigation measures required although the **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure ON01 would prevent any loss of active nest sites.	Small/ negligible	Minor adverse/ negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		Temporary disturbance: The estimated corn bunting population within 500 m of the Order Limits is up to 18 territories, six of which were across Misterton and Gringley Carrs. These breeding pairs could be affected by noise and visual disturbance.	The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON01, ON10, ON11, ON12.	Small/negligible	Minor adverse/negligible (**not significant**)
Bearded tit	District/ County	Temporary disturbance: Up to three breeding pairs could be affected by noise and visual disturbance within 500 m of the Order Limits at one location in Route Section A. This is likely to be limited by natural screening of the nest site from works areas by dense scrub and/or earth bunds.	Disturbance minimisation mitigation measures for bearded tit follow those previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON01, ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Lapwing	Local	Temporary direct habitat loss: Loss of nesting habitat due to site clearance within the Order Limits during construction, affecting a tiny percentage	No mitigation measures required although the **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure ON01 would prevent any loss of active nest sites	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		of the available nesting habitat within arable habitat.			
		Temporary disturbance: Up to 13 breeding pairs could be affected by noise and visual disturbance within 500 m of the Order Limits, predominantly across the Yorkshire Wolds (Route Section A), Humberhead Levels (Route Section A), near Warping Drain (Route Section D) and Gringley Carrs (Route Section E).	Disturbance minimisation mitigation measures for lapwing follow those previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Quail	Local	Temporary direct habitat loss: Loss of nesting habitat due to site clearance within the Order Limits during construction, affecting a tiny percentage of the available nesting habitat within arable habitat in Route Section B and Route Section E where this species was recorded.	The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON02.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		Temporary disturbance: Singing males were recorded in Route Sections B and E. At least two breeding pairs could be affected by noise and visual disturbance within 500 m of the Order Limits.	Disturbance minimisation mitigation measures for quail follow those previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative habitat. Pending habitat checks by an ornithologist working alongside the EnvCoW, where the timing of works requires localised adjustment to avoid disturbing nesting quail, works will be suspended for the duration of nesting, which is likely to be between mid-May and the end of August. As a WCA Schedule 1 species, quail is legally protected from disturbance when nesting. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON02.	Negligible	Negligible (**not significant**)
Kingfisher	Local	Temporary disturbance: Up to two breeding pairs could be affected by noise and visual disturbance within 100 m of the Order Limits at one location. This would be limited by natural screening of the nest site from works areas by dense scrub and earth bunds alongside the	Routeing of a scaffolding access track to the banks of a watercourse on which kingfishers nest has been designed to avoid tracking directly along the banks, by routeing vehicular access to the working areas along a track alignment perpendicular to the banks, minimising the potential interaction between works traffic and nest site(s). Disturbance minimisation mitigation measures for kingfisher follow those previously detailed for qualifying features of the Humber Estuary	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		watercourse on which nesting was recorded.	SPA, Ramsar site and SSSI, excluding the provision of alternative habitat. Pending habitat checks by an ornithologist working alongside the EnvCoW, where timing of works requires localised adjustment to avoid disturbance of nesting kingfisher, works will be suspended for the duration of nesting, which is likely to be between mid-March and the end of August. As a WCA Schedule 1 species, kingfisher is legally protected from disturbance when nesting. This is reflected in the . The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON02, ON04, ON05, ON07, ON08.		
Woodland bird assemblage: Socken Wood	Local	Temporary direct habitat loss: Habitat that is utilised by protected and notable bird species would be cleared to make way for the proposed overhead line for the duration of the construction phase, resulting in reduction of available foraging habitat for birds.	Construction design has avoided the placement of any working areas within the woodland. Works within Socken Wood will restrict tree loss to only those essential for the proposed overhead line clearance. Additional mitigation in the form of mitigation planting is proposed to compensate for woodland losses, as shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. These areas have been chosen with a view to extend existing habitats, for example,	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
			woodland areas, and/or provide links between existing areas of habitat. The woodland area linking to Socken Wood is 5 ha and has been located and designed to follow the outline of historic woodland, no longer present, in order to restore woodland to this area. Refer to **Application Document 7.1 Biodiversity Net Gain Report** for further details. The following **Application Document 7.3 Register of Environmental Actions and Commitments** non-ornithology specific measures will be implemented: GG01, GG02, GG04, GG05, GG06, GG07, E20, E22, E27, E28, E29, E30, E31, E32, E33, E34, E52. ARB01, ARB02, ARB03, ARB04, ARB06, ARB07, ARB08, ARB09, ARB10, LV02, LV03,LV04.		
		Permanent habitat loss: Woodland canopy habitat beneath the proposed overhead line will be managed to maintain clearance beneath the overhead line, resulting in losses of nest sites in the upper tree canopy with a loss of 0.43 ha (removed), plus 0.15 ha (managed) based on current design,	Additional mitigation in the form of mitigation planting is proposed to compensate for woodland losses, as shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. The following **Application Document 7.3 Register of Environmental Actions and Commitments** non-ornithology specific measures will be implemented: GG01, GG02, GG04, GG05, GG06, GG07, E20, E22, E27, E28, E29, E30, E31, E32, E33, E34, E52. ARB01, ARB02, ARB03, ARB04, ARB06,	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
			ARB07, ARB08, ARB09, ARB10, LV02, LV03, LV04.		
		Temporary disturbance: Temporary disturbance or degradation of habitats on protected and notable species could occur as a result of noise, visual disturbance, obstructions and habitat alteration.	Disturbance minimisation mitigation measures for the bird assemblage on this site follow those previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON01, ON10, ON11, ON12.	Negligible	Negligible (**not significant**)
Woodland bird assemblage: Brantingham Dale	Local	Temporary direct habitat loss: Habitat that is utilised by protected and notable bird species would be cleared to make way for all construction, working and storage areas and construction access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat for nesting birds.	Habitat removal will be kept to a minimum inside the SSSI. No trees inside the SSSI boundary will be removed below ground level. Permanent tree management along the edge of part of the SSSI in two locations (approximately 0.24 ha combined, increasing to a maximum of approximately 0.71 ha if the LoD is used in both locations) could potentially create more favourable conditions for grassland and other ground flora to establish or improve, including the calcareous grassland for which the SSSI is primarily designated. Some previous scrub management is known to have been carried out, under consent, inside the SSSI to improve the condition of the calcareous grassland. The SSSI is 15.8 ha in size, therefore 1.5% or maximum of 4.5% would be affected.	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
			The following **Application Document 7.3 Register of Environmental Actions and Commitments** non-ornithology specific measure will be applied: E17, E26, E52, GG01, GG02, GG04, GG05, GG07, ARB01, ARB02, ARB03, ARB04, ARB06, ARB08, ARB09, ARB10, LV02.		
		Permanent habitat loss: Woodland canopy habitat beneath the proposed overhead line would be managed to maintain clearance beneath the proposed overhead line, resulting in losses of nest sites in the upper tree canopy.	New trees will be planted in proposed mitigation planting areas, outside the established woodland, which are shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. These areas have been chosen with a view to extend existing woodland areas and/or provide links between existing areas of woodland. The following **Application Document 7.3 Register of Environmental Actions and Commitments** non-ornithology specific measure will be applied: E17, E26, E52, GG01, GG02, GG04, GG05, GG07, ARB01, ARB02, ARB03, ARB04, ARB06, ARB08, ARB09, ARB10, LV02.	Negligible	Negligible (**not significant**)
		Temporary disturbance: Temporary disturbance or degradation of habitats on protected and notable species could occur as a result of noise, visual	Disturbance minimisation mitigation measures for the bird assemblage on this site follow those previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, other than the provision of alternative habitat during construction. The following **Application Document 7.3 Register of Environmental Actions and**	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		disturbance, obstructions and habitat alteration.	**Commitments** ornithology specific measure will be applied: ON01, ON10, ON11, ON12.		
Farmland bird assemblage	Local	Temporary direct habitat loss: Habitats used for breeding and foraging by protected and notable assemblage species would be cleared to make way for construction, working and storage areas and construction access tracks for the duration of the construction phase, resulting in reduction of available foraging habitat for birds including predominantly arable, grassland, scrub and hedgerow habitats.	The Project design has sought to minimise habitat losses by: Utilising existing gaps in hedgerows, where possible; and Reinstatement of habitats to their original condition. Hedgerows will be restored to the same or better (in the case of hedgerows that are currently species-poor and gappy) condition than they were pre-construction. Mitigation for losses of foraging resource are addressed by a combination of measures to minimise habitat loss and additional mitigation measures that relate to the provision of favourable habitat for the farmland bird assemblage that are provided within mitigation for the Humber Estuary SPA, Ramsar site and SSSI. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON15.	Small	Minor adverse (**not significant**)
		Permanent habitat loss: Habitat that is occupied by the proposed overhead line infrastructure (pylon bases) would be permanently lost, although	The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measure will be applied: ON15.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[21]	Magnitude of impact	Residual effect
		the area of habitat lost beneath pylon feet would be extremely limited. Furthermore, it is assumed that farmland assemblage species would be capable of feeding beneath the pylons and the proposed overhead line			
		Temporary disturbance: Temporary disturbance or degradation of habitats utilised by protected and notable farmland bird assemblage species could occur due to noise, visual disturbance, obstructions and habitat alteration.	Disturbance minimisation mitigation measures for the farmland bird assemblage follow those previously detailed for qualifying features of the Humber Estuary SPA, Ramsar site and SSSI, excluding the provision of alternative habitat. The following **Application Document 7.3 Register of Environmental Actions and Commitments** ornithology specific measures will be applied: ON10, ON11, ON12, ON15.	Small	Minor adverse (**not significant)**

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