The Great Grid Upgrade

North Humber to High Marnham

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North Humber to High Marnham

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8. Ecology

8.1 Introduction

8.1.1 This chapter of the Environmental Statement (ES) presents the assessment of likely significant ecology 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**.

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

8.1.3 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**.

8.1.4 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 Environmental Impact Assessment Approach and Methodology**;
- **Application Document 6.6 Chapter 6 Landscape**;
- **Application Document 6.7 Chapter 7 Visual**;
- **Application Document 6.9 Chapter 9 Ornithology**;
- **Application Document 6.11 Chapter 11 Water Environment**;
- **Application Document 6.12 Chapter 12 Geology and Hydrogeology**;
- **Application Document 6.13 Chapter 13 Agriculture and Soils**;
- **Application Document 6.14 Chapter 14 Traffic and Transport**;
- **Application Document 6.15 Chapter 15 Air Quality**;
- **Application Document 6.16 Chapter 16 Noise and Vibration**;
- **Application Document 6.19 Chapter 19 Climate Change**;
- **Application Document 6.20 Chapter 20 Intra-project Cumulative Effects**; and
- **Application Document 6.21 Chapter 21 Inter-project Cumulative Effects**.

8.1.5 This chapter is supported by the following figures:

- **Application Document 6.8.F1 Figure 8.1 International Sites Designated for Nature Conservation within 10 km and National and Local Statutory Designated Sites within 5 km**; and
- **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km**.

8.1.6 This chapter is supported by the following appendices:

- **Application Document 6.8.A1 Appendix 8.1 Regional and Local Planning Policy**;
- **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**;
- **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report**;
- **Application Document 6.8.A4 Appendix 8.4 Botanical Report**;
- **Application Document 6.8.A5 Appendix 8.5 Badger Report (Confidential)**;
- **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**;
- **Application Document 6.8.A7 Appendix 8.7 Bat Roost Report**;
- **Application Document 6.8.A8 Appendix 8.8 Bat Activity Report**;
- **Application Document 6.8.A9 Appendix 8.9 Hazel Dormouse Report**;
- **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**;
- **Application Document 6.8.A11 Appendix 8.11 Summary of Assessments for Sites of Special Scientific Interest**; and
- **Application Document 6.8.A12 Appendix 8.12 Great Crested Newt Report for Nottinghamshire.**

8.1.7 This chapter is supported by the following application documents:

- **Application Document 6.5.A1 Appendix 5.1 Environmental Impact Assessment 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 5.2 Habitats Regulations Assessment Report**;
- **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 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.**

8.2 Regulatory and Planning Context

8.2.1 This section sets out the legislation and planning policy that is relevant to the ecology 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.

8.2.2 **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 ecological effects of the Project is presented below.

Legislation

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

Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species (Retained EU Legislation).

8.2.4 Following the United Kingdom's (UK's) exit from the European Union (EU), the provisions of EU Regulation No 1143/2014 (The European Parliament and the Council of the European Union, 2014) were retained as UK law and amended to function independently of the EU. The Secretary of State (SoS) may amend the (UK) list of species of invasive non-native species (INNS) whose adverse impact is such that concerted action is required across Great Britain. The Regulation sets out requirements for risk assessments, the prohibition of specified activities in respect of INNS, arrangements for the taking of necessary steps to prevent the unintentional introduction or spread of INNS, the requirement for permits, authorisations and emergency measures, and the management by the appropriate authority of widely spread INNS.

The Invasive Alien Species (Enforcement and Permitting) Order 2019

8.2.5 The Invasive Alien Species (Enforcement and Permitting) Order 2019 (HM Government, 2019) came into effect on 1 December 2019. This gives effect to certain provisions of EU Regulation No 1143/2014 (The European Parliament and the Council of the European Union, 2014), in particular in respect of offences and the relevant licences, permits and rules in connection with INNS of special concern. INNS that are of special concern are subject to provisions of the Wildlife and Countryside Act 1981 (HM Government, 1981). More information on the Wildlife and Countryside Act 1981 is provided in paragraph 8.2.6.

Wildlife and Countryside Act 1981

8.2.6 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

8.2.7 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.

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

8.2.8 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) (The Council of the European Communities, 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) (The European Parliament and the Council of the European Union, 2009) into UK law and provide for the designation and protection of European protected sites (and adapt 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.

8.2.9 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 the favourable conservation status in their natural range.

8.2.10 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[1], following the UK's exit from the EU. The Habitats Regulations ensure that the network of sites in the UK, that prior to EU Exit formed part of Natura 2000, now form part of the 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 (Habitats sites) designated under these Regulations.

8.2.11 On 21 May 2026, the Habitats Regulations were amended by the Planning and Infrastructure Act 2025 (HM Government, 2025) to extend the legal protection afforded to Habitats sites to Ramsar sites, which are sites designated under the Convention on Wetlands of International Importance (Convention on Wetlands Secretariat, 2026) especially as Waterfowl Habitat (the Ramsar Convention).

Natural Environment and Rural Communities Act 2006

8.2.12 Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC) (HM Government, 2006) sets out the '*general biodiversity objective*' the furtherance of which a public authority must consider. The general biodiversity objective is the

[1] Natura 2000 is a network of protected areas of land and sea in Europe. The sites within Natura 2000 are designated under the Birds Directive (The European Parliament and the Council of the European Union, 2009) and the Habitats Directive (The Council of the European Communities, 1992).

conservation and enhancement of biodiversity in England through the exercise of functions in England. In respect of the general biodiversity objective, the SoS must in particular have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992 (Secretariat of the Convention on Biological Diversity , 1992). Section 41 of the NERC Act 2006 (HM Government, 2006) requires the SoS 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 (Joint Nature Conservation Committee on behalf of the Four Countries' Biodiversity Group, 2024).

Environment Act 2021

8.2.13 The Environment Act 2021 (HM Government, 2021) provides a legal framework for environmental governance following the UK's exit from the EU, 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

8.2.14 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, the control of emissions, and the identification and remediation of land posing unacceptable risks to human health and the environment.

Protection of Badgers Act 1992

8.2.15 The Protection of Badgers Act 1992 (HM Government, 1992) provides specific legislation to protect badgers (*Meles meles*) and their setts from harm.

The Hedgerows Regulations 1997

8.2.16 The Hedgerows Regulations 1997 (HM Government, 1997) introduced protection for countryside hedgerows that are defined as Important because they meet specific wildlife or landscape criteria.

Animal Welfare Act 2006

8.2.17 The Animal Welfare Act 2006 (HM Government, 2006) protects vertebrate animals from harm and extends to domesticated animals and those under the control of people.

Salmon and Freshwater Fisheries Act 1975

8.2.18 The Salmon and Freshwater Fisheries Act 1975 (HM Government, 1975) relates to the protection of freshwater fish, with a focus on salmon and trout species. It considers mortality, migration barriers, pollution, and the degradation of habitats.

The Eels (England and Wales) Regulations 2009

8.2.19 The Eels (England and Wales) Regulations 2009 (the Eel Regulations) (HM Government, 2009) came into force on 15 January 2010, aiming to halt and reverse the decline in the European eel (*Anguilla anguilla*) stock and meet mature adult eel biomass escapement to sea targets of 40 per cent relative to that expected in the

absence of anthropogenic impacts. Provisions are made for safe and unobstructed passage for eel, channel alterations, river crossings, and culverting.

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

8.2.20 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (HM Government, 2017) consolidate, revoke, and replace the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 (HM Government, 2003). The 2017 Regulations place a general duty on the SoS, the Welsh Ministers, the Environment Agency, and Natural Resources Wales to exercise their relevant functions to secure compliance with the Water Framework Directive (WFD) (Regulation 3).

National Policy

National Policy Statements

8.2.21 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.

8.2.22 Table 8.1 and Table 8.2 provide details of the elements of the Overarching NPS for Energy (EN-1) (Department for Energy Security & Net Zero, 2025), referred to hereafter as NPS EN-1, and NPS for Electricity Networks Infrastructure (EN-5) (Department for Energy Security & Net Zero, 2025), referred to hereafter as NPS EN-5, that are relevant to the assessment of the Project on ecology and how and where related information is provided in the ES and the application.

8.2.23 The elements of NPS EN-1 (Department for Energy Security & Net Zero, 2025) and NPS EN-5 (Department for Energy Security & Net Zero, 2025) that are relevant to Biodiversity Net Gain (BNG) are provided in **Application Document 7.1 Biodiversity Net Gain Report**.

National Planning Policy Framework

8.2.24 The National Planning Policy Framework (NPPF) as revised in August 2026 (Ministry of Housing, Communities & Local Government, 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 & Local Government, 2026) has a strong emphasis on sustainable development, with a presumption in favour of such development. Although the NPS set out the primary policy tests for the Project, the NPPF (Ministry of Housing, Communities & Local Government, 2026) has the potential to be considered important and relevant to the consideration of the Project by the SoS.

8.2.25 Table 8.3 provides details of the elements of the NPPF (Ministry of Housing, Communities & Local Government, 2026) that relate to the ecology assessment, and how and where they are covered in the ES and application.

8.2.26 The elements of the NPPF (Ministry of Housing, Communities & Local Government, 2026) that are relevant to BNG are provided in **Application Document 7.1 Biodiversity Net Gain Report**.

Table 8.1 – NPS EN-1 sections relevant to ecology

NPS EN-1 section	Where this is covered in the application
Paragraph 4.6.13 states that: '*In addition to delivering biodiversity net gain, developments may also deliver wider environmental gains and benefits to communities relevant to the local area, and to national policy priorities, such as:* *…* • *the enhancement, expansion or provision of trees and woodlands*.'	As detailed in section 8.8 of this chapter and in **Application Document 7.8 Outline Landscape and Ecology Management Plan**, the Project includes features such as areas of new grassland and woodland, with an aim to enhance biodiversity and to benefit relevant local communities.
Paragraph 4.6.15 states that: '*Applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into proposals as part of good design (including any relevant operational aspects) of the project.*'	This chapter details how the Project has taken advantage of opportunities to conserve and enhance biodiversity, in line with relevant planning policy, such as the inclusion of new planting areas and by retaining as much of the existing habitat as practicable. The Project proposes to deliver a minimum of 10 per cent BNG, with potential for wider environmental and societal benefits, on a voluntary basis. Detail on the Project's approach to voluntary BNG is provided in **Application Document 7.20 Design Development Report - 2025** and **Application Document 7.1 Biodiversity Net Gain Report.**
Paragraph 5.4.5 '*As a matter of policy, the following should be given the same protection as sites covered by the Habitats Regulations and an HRA* [Habitats Regulations Assessment] *will also be required:* • *Potential Special Protection Areas and possible Special Areas of Conservation;* • *Listed or proposed Ramsar sites; and* • *Sites identified, or required, as compensatory measures for adverse effects on Special Protection Areas, Special Areas of Conservation, and any of the other sites covered by this paragraph.'*	This chapter and **Application Document 5.2 Habitats Regulations Assessment Report** consider potential SPAs, possible SACs, and Ramsar sites (listed or proposed) **Application Document 5.2 Habitats Regulations Assessment Report** also identifies the requirement for compensatory habitat for the loss of Functionally Linked Land (FLL) associated with, but outside of the boundary of, Habitats sites.

NPS EN-1 section	Where this is covered in the application
Paragraph 5.4.8 '*Development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits (including need) of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national networks of SSSIs*.'	This chapter assesses the effects of the Project on designated sites of ecological importance, including SSSIs. Measures to protect SSSIs are set out in this chapter and in **Application Document 7.2 Outline Code of Construction Practice** and **Application Document 7.3 Register of Environmental Actions and Commitments**. Potential cumulative effects are set out in **Application Document 6.20 Chapter 20 Intra-project Cumulative Effects** and **Application Document 6.21 Chapter 21 Inter-project Cumulative Effects**.
Paragraph 5.4.18 '*Where the development is subject to EIA, the applicant should ensure the ES clearly sets out any effects on internationally, nationally, and locally designated sites of ecological or geological conservation importance (including those outside England and Wales), on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity, including irreplaceable habitats*.'	This chapter details the effects on designated sites of ecological importance, protected species, and on habitats and other species identified as being of Principal Importance for the conservation of biodiversity. **Application Document 5.2 Habitats Regulations Assessment Report** details whether the Project is likely to have a significant effect on areas that have been designated for nature and conservation purposes under the Habitats Regulations (HM Government, 2017) and in accordance with international treaties to which the UK is a party; such designations include SACs, SPAs, and Ramsar sites.
Paragraph 5.4.20 '*The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests*.'	The Project has been designed to avoid designated ecological sites and areas of geological conservation through embedded measures, as far as practicable. **Application Document 5.9 Design Development Report** describes how the Project has been developed, taking into account biodiversity and geological conservation interests. **Application Document 6.3 Chapter 3 Main Alternatives Considered** sets out the alternatives considered and the main reasons for the option chosen, taking into account the effects of the Project on the environment. This chapter provides information on how the Project has taken advantage of opportunities to conserve and enhance biodiversity. This includes embedded mitigation measures which aim to conserve and enhance biodiversity conservation interests.

NPS EN-1 section	Where this is covered in the application
Paragraph 5.4.21 '*Applicants should consider wider ecosystem services and benefits of natural capital when designing enhancement measures.'*	Ecosystem services and natural capital are considered when delivering BNG on-site and when options for off-site delivery are explored. This is reported in **Application Document 7.1 Biodiversity Net Gain** Report. Noting that the Project proposes to deliver a minimum of 10 per cent BNG, with potential for wider environmental and societal benefits, on a voluntary basis. Detail on the Project's approach to voluntary BNG is provided in **Application Document 7.20 Design Development Report - 2025** and **Application Document 7.1 Biodiversity Net Gain Report.**
Paragraph 5.4.22 '*As set out in Section 4.7, the design process should embed opportunities for nature inclusive design. Energy infrastructure projects have the potential to deliver significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains (see Section 4.6 on Environmental and Biodiversity Net Gain). The scope of potential gains will be dependent on the type, scale, and location of each project.*'	**Application Document 5.9 Design Development Report** describes how the Project has been developed considering important ecological features, e.g. protected and notable habitats. **Application Document 6.3 Chapter 3 Main Alternatives Considered** sets out the alternatives considered and the main reasons for the option chosen, taking into account the effects of the Project on the environment. This chapter provides information on how the Project has taken advantage of opportunities to conserve and enhance biodiversity. This includes embedded mitigation measures which aim to conserve and enhance biodiversity conservation interests.
Paragraph 5.4.23 '*The design of energy NSIP [Nationally Significant Infrastructure Project] 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 mobile and migratory species are covered in section 8.9of this chapter. Effects on birds are detailed in **Application Document 6.9 Chapter 9 Ornithology**.
Paragraph 5.4.24 '*Energy projects will need to ensure vessels used by the project follow existing regulations and guidelines to manage ballast water.'*	No vessels will be used in the transport of Project freight using the inland waterways (canals or rivers) within or adjacent to the Order Limits. This was considered during the preliminary design phase as a

NPS EN-1 section	Where this is covered in the application
	measure to reduce road traffic, but is no longer included in the Project design (further details regarding this decision are presented in **Application Document 5.1 Consultation Report**). At Statutory Consultation, the use of boats to draw the ropes (to which the conductors will be attached) across the river for the stringing of the proposed overhead line across the River Ouse (crossing of the Humber Estuary SAC, SPA, Ramsar and SSSI) was also considered. The Project will now use an alternative method of conductor stringing, such as using drones or helicopter. **Application Document 6.3 Main Alternatives Considered** provides detail on the decision to progress with this method of stringing. Considering the above, the only vessel to be used in the construction of the Project will be a small safety boat which will be required during the installation of the proposed overhead line as it crosses the River Ouse, and associated designated sites. This is a short-term temporary operation, and it is likely that a Rigid Inflatable Boat, or similar, will be used, where ballast water not required. **Application Document 7.3 Register of Environmental Actions and Commitments** commits to vessels being correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner.
Paragraph 5.4.26 '*The applicant should seek the advice of the appropriate SNCB [Statutory Nature Conservation Body] and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether an HRA Appropriate Assessment [AA] is required. Applicants can request and agree 'Evidence Plans' with SNCBs, which is a way to record upfront the information the applicant needs to supply with its application, so that the HRA can be efficiently carried out. If an AA is required, the applicant must provide the Secretary of State with such information as may reasonably be required to enable the Secretary of State to conduct the AA. This should include information on any mitigation*	A report to inform Appropriate Assessment has been provided at **Application Document 5.2 Habitats Regulations Assessment Report**. In the assessment, it was concluded that no adverse effect on the integrity of any Habitats sites would arise, from the Project alone or in combination with other plans or projects. This is based on adverse effects on the integrity of Habitats sites being negated by a combination of seasonal restrictions to works, implementation of noise and visual disturbance measures, and provision of enhanced land parcels to mitigate effect on FLL.

NPS EN-1 section	Where this is covered in the application
measures that are proposed to minimise or avoid likely significant effects.'	
Paragraph 5.4.33 '*Applicants should include measures to mitigate fully the direct and indirect effects of development on ancient woodland, ancient and veteran trees or other irreplaceable habitats during both construction and operational phases.'*	Mitigation measures relating to the protection of ancient woodland, and ancient and veteran trees are outlined in **Application Document 7.3 Register of Environmental Actions and Commitments**, **Application Document 7.8 Outline Landscape and Ecology Management Plan**, and **Application Document 7.14 Arboricultural Impact Assessment**. Potential impacts on these features, mitigation measures, and residual effects are presented in sections 8.7, 8.8 and 8.9 of this chapter respectively.
Paragraph 5.4.34 '*Applicants should consider any reasonable opportunities to maximise the restoration, creation, and enhancement of wider biodiversity, and the protection and restoration of the ability of habitats to store or sequester carbon as set out under Section 4.6*.'	Reasonable opportunities to maximise the restoration, creation, and enhancement of wider biodiversity are set out in **Application Document 7.1 Biodiversity Net Gain Report**. **Application Document 6.19.A4 Greenhouse Gas Reduction Strategy** acknowledges that these measures deliver indirect carbon savings alongside ecological protection.
Paragraph 5.4.35 '*Consideration should be given to improvements to, and impacts on, habitats and species in, around and beyond developments, for wider ecosystem services and natural capital benefits, beyond those under protection and identified as being of principal importance. This may include considerations and opportunities identified through Local Nature Recovery Strategies, and national goals and targets set through the Environment Act 2021 and the Environmental Improvement Plan.'*	Opportunities to enhance habitats beyond the Project are documented in **Application Document 7.1 Biodiversity Net Gain Report**. The Project proposes to deliver a minimum of 10 per cent BNG, with potential for wider environmental and societal benefits, on a voluntary basis. Detail on the Project's approach to voluntary BNG is provided in **Application Document 7.20 Design Development Report - 2025** and **Application Document 7.1 Biodiversity Net Gain Report**.
Paragraph 5.4.36 '*Applicants should include appropriate avoidance, mitigation, compensation and enhancement measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:* *during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works*;	This chapter, **Application Document 7.2 Outline Code of Construction Practice**, and **Application Document 7.3 Register of Environmental Actions and Commitments** set out information on how the Project will minimise working areas during construction, follow best practice during construction and operation to avoid or minimise disturbance or damage to species or habitats, restore habitats following construction activities where possible and enhance

NPS EN-1 section	Where this is covered in the application
the timing of construction has been planned to avoid or limit disturbance; *during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;* *habitats will, where practicable, be restored after construction works have finished;* *opportunities will be taken to enhance existing habitats rather than replace them, and where practicable, create new habitats of value within the site landscaping proposals. Where habitat creation is required as mitigation, compensation, or enhancement, the location and quality will be of key importance. In this regard habitat creation should be focused on areas where the most ecological and ecosystems benefits can be realised; and* *mitigations required as a result of legal protection of habitats or species will be complied with*.'	existing habitats and create new biodiverse habitats. **Application Document 7.8 Outline Landscape and Ecology Management Plan** also outlines the habitats that will be created, restored and enhanced as part of the Project.
Paragraph 5.4.37 '*Applicants should produce and implement a Biodiversity Management Strategy as part of their development proposals. This could include provision for biodiversity awareness training to employees and contractors so as to avoid unnecessary adverse impacts on biodiversity during the construction and operation stages.'*	**Application Document 7.8 Outline Landscape and Ecology Management Plan** sets out how the land will be managed throughout the operational phase, following the completion of construction. Biodiversity awareness training will be delivered to contractors through toolbox talks, as detailed in **Application Document 7.2 Outline Code of Construction Practice** and **Application Document 7.3 Register of Environmental Actions and Commitments**.

NPS EN-1 section	Where this is covered in the application
Paragraph 5.4.43 [part] '*As a general principle…development should, in line with the mitigation hierarchy, aim to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives…. Where significant harm cannot be avoided, impacts should be mitigated and as a last resort, appropriate compensation measures should be sought*.'	The Project has been designed to avoid designated ecological sites and areas of geological conservation as far as practicable. **Application Document 5.9 Design Development Report** describes how the Project has been developed, taking into account biodiversity and geological conservation interests. **Application Document 6.3 Chapter 3 Main Alternatives Considered** sets out the alternatives considered and the main reasons for the option chosen, taking into account the effects of the Project on the environment. Mitigation measures, which aim to avoid significant harm to important ecological features, are set out in section 8.8 of this chapter, **Application Document 7.2 Outline Code of Construction Practice**, and **Application Document 7.3 Register of Environmental Actions and Commitments**. **Application Document 7.8 Outline Landscape and Ecology Management Plan** outlines the approach to the management of habitats retained and created as part of the Project.
Paragraph 5.4.55 '*The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of any irreplaceable habitats, including ancient woodland, and ancient and veteran trees unless there are wholly exceptional reasons and a suitable compensation strategy exists*.'	No areas of woodland on the Ancient Woodland Inventory (Natural England, 2026) or the associated Ancient Woodland - Revised (England) - Completed Counties dataset (Natural England, 2026)[2] will be lost to the Project. **Application Document 7.14 Arboricultural Impact Assessment** details that based upon the Project design as set out in **Application Document 6.4 Chapter 4 Description of the Project** all veteran trees are retained. However should the Limits of Deviation (LoD) for the proposed overhead line be used to the south of its location one veteran tree (T4, common oak (*Quercus robur*)) in Route Section A would require removal in order to construct a safe and reliable power grid.

[2] The Ancient Woodland Inventory (Natural England, 2026) is the only dataset showing designated ancient woodland across the whole of England. Natural England is in the process of updating this dataset on a county-by-county basis (for example refining boundaries using modern mapping techniques and including smaller areas of woodland than previously considered), and where available these revised data (Natural England, 2026) are used in preference. The revised data set only covers part of the study area.

NPS EN-1 section	Where this is covered in the application
	Mitigation measures relating to the protection of ancient woodland, , and ancient and veteran trees, are outlined in **Application Document 7.3 Register of Environmental Actions and Commitments**, **Application Document 7.8 Outline Landscape and Ecology Management**, and **Application Document 7.14 Arboricultural Impact Assessment**. Potential impacts on these features, mitigation measures, and residual effects are presented in sections 8.7, 8.8 and 8.9 of this chapter respectively.
Paragraph 5.4.57 [part] '*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.'*	Mitigation measures are set out in section 8.8 of this chapter, **Application Document 7.2 Outline Code of Construction Practice**, and **Application Document 7.3 Register of Environmental Actions and Commitments** to reduce significant harm to important ecological features, including protected species and their habitats. Residual effects are detailed in section 8.9 of this chapter.
Paragraph 5.12.10 '*Some noise impacts will be controlled through environmental permits and parallel tracking is encouraged where noise impacts determined by an environmental permit interface with planning issues (i.e. physical design and location of development). The applicant should consult the EA [Environment Agency] and/or the SNCB, and other relevant bodies, such the MMO [Marine Management Organisation] or NRW [Natural Resources Wales], as necessary, and in particular regarding assessment of noise on protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be considered.'*	Effects on protected and notable species due to noise disturbance during construction are detailed in section 8.9 of this chapter, with effects on birds detailed in **Application Document 6.9 Chapter 9 Ornithology**.

Table 8.2 – NPS EN-5 sections relevant to ecology

NPS EN-5 section	Where this is covered in the application
Paragraph 2.9.17 of EN-5 states that: 'In brief, the Holford Rules state that applicants should: • *Avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if total mileage is somewhat increased in consequence;* • *Avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers, i.e. the bigger structures which are used when lines change direction; …'*	**Application Document 5.9 Design Development Report** describes how the Project has been developed to avoid areas of highest amenity. **Application Document 6.3 Chapter 3 Main Alternatives Considered** sets out the alternatives considered and the main reasons for the option chosen, taking into account the effects of the Project on the environment. The proposed overhead line has been planned to avoid designated ecological sites, areas of geological conservation and areas of scientific interest through deviation, as far as practicable.

Table 8.3 – NPPF sections relevant to ecology

NPPF section	Where this is covered in the application
Policy N2: Improving the natural environment states: *'1. To contribute positively to the natural environment, and support nature's recovery, development proposals should:* *a) Consider the environmental qualities of land proposed for development, including habitats, landscape character and the natural beauty of the countryside, and identify opportunities for those qualities to be conserved or enhanced (including through requirements for biodiversity net gain where these apply);* *…* *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, 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	In response to point 1a, the Project has been designed to avoid designated ecological sites and notable habitats through embedded measures, as far as practicable. **Application Document 5.9 Design Development Report** describes how the Project has been developed, taking into account biodiversity conservation interests and **Application Document 6.3 Chapter 3 Main Alternatives Considered** sets out the alternatives considered and the main reasons for the option chosen, taking into account the effects of the Project on the environment. This chapter provides information on how the Project has taken advantage of opportunities to conserve and enhance biodiversity. This includes embedded mitigation measures which aim to conserve and enhance biodiversity conservation interests. The Project proposes to deliver a minimum of 10 per cent BNG, with potential for wider environmental and societal benefits, on a voluntary basis. Detail on the Project's approach to voluntary BNG is provided

NPPF section	Where this is covered in the application
hedgerows) where possible; and use appropriate landscaping to help *create a well-designed place and integrate the development into its surroundings;* *e) Use green infrastructure provided as part of the scheme and nature-based solutions to secure multiple benefits: such as for biodiversity; surface water and pollution management (including maintaining flow rates and water quality); climate change mitigation and adaptation, and recreation;* *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* *g) Ensure that green infrastructure and other features to support nature are located and designed to minimise risk of future failure, and that appropriate measures are in place for any necessary long-term management.* *2. If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated or, as a last resort, compensated for, then the development should be refused.*	in **Application Document 7.20 Design Development Report - 2025** and **Application Document 7.1 Biodiversity Net Gain Report.** In response to points 1c and 1d, this chapter sets out information on how the Project has sought to minimise impacts, as far as practicable, and provide gains for biodiversity, including establishing coherent ecological networks which may support protected or notable species. Landscape proposals are outlined in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. In response to point 1e, Mitigation planting areas are proposed across the Project Order Limits; these are 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 woodland areas, and/or provide links between existing areas of habitat. In response to points 1f ,1g and 2, this chapter sets out the effects on designated sites of ecological importance, protected species and on habitats and other species identified as being of Principal Importance for the conservation of biodiversity. Mitigation measures are set out in section 8.8 of this chapter, **Application Document 7.2 Outline Code of Construction Practice**, and **Application Document 7.3 Register of Environmental Actions and Commitments** to reduce significant harm to important ecological features, including protected species and their habitats. Residual effects are detailed in section 8.9 of this chapter. Mitigation planting areas are proposed across the Order Limits; these are shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. Opportunities to enhance habitats beyond the Project are documented in **Application Document 7.1 Biodiversity Net Gain Report**. The Project proposes to deliver a minimum of 10 per cent BNG, with potential for wider environmental and societal benefits, on a voluntary basis. Detail on the Project's approach to voluntary BNG is provided in **Application Document 7.20 Design Development**

NPPF section	Where this is covered in the application
	Report - 2025 and **Application Document 7.1 Biodiversity Net Gain Report.**
Policy N3: Trees in new development states*:* *'1. In recognition of the benefits which trees can provide for biodiversity, climate change mitigation and adaptation, and the character and quality of the built environment, development proposals should:* *a) Make new streets tree-lined (unless there are strong reasons why this would be inappropriate in specific streets), and incorporate trees in other suitable locations, such as in parks and through the provision of community orchards;* *b) Ensure that the selection of species and their placement is compatible with highways and other infrastructure requirements and the needs of different users of public spaces; and will be effective in helping to adapt to the effects of climate change and delivering other environmental benefits. Suitable arboricultural advice should be sought, and proposals discussed with highways and trees officers where necessary, so that the right trees are planted in the right places; and* *c) Make provision for the long-term maintenance of both existing and newly-planted trees which form part of the development.'*	The Project has been designed to avoid trees, particularly veteran trees, as far as practicable. An Arboricultural Impact Assessment is provided as **Application Document 7.14 Arboricultural Impact Assessment**, with Appendix E specifically relating to veteran trees. Mitigation planting areas (include tree planting) are located in key locations through the Project. The locations of these areas are detailed within **Application Document 6.4.F1 Figure 4.1 Proposed Project Design** and discussed in **Application Document 7.8 Outline Landscape and Ecology Management Plan.** This chapter and **Application Document 7.1 Biodiversity Net Gain Report** set out how the Project proposes to secure net gains for biodiversity. Noting that the Project proposes to deliver a minimum of 10 per cent BNG, with potential for wider environmental and societal benefits, on a voluntary basis. Detail on the Project's approach to voluntary BNG is provided in **Application Document 7.20 Design Development Report - 2025** and **Application Document 7.1 Biodiversity Net Gain Report**.
Policy N6: Areas of particular importance for biodiversity and geodiversity states: *'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*	In response to point 1a, a report to inform Appropriate Assessment has been provided as **Application Document 5.2 Habitats Regulations Assessment Report**. In the assessment, it was concluded that no adverse effect on the integrity of any Habitats sites would arise, from the Project alone or in combination with other plans or projects. This is based on adverse effects on the integrity of Habitats sites being negated by a combination of seasonal restrictions to works, implementation of noise and visual disturbance measures, and provision of enhanced land parcels to mitigate effects on FLL.

NPPF section	Where this is covered in the application
individually or in combination with other developments), or the proposal can satisfy the derogation tests[3]; 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 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. The benefits of development in the location proposed clearly outweigh the likely impact on the features which make the site valuable for nature conservation.*	In response to point 1b, this chapter assesses the effects of the Project on designated sites of ecological importance, including SSSIs. The effects of the Project on SSSIs in relation to ecological, ornithological and geological features are summarised in **Application Document 6.8.A11 Summary of Assessments for Sites of Special Scientific Interest**. No significant effects are identified. Measures to protect SSSIs are set out in this chapter and in**Application Document 7.2 Outline Code of Construction Practice** and **Application Document 7.3 Register of Environmental Actions and Commitments**. Potential cumulative effects are set out in **Application Document 6.20 Chapter 20 Intra-project Cumulative Effects** and **Application Document 6.21 Chapter 21 Inter-project Cumulative Effects**. In response to point 1c, this chapter assesses the effects of the Project on locally designated sites of ecological importance (statutory and non-statutory). Measures to reduce residual adverse effects on locally designated site are set out in this chapter and in **Application Document 7.2 Outline Code of Construction Practice** and **Application Document 7.3 Register of Environmental Actions and Commitments**. In response to point 2, this chapter sets out the effects on irreplaceable habitats. The baseline ecological conditions (gained through desk-study and surveys) within the Order Limits and relevant Zones of Influence (ZoIs) are presented in this chapter and in **Application Document 7.14 Arboricultural Impact Assessment**, **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report** and **Application Document 6.8.A4 Appendix 8.4 Botanical Report**. No areas of woodland on the Ancient Woodland Inventory (Natural England, 2026) or the associated Ancient Woodland - Revised

[3] Where significant harm cannot be mitigated, it may be appropriate to consider whether suitable compensation would be acceptable

NPPF section	Where this is covered in the application
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.	(England) - Completed Counties dataset (Natural England, 2026) will be lost to the Project. **Application Document 7.14 Arboricultural Impact Assessment** details that based upon the Project design as set out in **Application Document 6.4 Chapter 4 Description of the Project** all veteran trees are retained. However, if, during detailed design the LoD for the proposed overhead line is used to the south of its location one veteran tree (T4, common oak) in Route Section A would require removal in order to construct a safe and reliable power grid.

National Planning Practice Guidance

8.2.27 The NPPF (Ministry of Housing, Communities & Local Government, 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 & Local Government, 2026) policies. The PPG that is relevant to the ecology assessment is summarised below.

Planning Practice Guidance for Natural Environment

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

Regional and Local Policy

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

8.2.30 A range of regional and local planning policies are in place that seek to protect and enhance ecological features; these have been given due regard in the ecology 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 6.8.A1 Appendix 8.1 Regional and Local Planning Policy**.

8.3 Scoping Opinion and Consultation

Scoping Opinion

8.3.1 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 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 8.4 sets out the comments raised in **Application Document 6.5.A2 Appendix 5.2 Scoping Opinion** that are relevant to ecology 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.

Table 8.4 – 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**	Designated sites with mobile qualifying criteria, for example birds, have not been scoped out of the assessment. Permanent and temporary loss,

ID	Inspectorate's comments	Response
	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.	disturbance, and fragmentation of supporting/foraging habitat (including FLL), has been assessed in the ES. Effects specifically relating to birds and FLL are detailed in **Application Document 6.9 Chapter 9 Ornithology**. Designated sites (both with and without mobile qualifying criteria) located in the relevant study areas (including those beyond 2 kilometres (km)) have been considered in terms of potential indirect impacts that could occur. Sites beyond 2 km are not assessed where there is no likely pathway for significant effects to occur, such as hydrological pathways, and where there are no mobile qualifying criteria which could be affected by loss of supporting habitats outside of the designated site.
3.3.2	**Incidental mortality of protected or notable species (Invertebrates) – Construction and Operation (Maintenance activity) Appropriate mitigation will be agreed with the relevant stakeholders and will be secured and embedded within the appropriate documents.** The Applicant proposes to scope out this matter for all phases for the receptor identified on the basis that it is unlikely that notable population assemblages will be significantly affected by direct mortality once mitigation measures are in place. The Inspectorate is content that this matter can be scoped out, subject to appropriate mitigation measures agreed with the relevant stakeholders, secured and embedded within control documents.	The Inspectorate's comments are noted, however effects on protected or notable species (invertebrates) have been scoped in and are assessed in section 8.9.
3.3.3	**Impacts to common and widespread habitats of low sensitivity and/or conservation interest.** The Applicant proposes to scope out this matter. However, the Inspectorate considers that there is currently insufficient information regarding the habitats the Applicant has classified to be of low sensitivity and/or conservation interest, together with the scale of any temporary/permanent loss, and therefore cannot agree that significant effects would not be likely.	Habitats recorded as present within the Order Limits and relevant ZoI are presented in section 8.6 of this chapter, along with their assigned value. As per the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (Chartered Institute of Ecology and Environmental Management, 2024) the assessment focuses on habitats and species that are relevant, i.e. ecological features

ID	Inspectorate's comments	Response
		considered important and potentially affected by the Project. In its guidance, CIEEM makes clear that there is no need to: '*…carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*'. However, the mitigation measures set out in section 8.8 of this chapter will help to safeguard wider biodiversity. As stated in paragraph 8.4.27 of this chapter, all 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 the impact assessment presented in section 8.9 and are the relevant ecological features for the purposes of the Ecological Impact Assessment (EcIA).
3.3.4	**Chesterfield Canal Site of Special Scientific Interest (SSSI).** The Applicant's attention is drawn to the consultation response from the Canal and River Trust (Appendix 2 of this Opinion). This states that a section of the Chesterfield Canal is a designated SSSI and, although it is designated primarily for the nationally uncommon aquatic plant community, it is an important flight line for birds and bats. The Inspectorate therefore advises that any cable crossings have measures in place to reduce the risk of cable strikes by birds and that any construction phase activities should be kept away from the canal corridor to minimise any disturbance. The ES should also provide full details of habitat loss in proximity to the Chesterfield Canal SSSI, including an assessment of the extent of vegetation loss. Any proposed mitigation measures should be agreed with the relevant stakeholders.	Potential effects on Chesterfield Canal SSSI have been assessed in section 8.9 of this chapter. Table 8.19 provides details of any impacts to habitats in proximity to the Chesterfield Canal SSSI and mitigation measures that will be carried out to prevent residual significant effects on the SSSI. Effects in relation to birds using the canal as a flight line are provided in **Application Document 6.9 Chapter 9 Ornithology**. Measures that will be carried out to protect designated sites and habitats are detailed in **Application Document 7.3 Register of Environmental Actions and Commitments**. The canal corridor will continue to be available to commuting and foraging bats during construction and operation of the Project, with measures put in place to restrict the potential for disturbance associated with lighting.

Statutory Consultation

8.3.2 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 ecology is provided below in Table 8.5. Further details on how consultation responses have informed the assessment are provided in **Application Document 5.1 Consultation Report**.

Table 8.5 – Assessment aspects raised at statutory consultation and how these have been addressed

Stakeholder	Assessment aspects raised	How this has been addressed
Natural England	Whilst it is acknowledged that a separate ornithology chapter is beneficial due to the significant amount of Ornithology survey and assessment required, Natural England recommends including in the ecology chapter a summary of all SSSIs that could be impacted, referencing where further assessment may have taken place in other chapters. This will help to ensure it is clear that all relevant sites/impacts have been considered.	**Application Document 6.8.A2 Appendix 8.2 Designated Sites Information** provides details on the SSSIs located within the relevant ecology study areas; these are illustrated in **Application Document 6.8.F1 Figure 8.1 International Sites Designated for Nature Conservation** within 10 km and National and Local Statutory Designated Sites within 5 km. Within this chapter Table 8.13 presents all SSSIs in the study area and provides justification for their inclusion in the ecology assessment or otherwise, i.e. where there is an absence of impact pathways, and impacts are detailed in Table 8.18. Impacts to ornithological receptors using SSSIs are provided in **Application Document 6.9 Chapter 9 Ornithology.** A summary of the overall effects on each SSSI[4] is provided in **Application Document 6.8.A11 Summary of Assessments for Sites of Special Scientific Interest.**
Natural England	Natural England advise that the ES should include rationale for the absence of impacts to all the SSSIs identified within the study area, for complete transparency & clarity for the examination.	Table 8.13 in this chapter presents all SSSIs located within the study area and provides justification for their inclusion in the ecology assessment or otherwise, where there is an absence of impact pathways.
Natural England	Natural England would expect to see all efforts made to avoid any development within the Brantingham Dale SSSI boundary. We therefore encourage the micro-siting of the tower outside the designated site to avoid any impacts. If this is not achievable and there will be a loss of habitat then compensation measures will be required and should be	As part of the Project's iterative design process, and in response to Natural England's comments, the pylon working area has been moved outside the boundary of the SSSI, as shown on **Application Document 6.4.F3 Figure 4.3 Temporary Construction Works**. However, there will be some vegetation management along part of the edge of the

[4] The study area used to identify SSSIs that could be potentially impacted by the Project comprises the Order Limits excluding the FLL compensation area and the public right of way temporary diversion in the Adlingfleet area (both in Rote Section B), plus a 5 km buffer.

Stakeholder	Assessment aspects raised	How this has been addressed
	presented within the ES. If there is temporary loss of habitat, a restoration plan should be developed. Potential for construction pollution (e.g. petrol spills) which will damage notified features should also be assessed and mitigated.	SSSI, to facilitate the proposed overhead line and its operational requirements. Impacts are discussed in Table 8.18, noting that vegetation management is in keeping with existing management of the SSSI. This has been discussed with Natural England in stakeholder meetings, as set out in Table 8.6. This chapter considers construction pollution in Table 8.19. **Application Document 7.3 Register of Environmental Actions and Commitments** includes pollution prevention measures. A summary of the overall effects on each SSSI[4] is provided in **Application Document 6.8.A11 Summary of Assessments for Sites of Special Scientific Interest**.
Natural England	The mitigation proposed for Chesterfield Canal SSSI appears suitable in principle, however, specific avoidance methods and construction management measures are not yet finalised for the crossing point. The use of a clear span bridge is welcomed, although it is noted this is yet to be confirmed as the final design. Natural England would welcome further discussion regarding construction methods and mitigation measures for this SSSI. Indirect impacts including dust, water pollution, traffic pollution and introduction of INNS also need to be considered.	Chesterfield Canal SSSI will be crossed using a clear span bridge[5], or other suitably assessed alternative, as shown on **Application Document 6.4.A2 Appendix 4.2 Indicative Bridge and Culvert Schedule** and **Figure A4.2.1 Bridge and Culvert Watercourse Crossings**. The scaffolding either side of the SSSI will be set back from the boundary of the SSSI-retaining bankside vegetation. Potential indirect impacts, including INNS, dust, and other pollution are also considered. Mitigation measures specifically relating to Chesterfield Canal are included in Table 8.19 of this chapter and in **Application Document 7.3 Register of Environmental Actions and Commitments**. Chesterfield Canal SSSI has been discussed with Natural England in stakeholder meetings, as set out in Table 8.6. A summary of the overall effects on each SSSI[4] is provided in **Application Document 6.8.A11 Summary of Assessments for Sites of Special Scientific Interest**.

[5] A clear span bridge is a structure which crosses a stream or channel completely from bank top to bank top without any piers, supports, or pilings placed inside the water channel. The supports on either side of the channel sit outside or safely set back from the natural flow.

Stakeholder	Assessment aspects raised	How this has been addressed
Natural England	Mother Drain is crossed by the Order Limits just upstream of the 'Mother Drain, Misterton' SSSI. As a result, any pollutants introduced to the watercourse during construction have the potential to have an adverse effect on the aquatic and marginal vegetation at the site, which support the exceptionally rich invertebrate fauna for which the SSSI is notified. The appropriate implementation of the Code of Construction Practice (CoCP) is considered likely to avoid an adverse effect on this SSSI. The CoCP must include this site as a sensitive receptor to ensure these impacts are avoided. At present, impacts via dust and water pollution to this SSSI have been grouped together under the Receptor 'Statutory designated sites within the study area, outside of the draft Order Limits'. Natural England advise that dust and water pollution impacts to this SSSI should be assessed individually within the ES.	The undesignated section of Mother Drain will be crossed by the proposed overhead line, at height (between pylons 4AF171 and 4AF172), but the watercourse will not be crossed by any access roads as shown on **Figure A4.2.1 Bridge and Culvert Watercourse Crossings**. Drainage associated with the construction access and working area will either infiltrate water at the source or will discharge into the drain. Measures relating to the treatment of drainage water are set out in **Application Document 7.2 Outline Code of Construction Practice**, and **Application Document 7.3 Register of Environmental Actions and Commitments**. Mother Drain, Misterton SSSI is approximately 0.65 km from the Order Limits, and outside of the construction dust assessment study area (as detailed in **Application Document 6.15.A2 Appendix 15.2 Construction Dust Assessment and Methodology**). However, a section of Mother Drain which lies approximately 15 m from the Order Limits (at its closest point) is designated as a Local Wildlife Site (LWS), and due to its location, has been included in the construction dust risk assessment (**Application Document 6.15.A2 Appendix 15.2 Construction Dust Assessment and Methodology**). Therefore, any mitigation to prevent significant dust related effects on the section of Mother Drain that is designated as a LWS would also benefit the SSSI, which is further downstream from Order Limits and outside of the construction dust assessment study area. Effects on Mother Drain, Misterton SSSI are assessed in section 8.9 of this chapter. Mitigation measures relating to water pollution and dust are presented in section 8.8 of this chapter, **Application Document 6.15 Chapter 15 Air Quality**, **Application Document 7.2 Outline Code of Construction Practice**, and **Application Document 7.3**

Stakeholder	Assessment aspects raised	How this has been addressed
		Register of Environmental Actions and Commitments. Although some indirect effects remain grouped for designated sites within this chapter, a summary of the overall effects on each individual SSSI[4] is provided in **Application Document 6.8.A11 Summary of Assessments for Sites of Special Scientific Interest**.
Natural England	At present, impacts to Treswell Wood SSSI via dust and water pollution have been grouped together under the Receptor 'Statutory designated sites within the study area, outside of the draft Order Limits'. Natural England advise that dust and water pollution impacts to this SSSI should be assessed individually within the ES.	Effects on Treswell Wood SSSI due to indirect dust and water pollution impacts are presented in section 8.9 of this chapter. Additionally, an assessment of the effects of construction dust on ecological receptors (including SSSIs) is contained in **Application Document 6.15 Chapter 15 Air Quality** and referenced in this chapter. Although some indirect effects remain grouped for designated sites within this chapter, a summary of the overall effects on each individual SSSI[4] is provided in **Application Document 6.8.A11 Summary of Assessments for Sites of Special Scientific Interest**.
East Riding of Yorkshire Council	The council request that at a minimum all priority habitats, woodlands, hedgerows and semi-improved grasslands are subject to further survey with poor semi-improved grassland considered dependent on timing of the initial Phase 1 survey.	More detailed botanical surveys (including National Vegetation Classification (NVC) surveys, where appropriate) were carried out in Summer 2025. These surveys targeted affected locations within the Order Limits where the Phase 1 habitat survey identified habitat as being particularly species diverse and/or sensitive and/or a type restricted in the UK/region. This included areas of grassland and woodland as appropriate.
East Riding of Yorkshire Council	The council suggest terrestrial invertebrate and reptile surveys for Brantingham Dale and support terrestrial invertebrates at the Humber Estuary.	Through the Project's iterative design process, working areas have been adjusted to avoid the Humber Estuary SSSI, therefore only ornithological surveys have been necessary for this designated site, and effects are assessed within **Application Document 6.9 Chapter 9 Ornithology**.

Stakeholder	Assessment aspects raised	How this has been addressed
		Areas of woodland in the Brantingham area will be oversailed by the proposed overhead line resulting in temporary habitat loss and disturbance, with the permanent loss of trees. The siting of pylons will also involve some tree loss. However, this will open up some areas of woodland, potentially increasing the suitability of the habitat in the long-term for reptiles and certain invertebrates, with the surrounding woodland retained. Large areas of this woodland are plantations, with evidence of repeated clear felling and replanting in recent years. Areas of woodland planting to mitigate for the losses within Brantingham Dale have been included as additional mitigation measures as part of the Project; these are detailed in **Application Document 7.8 Outline Landscape and Ecology Management Plan**, and are shown on **Application Document 6.4.F1 Figure 4.1 Proposed Project Design** Desk-study records and survey observations, along with the majority of the route being of suboptimal habitat for reptiles, suggest that they are unlikely to be present in large numbers, and that standard reptile mitigation measures would be appropriate to avoid harm to any reptiles present. Measures that will be carried out to protect reptiles during construction are detailed in **Application Document 7.3 Register of Environmental Actions and Commitments**. Desk-study records did not suggest that protected invertebrate species are present within Brantingham. Most of the route is suboptimal habitat for invertebrates, with more suitable habitat areas being less affected by the required works, such as the restringing of existing pylons by Keadby Power Station in Route Section C. Surveys have not been carried out in these areas to support the ecology assessment. Working areas have been adjusted to avoid being sited within Brantingham Dale SSSI, however some

Stakeholder	Assessment aspects raised	How this has been addressed
		tree and vegetation management will be required due to the operational requirements of the proposed overhead line. This may be of benefit to the calcareous grasslands present 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. This may also be of benefit for invertebrates.
Bassetlaw District Council	We request that Bassetlaw Local Plan Policy ST38: Biodiversity and Geodiversity is included.	Consideration of Policy ST38 is included in **Application Document 6.8.A1 Appendix 8.1 Regional and Local Planning Policy**.
Bassetlaw District Council	It is expected the application will make a full assessment of the proposals potential to impact upon protected sites although it is clear the chosen route avoids direct land take, there may be indirect impacts and impacts upon functionally linked land.	Impacts to protected sites including FLL/habitats are assessed as required. Impacts to FLL used by birds are assessed in **Application Document 6.9 Chapter 9 Ornithology**. A report to inform Appropriate Assessment has been provided at **Application Document 5.2 Habitats Regulations Assessment Report**. A summary of the overall effects on each individual SSSI[4] is provided in **Application Document 6.8.A11 Summary of Assessments for Sites of Special Scientific Interest**.
Lincolnshire Wildlife Trust	Cumulative impacts upon sites of ecological importance and the cohesion of the conservation site network should be considered following standard approaches for Nationally Significant Infrastructure Projects.	Assessments of intra- and inter-project cumulative effects on important ecological features are presented in **Application Document 6.20 Chapter 20 Intra-project Cumulative Effects** and **Application Document 6.21 Chapter 21 Inter-project Cumulative Effects**.
Canal and River Trust	The removal of vegetation and shading of Chesterfield canal to facilitate the temporary construction access bridge crossing could have a significant impact on the ecology of the canal and SSSI. Full details of this impact and potential mitigation should be provided within the final ES to inform the application.	Chesterfield Canal SSSI will be crossed using a clear span bridge, or other suitably assessed alternative. As set out in the relevant commitment within **Application Document 7.3 Register of Environmental Actions and Commitments**, the scaffolding either side of the SSSI will be set back from the boundary of the SSSI, retaining bankside vegetation, and

Stakeholder	Assessment aspects raised	How this has been addressed
		hedgerows and a tree (T170, Crack willow - *Salix fragilis*) within the SSSI will be managed to reduced height (for overhead line clearance) only, and not removed. Potential indirect impacts, including INNS, dust, and other pollution are also considered in section 8.9. An assessment of effects on Chesterfield Canal and SSSI is provided in Table 8.19 of this chapter. Mitigation measures are presented in section 8.8 of this chapter, **Application Document 7.2 Outline Code of Construction Practice**, and **Application Document 7.3 Register of Environmental Actions and Commitments**. A summary of the overall effects on each individual SSSI[4] is provided in **Application Document 6.8.A11 Summary of Assessments for Sites of Special Scientific Interest**.
Canal and River Trust	Should piling works be proposed for any pylons, we wish to highlight that such works can result in disturbance from vibration. As a result, we believe the impact should be included as part of the overall assessment. The impact of vibrational impacts on bats will be considered in the ES. It is request that impacts on waterborne species, including fish, should also be considered, with specific attention given to the impact of piling operations.	Indicative foundation types are shown in **Application Document 6.4.A1 Appendix 4.1 Indicative Pylon Schedule**, and a range of foundation types are proposed. The ecology assessment assumes all foundations would be piled, as a worst-case. An assessment of effects on aquatic species is provided in Table 8.21 of this chapter. Indirect impacts to bats and waterborne species, including lighting, noise, and vibration are considered as part of the assessment, in Table 8.21.
Environment Agency	Impact assessment on fish from percussive piling near watercourses has not been assessed. Noise associated with percussive piling may affect natural migratory fish behaviour and in extremities, kill fish. The ES should include an assessment of noise impacts from piling on fish species, particularly in the River Ouse.	Indicative foundation types are shown in **Application Document 6.4.A1 Appendix 4.1 Indicative Pylon Schedule**, and a range of foundation types are proposed. However, the ecology assessment assumes all foundations would be piled, as a worst-case. An assessment of effects on aquatic species is provided in Table 8.21 of this chapter. This includes consideration of noise and vibration effects from piling.

Stakeholder	Assessment aspects raised	How this has been addressed
Environment Agency	European eel (*Anguilla anguilla*) not included in the baseline data. Impact-pathways from the proposal on this protected fish species may not be assessed in the EIA. This could lead to harm to the species and its habitat. European eel are present in most waterbodies where there is suitable habitat and hydrological connectivity to main watercourses. They should be included in the baseline and risks to them assessed in the EIA.	**Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report** provides baseline data for eel, including desk-based study and field survey data. An assessment of effects on aquatic species, including eel, is provided in Table 8.21 of this chapter.

Stakeholder Engagement

8.3.3 National Grid Electricity Transmission plc (National Grid) has engaged with relevant stakeholders throughout the evolution of the Project, including East Riding of Yorkshire Council, North Lincolnshire Council, Bassetlaw District Council, Nottinghamshire County Council[6], Natural England, and the relevant Wildlife Trusts.

8.3.4 A summary of discussions and how these have influenced the scope and the approach to the ecology assessment are provided in Table 8.6. Ornithological matters are discussed in the corresponding section of **Application Document 6.9 Chapter 9 Ornithology**.

[6] The Project is located within the administrative boundaries of East Riding of Yorkshire Council, North Lincolnshire Council and Bassetlaw District Council, which forms part of the two tier local government authority area of Nottinghamshire, where Nottinghamshire County Council is the upper tier authority

Table 8.6 – Further engagement

Organisation and date	Summary of issues raised	How this has been addressed
Natural England 03 July 2022	Overview of potential projects that National Grid could support, such as the Royal Society for the Protection of Birds (RSPB) with, wetlands enhancement. Overview of Brantingham Dale SSSI and how it could potentially be impacted by the Project. Overview of ecology surveys and data collated.	Meeting informed decisions on mitigation and enhancement measures for the Project. The ecology survey findings are summarised in section 8.6 of this chapter and are detailed in **Application Documents 6.8.A3** to **6.8.A10 and 6.8.A12**. Information relating to bird surveys and mitigation is provided in **Application Document 6.9 Chapter 9 Ornithology**. Effects on Brantingham Dale SSSI and mitigation, such as provision of mitigation planting areas, are detailed in Table 8.19 of this chapter. See also **Application Document 7.3 Register of Environmental Actions and Commitments**, and **Application Document 7.8 Outline Landscape** and **Ecology Management Plan**.
Natural England 19 August 2024	Overview of survey progress and discussion regarding licensing approach for great crested newt (*Triturus cristatus*) (GCN), bats and hazel dormouse (*Muscardinus avellanarius*). Discussion regarding Brantingham Dale SSSI. Natural England confirmed that the notified feature is grassland, which in places is being encroached by scrub. Discussion regarding Chesterfield Canal SSSI, with Natural England agreeing that due to the aquatic nature and proposed construction methods, impacts could be mitigatable. Agreement for National Grid to provide construction methodologies to Natural England which concern the crossing of SSSIs. Overview of woodland surveys carried out to date, with a commitment for the Project to avoid areas of woodland on the Ancient Woodland Inventory. Natural England advised that ancient woodland under 2 hectares (ha) may not be	Meeting informed decisions on survey and licensing approaches for protected species impacted by the Project and mitigation for SSSIs. The ecology survey findings are summarised in section 8.6 of this chapter and are detailed in **Application Documents 6.8.A3** to **6.8.A10 and A12**. Anticipated licence requirements (subject to pre-construction surveys) are also set out in **Application Documents 6.8.A3** to **6.8.A10** and **6.8.A12**, where relevant. The Statement of Common Ground is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**. Potential effects on Brantingham Dale SSSI and Chesterfield Canal SSSI, and proposed mitigation, are detailed in Table 8.19 of this chapter. The crossing of Chesterfield Canal SSSI has been confirmed to be via clear span bridge or suitably assessed and approved alternative, as per the relevant

Organisation and date	Summary of issues raised	How this has been addressed
	present on the Ancient Woodland Inventory and that 16th Century woodland is considered ancient without designation. Natural England advised that as Nottingham isn't part of a GCN District Level Licence (DLL) scheme the Project should not assume DLL can be used. Either a bespoke or a traditional route for surveys and licensing may be required for the Nottinghamshire area. Natural England confirmed that DLL in both Nottinghamshire and Lincolnshire is on hold due to difficulties Natural England is having implementing them at this time. Natural England confirmed that service level agreement is in place to support Natural England resourcing the Project. Natural England advised that producing a bespoke project-wide licence may be excessive if it is relatively simple for the Project to follow the standard licensing regime. Natural England also clarified that if National Grid can show ecological risks, their team can help with the approach to a solution which isn't all the way to DLL. Overview of the approach to bat surveys being carried out for the Project. Natural England confirmed that a response to the latest bat survey guidelines was going to be prepared but timescales for this were unconfirmed.	commitment within **Application Document 7.3 Register of Environmental Actions and Commitments**. Areas of ancient woodland included on the Ancient Woodland Inventory (Natural England, 2026) and revised county-by-county dataset (Natural England, 2026)[2] have been avoided by the Project design. The Project has identified areas of woodland within the Order Limits which is not on the Ancient Woodland Inventory or the revised dataset, but which is considered as having characteristics of ancient woodland. Effects on this woodland and mitigation is set out in sections 8.8 and 8.9 of this chapter.
Natural England 25 November 2024	Key ecology survey findings to date, anticipated protected species licence requirements, approach to Letters of No Impediment and Statement of Common Ground.	The ecology survey findings are summarised in section 8.6 of this chapter and are detailed in **Application Documents 6.8.A3** to **6.8.A10 and 6.8.A12**. Anticipated licence requirements (subject to pre-construction surveys) are also set out in **Application Documents 6.8.A3** to **6.8.A10** and **6.8.A12**, where relevant. The Statement of Common Ground is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**.

Organisation and date	Summary of issues raised	How this has been addressed
Natural England 4 July 2025	Overview of the bat survey work that had been undertaken to date and the proposed approach to bat roost surveys, with justification.	Natural England's advice and comments were incorporated into the proposed bat roost survey methods, which were subsequently agreed by Natural England, prior to survey. Bat survey methods and survey data are detailed in **Application Document 6.8.A7 Appendix 8.7 Bat Roost Report** and **Application Document 6.8.A8 Appendix 8.8 Bat Activity Report**.
Natural England 24 July 2025	Approaches to survey and licensing for otter (*Lutra lutra*), water vole (*Arvicola amphibius*), and badger (*Meles meles*). Overview of hazel dormouse records and approach to survey and licensing. Approaches to survey for GCN. Licensing approach for GCN and whether a DLL is a potentially suitable option. Natural England agreed a DLL application for the whole route would be acceptable.	Natural England guidance and comments were incorporated into the survey methods, which were agreed by Natural England, prior to survey. The survey method s and findings, and approaches to licensing for GCN, otter, water vole, badger, and hazel dormouse are presented in **Application Document 6.8.A5 Appendix 8.5 Badger Report (Confidential)**, **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**, **Application Document 6.8.A9 Appendix 8.9 Hazel Dormouse Report** and **Application Document 6.8.A12 Appendix 8.12 Great Crested Newt Report for Nottinghamshire**. The ecology survey findings are summarised in section 8.6 of this chapter. The Statement of Common Ground is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**.
Natural England 19 January 2026	Update regarding confirmed GCN ponds and licensing strategy. Natural England confirmed no change to thoughts since previous discussion and still happy to accept a DLL application for the whole route.	The ecology survey findings are summarised in section 8.6 of this chapter and are detailed in **Application Documents 6.8.A3** to **6.8.A10** and **6.8.A12**. Anticipated licence requirements (subject to pre-construction surveys) are also set out in **Application Documents 6.8.A3** to **6.8.A10** and **6.8.A12**, where relevant. The Statement of Common Ground

Organisation and date	Summary of issues raised	How this has been addressed
	Overview of otter surveys and updated crossing points. Discussion regarding works close to identified otter resting sites and holts and interactions with mitigation buffers. Proposed artificial holt discussed and fencing area set out to demonstrate mitigation. Natural England recommended closure of a holt if would be impacted by the Project as simpler to consider it functionally lost and discussed importance of monitoring in case it is a natal holt. Update regarding cameras set up to monitor identified otter holts. Natural England confirmed that methods of works will impact a decision on whether the programme is acceptable. Overview of water vole surveys and remaining surveys in 2026. Overview included identified habitat improvement measures and the locations of these in relation to the current design at the time of the meeting. The water vole licence strategy for the Project was presented to Natural England. Where clear span bridges (or suitably assessed and approved alternatives which also avoids affecting the bank within 5 m of the watercourse) cannot be used, a licence will be sought and mitigation areas identified for habitat enhancement. Natural England encouraged the use of a water vole CL31 licence[7] and general support for this approach, as long as any new water vole mitigation locations are at a suitable distance from the existing identified locations. Natural England reaffirmed advice to continue works to check water vole populations and any changes and that an A11 licence application[8] could be required if changes occur.	is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**. Mitigation in relation to protected species is 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**.

[7] Licence to intentionally damage or destroy water vole burrows by displacement (CL31)

[8] Water vole mitigation licence application form (A11)

Organisation and date	Summary of issues raised	How this has been addressed
	Overview of dormouse surveys and works close to confirmed presence. Showed proposed licence area and discussed reasonings behind it. Natural England confirmed support for approach and emphasised connecting habitats. Overview of badger surveys, findings and which setts are likely to be impacted by the Project. Example area discussed with Natural England where trees require removal or management in proximity to a badger sett but could potentially be cut to above ground level using soft felling techniques. Natural England confirmed that the suitability of this technique would be dependent on the Main Work Contractor(s) being able to design out the impact to the sett and land around it and that the use of hand tools is usually preferred. Natural England stated that if heavy plant machinery is needed within a badger mitigation buffer Natural England would want it to be covered with a licence. Overview of bat surveys and results recorded to date. Natural England confirmed that as no roosts had been confirmed then it would be challenging for Natural England to provide impact confirmations, and that more survey results would be needed for certainty. A draft licence is preferred to be commented on by Natural England rather than method statement, and the advice was to continue to undertake surveys until confident that a licence is required or if none required, to satisfy the evidence base for a decision. Natural England encouraged any work to build up evidence base for approach. Natural England can undertake a review of a draft bat licence (for anticipated roosts if none found at the time) but it would be difficult to provide a letter of no impediment, although comments can be provided. Natural England stated that if there are ongoing surveys the Planning Inspectorate may ask about them Examination,	

Organisation and date	Summary of issues raised	How this has been addressed
	therefore dialogue encouraged to capture progress (e.g. through Statements of Common Ground). Overview of proposed draft "ghost" licence[9] strategy. Natural England confirmed that they will comment on what is sent as part of the draft submission, but not all sections may be required for a ghost licence.	
Natural England 27 July 2026	Discussion regarding the approach to licencing for GCN. Natural England advised that in a change to previously discussed, Nottingham will not become part of a GCN DLL scheme , and therefore the Project DLL cannot cover the section of the Order Limits which lies inside Nottinghamshire. Natural England stated that Nottinghamshire will instead fall under the Environmental Delivery Plan (EDP) scheme when in use, but the timescales for the introduction of the Nottinghamshire EDP may not align with the requirements of the Project. Natural England suggested that it may be possible for a letter of no impediment for use of the EDP to be provided, but this would require legal approval. Natural England suggested that the Project instead apply for a standard mitigation licence for Nottinghamshire, using DLL for the other areas of the Project. The issue was raised that the Project does not have population survey data for Nottinghamshire as these were not needed for the previously agreed DLL approach. Discussion held on requirements for DLL for the two regions that form part of the DLL scheme (East Riding of Yorkshire and North Lincolnshire).	The survey methods and findings, and approach to licensing for GCN in Nottinghamshire are presented in **Application Document 6.8.A12 Appendix 8.12 Great Crested Newt Report for Nottinghamshire**. The survey findings are summarised in section 8.6 of this chapter. The Statement of Common Ground is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**.

[9] A ghost licence is a draft application and accompanying method statement for a protected species mitigation licence prepared in advance of a formal submission and submitted to Natural England during the consenting phase of a project. Providing that Natural England agree to the proposed methodology/mitigation they will issue a Letter of No Impediment (LONI), providing assurance to the decision-makers that a formal licence can be granted should the project be consented.

Organisation and date	Summary of issues raised	How this has been addressed
Natural England 30 July 2026	Update on the Project's approach to licencing in relation to bats, hazel dormouse, otter, and water vole. Discussion on likely requirements for mitigation and licences per species. Approach to ghost licence[9] submission and Letters of No Impediment (LONI). Natural England advised that they would be unable to provide a LONI for a precautionary bat licence if surveys showed no roosts to be present, noting that although surveys were ongoing, at the date of the meeting no bat roost had been identified.	The survey methods and findings, and approaches to licensing for bats, hazel dormouse otter, and water vole are presented in **Application Document 6.8.A7 Appendix 8.7 Bat Roost Report**, **Application Document 6.8.A9 Appendix 8.9 Hazel Dormouse Report** and **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**. The Statement of Common Ground is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**.
Natural England 18 August 2026	Discussion on NHHM licence approach in relation to GCN and badger. Overview of the GCN survey results for the Project, with particular focus on Nottinghamshire, and the potential licensing options available (as previously discussed on 27 July 2026, see above). Natural England advised that should the standard licensing route be followed for Nottinghamshire, it may be possible for a mitigation licence to be issued without population survey data being collected. Natural England advised that a LONI could be completed ahead of examination based on assuming GCN presence in each pond not surveyed. Post-consent work would be required to determine presence/absence and inform the final licencing position. Natural England advised that discussion would be needed on what needs to be contained in ghost licence[9] for a LONI. Update provided to Natural England regarding badger surveys and findings.	The survey methods and findings, and approaches to licensing for GCN (Nottinghamshire only) and badger are presented in **Application Document 6.8.A5 Appendix 8.5 Badger Report (Confidential)** and **Application Document 6.8.A12 Appendix 8.12 Great Crested Newt Report for Nottinghamshire**. The Statement of Common Ground is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**.

Organisation and date	Summary of issues raised	How this has been addressed
	With regards to potential disturbance to badger from noise and vibration, Natural England advised that there are no rules/guidance relating to decibel levels or distance, and disturbance should be assessed on a case-by-case basis. Natural England enquired about the duration of works for pylon foundations and suggested that works could be programmed to avoid badger breeding season. Discussion regarding the potential impacts to sett tunnels due to vibration associated with piling. Natural England advised that it was difficult to determine whether piling could cause tunnel collapse, which would be a reason to close a sett in advance of works. Natural England confirmed that disturbance could be licenced. Research and ground investigation work could be used to inform the risk to badger setts on a case-by-case basis. The Project asked for Natural England's thoughts on the use of existing tracks by construction traffic, advising that the tracks were currently suitable for agricultural vehicles with unlimited access. Natural England advised that providing the setts were not main setts, restricting access to certain times of the year is unlikely to be required, unless there is evidence of breeding. Constant heavy machinery could be concerning, however if use was sporadic then this could be an acceptable level of disturbance.	
Natural England 19 August 2026	Update regarding potential impacts on statutory designated sites and mitigation. Discussed Humber Estuary designated sites, and for non ornithological related impacts, it will be mainly indirect effects with the potential for reducing the height of one small tree	Potential effects on statutory designated sites and mitigation are provided in section 8.8 and 8.9 of this chapter. Survey results are detailed in, **Application Document 6.8.A5 Appendix 8.5 Badger Report (Confidential)**, **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**, **Application Document 6.8.A7 Appendix 8.7 Bat Roost Report** and **Application**

Organisation and date	Summary of issues raised	How this has been addressed
	within the boundary if required, which is not part of the reasons for designation. Discussed the works required within Brantingham Dale SSSI. Natural England confirmed that they had conducted a site visit and agree that management of vegetation (tree removal and management) required for the Project may assist in an improvement of SSSI condition as is designated for calcareous grassland. This is dependant upon mitigation and working methods that prevent damage to the grassland being used. Discussed Chesterfield Canal SSSI, Crowle Borrow Pitts SSSI and Treswell Wood SSSI. National Grid provided an update regarding surveys in relation to GCN, badger, otter, water vole, hazel dormouse, and bats. Discussed issuing of a letter of comfort for DLL (for East Riding of Yorkshire and North Lincolnshire regions) in advance of the DLL submission and subsequent issuing of certification.	**Document 6.8.A8 Appendix 8.8 Bat Activity Report**. **Application Document 6.8.A9 Appendix 8.9 Hazel Dormouse Report**, and **Application Document 6.8.A12 Appendix 8.12 Great Crested Newt Report for Nottinghamshire.** The ecology survey results are summarised in section 8.6 of this chapter. The Statement of Common Ground is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**.
North Lincolnshire Council 15 May 2023	Overview of proposed ecology scope and survey requirements.	The ecology survey methods are summarised in Table 8.8 of this chapter and are detailed in **Application Documents 6.8.A3** to **6.8.A10** and **6.8.A12**.
Nottinghamshire Wildlife Trust 25 July 2025	A meeting to discuss hazel dormouse, including current known presence and distribution of the species, and approach to survey. Nottinghamshire Wildlife Trust advised that, in their experience, the use of footprint tunnels delivers the best survey results.	Hazel dormouse habitat requirements will be considered when designing new areas of habitat which are linked to Treswell Wood SSSI. This includes reinstating temporary gaps in hedgerows and incorporating Midland hawthorn (*Crataegus laevigata*), and other suitable species. The decision was made to use nest tubes only for the hazel dormouse survey carried out for the Project (carried out in

Organisation and date	Summary of issues raised	How this has been addressed
	It was requested that woodland created as part of the Project be suitable for hazel dormouse, including for example manipulation of soils/slopes. Nottinghamshire Wildlife Trust supplied hazel dormouse records collated by the Nottinghamshire Dormouse Group between 2021 and 2025 for Treswell Wood and other surrounding woodlands where hazel dormouse reintroduction effort (as a result of the Nottinghamshire Dormouse Project) has been focused.	line with current guidance (Wells, Chanin, & Gubert, 2025)). Footprint tunnels must be used and checked during a certain period that would not allow for sufficient collection of data prior to completing ecological assessment which forms part of the ES. Due to the desk-based data/records showing presence of hazel dormouse, it was concluded that a licence application would likely be needed for the Project, with survey data providing supplementary information to inform the licence application and mitigation requirements. Therefore, the use of nest tubes was considered appropriate.
Yorkshire Wildlife Trust 11 September 2025	Overview of the Project, including routeing, pylon design and work completed to date. Yorkshire Wildlife Trust queried whether pylon design can have an effect on bird collisions. National Grid identified that in terms of collision there is greater risk from the earth wires which run between the top of each pylon. National Grid summarised the statutory consultation feedback received from Yorkshire Wildlife Trust and explained the current Project approach to delivery of BNG. Yorkshire Wildlife Trust are in the process of surveying their land holdings in the East Riding of Yorkshire.	Information relating to birds and potential collision impacts is provided in **Application Document 6.9 Chapter 9 Ornithology**. The BNG assessment is provided in **Application Document 7.1 Biodiversity Net Gain Report**, noting that the Project proposes to deliver a minimum of 10 per cent BNG, with potential for wider environmental and societal benefits, on a voluntary basis. Detail on the Project's approach to voluntary BNG is provided in **Application Document 7.20 Design Development Report - 2025** and **Application Document 7.1 Biodiversity Net Gain Report.**
Nottinghamshire County Council Bassetlaw District Council 3 February 2025	Updates were provided regarding the Project.	There were no actions from the meeting.
Nottinghamshire County Council	Overview of the ecology work carried out to date.	There were no actions from the meeting.

Organisation and date	Summary of issues raised	How this has been addressed
and Bassetlaw District Council 28 March 2025	Bassetlaw District Council confirmed they do not hold additional species records and that they are all held by the relevant Local Records Centres.	
Nottinghamshire County Council and Bassetlaw District Council 24 April 2024	Overview of proposed ecology scope and survey requirements. Nottinghamshire County Council advised the council had been involved in works to improve habitat and connectivity for hazel dormouse with landowners, and that it was something to consider for the Project.	Mitigation for hazel dormouse is presented in section 8.8 of this chapter and in **Application Document 6.8.A9 Appendix 8.9 Hazel Dormouse Report**.
East Riding of Yorkshire Council, Bassetlaw District Council and North Lincolnshire Council 11 September 2025	East Riding of Yorkshire Council – Overview of the design changes that have been made in areas where Local Wildlife Sites (LWS) are present, and the reasoning behind this. The oversailing of Brantingham Dale was also discussed. North Lincolnshire Council – Overview of the LWS that partly lie within the Order Limits (as of September 2025), and the elements of the draft design that interact with these sites. Bassetlaw District Council – Overview of the two LWS that lie partly within the Order Limits (as of September 2025), Chesterfield Canal and Retford Gate Green Lane, and how the draft design will affect these sites. All – Overview of the protected species surveys that are being carried out for the Project, mitigation and licensing approaches, including those which have been discussed with Natural England. Overview of areas where National Vegetation Classification (NVC) surveys have been carried out and identified smaller areas of calcareous grassland. No known areas of ancient woodland will be directly affected by the Project.	Potential effects on LWS and proposed mitigation are presented in Table 8.19. The ecology survey findings are summarised in section 8.6 of this chapter and are detailed in **Application Documents 6.8.A1** to **6.8.A10** and **6.8.A12**. Anticipated licence requirements (subject to pre-construction surveys) are also set out in **Application Documents 6.8.A3** to **6.8.A10** and **6.8.A12**, where relevant. The Statement of Common Ground is provided as **Application Document 5.8.3 Statement of Common Ground - Natural England**.

Organisation and date	Summary of issues raised	How this has been addressed
	A summary of the comments received from the three councils during statutory consultation, and how they have influenced the design process. No specific comments were raised.	
East Riding of Yorkshire Council 22 January 2026	Overview of the recorded locations and abundance of the notable plant species yellow bird's-nest (*Hypopitys monotropa*), in the Brantingham area and proposed mitigation options including transplantation of individuals to elsewhere within the woodland.	**Application Document 6.8.A4 Appendix 8.4 Botanical Report** details the methodology, survey area, and results of the yellow bird's-nest surveys. Potential effects and mitigation relating to this plant are presented in Table 8.21.
Canal and Rivers Trust 24 July 2026	Overview regarding potential impacts on Chesterfield Canal and mitigation requirements. Requested information on potential effects on Stainforth and Keadby Canal.	Potential effects on and proposed mitigation for Chesterfield Canal SSSI and LWS, and Stainforth and Keadby Canal LWS, are detailed in Table 8.19 of this chapter. As per the relevant commitment within **Document 7.3 Register of Environmental Actions and Commitments**, the crossing of Chesterfield Canal has been confirmed to be via clear span bridge or suitably assessed and approved alternative, the scaffolding either side of the SSSI will be set back from the boundary of the SSSI thereby retaining bankside vegetation, and hedgerows and a tree (T170, Crack willow) within the SSSI will be managed to reduced height (for overhead line clearance) only, and not removed. The Stainforth and Keadby Canal will be crossed using existing bridges. As per the relevant commitment within **Document 7.3 Register of Environmental Actions and Commitments**, vegetation within the LWS will be avoided as far as is practicable, and where vegetation loss cannot be avoided the works will be undertaken and overseen by an ECoW. Information relating to birds is provided in **Application Document 6.9 Chapter 9 Ornithology**.

Summary of Scope of Assessment

8.3.5 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 8.4, statutory consultation as set out in Table 8.5 and further engagement with stakeholders as set out in Table 8.6.

Aspects scoped into the assessment

8.3.6 The following aspects have been scoped into the ecology assessment with regard to the construction, operation and maintenance of the Project:

- Temporary and permanent direct habitat loss;
- Disturbance and fragmentation of habitats, including those used by protected and notable species;
- Incidental mortality of protected and notable species;
- Disturbance to protected or notable species;
- Changes in air quality;
- Pollution impacts on designated sites and notable habitats;
- Introduction/spread of INNS; and,
- Loss/reduction in habitat quality.

Aspects scoped out of the assessment

8.3.7 The following aspects have been scoped out of the ecology assessment with regard to the construction, operation and maintenance of the Project:

- 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 phase of the Project. As agreed through **Application Document 6.5.A2 Appendix 5.2 Scoping Opinion**, the assessment of air quality during the operational phase has been scoped out due to the Project being a static structure which will not have any associated emissions during operation. 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.
- Effects on GCN are scoped out of the assessment for the sections of the Project which lie within the counties of East Riding of Yorkshire and Lincolnshire only as DLL will be used to offset the effects of the Project on GCN in these counties.
- As detailed in Table 8.4, permanent and temporary habitat loss, disturbance, fragmentation and indirect impacts to statutory and non-statutory designated sites (without mobile qualifying criteria) located greater than 2 km from the Order Limits have been scoped out for all phases of the Project where there is no likely pathway for significant effects to occur.
- As detailed in Table 8.4, impacts to common and widespread habitats of low sensitivity and/or conservation interest are scoped out of the assessment for all

phases of the Project, in line with CIEEM Guidelines for Ecological Impact Assessment (Chartered Institute of Ecology and Environmental Management, 2024).

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

8.4 Assessment Approach and Methods

8.4.1 **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 ecology assessment. An assessment of effects on ornithological features is provided separately in **Application Document 6.9 Chapter 9 Ornithology**. 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.

Guidance Specific to the Ecology Assessment

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

- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (Chartered Institute of Ecology and Environmental Management, 2024);
- Protected species and development: advice for local planning authorities (updated 2025) (Natural England and Department for Environment, Food & Rural Affairs, 2025);
- Birds of Conservation Concern (Stanbury, et al., 2021);
- The International Union for Conservation of Nature (IUCN) Red List of Threatened Species (IUCN Red List) (International Union for Conservation of Nature , 2026);
- A new vascular plant Red List for Great Britain (Stroh, et al., 2025)
- Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) (Collins, 2023);
- Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 Habitat Survey – A technique for environmental audit (revised 2016) (Joint Nature Conservation Committee, 2016);
- Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*) (Oldham, Keeble, Swan, & Jeffcote, 2000);
- Reptile Habitat Management Handbook (Edgar, 2010);
- Surveying Badgers (Harris, Cresswell, & Jefferies, 1989);
- The Water Vole Mitigation Handbook (Dean, Strachan, Gow, & Andrews, 2016);

- The Water Vole Conservation Handbook (3rd edition) (Strachan, Moorhouse, & Gelling, 2011);
- Ecology of the European Otter (Chanin, 2003);
- Hazel Dormouse Conservation Handbook (3rd edition) (Bullion, Wolton, & White, 2025);
- Hazel Dormouse Mitigation Handbook (Wells, Chanin, & Gubert, 2025);
- Guidelines for Electric Fishing Best Practice (Beaumont, Taylor, Lee, & Welston, 2002);
- Freshwater macro-invertebrate analysis of riverine samples Operational Instruction 024_08 (Environment Agency, 2014);
- Freshwater macro-invertebrate sampling in rivers Operational Instruction 018_08 (Environment Agency, 2017);
- UKTAG River Assessment Method Macrophytes and Phytobenthos: Macrophytes (River LEAFPACS2) (WFD-UKTAG, 2014);
- UKTAG River Assessment Method Benthic Invertebrate Fauna: Invertebrates (General Degradation): Walley, Hawkes, Paisley & Trigg (WHPT) metric in River Invertebrate Classification Tool (RICT) (WFD-UKTAG, 2023); and
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services (Department for Environment, Food & Rural Affairs, 2011).

8.4.3 The following have been updated since scoping: Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (Chartered Institute of Ecology and Environmental Management, 2024); Natural England and Department for Environment, Food & Rural Affairs protected species standing advice (Natural England and Department for Environment, Food & Rural Affairs, 2025); Birds of Conservation Concern (Stanbury, et al., 2021); IUCN Red List (International Union for Conservation of Nature , 2026); A vascular plant Red List for Great Britain (Stroh, et al., 2025), Hazel Dormouse Conservation Handbook (Bullion, Wolton, & White, 2025); and Hazel Dormouse Mitigation Handbook (Wells, Chanin, & Gubert, 2025). The updates have not affected the ecology scope or method of assessment. With regard to the hazel dormouse guidance, surveys were started after the guidelines were updated, so this did not impact how data were collected for this species.

Study Area

8.4.4 The study areas for ecology are presented in **Application Document 6.8.F1 Figure 8.1 International Sites Designated for Nature Conservation within 10 km and National and Local Statutory Designated Sites within 5 km** and **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km**.

8.4.5 This section describes the study areas used to gather baseline data for the ecological assessment and includes the land within the Order Limits and appropriate buffer zones as described in Table 8.7. Within each of these study areas, habitats and species have a specific ZoI relating to individual habitats, species and species groups. These are reflected in the field survey areas, which are detailed in Table 8.8.

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

Table 8.7 – Study areas for different ecological features

Study area (distance from Order Limits)	Feature
135 km	In line with **Application Document 5.2 Habitats Regulations Assessment Report**, a 135 km ZoI was used for any Habitats sites designated for grey seal (*Halichoerus grypus*) due to the typically wide range used by this species. No such sites were identified.
50 km	In line with **Application Document 5.2 Habitats Regulations Assessment Report**, a 50 km study area was used to identify any Habitats sites designated for relevant marine mammals. It can be confirmed that there are no SACs or proposed SACs designated for harbour porpoise (*Phocoena phocoena*) and harbour seal (*Phoca vitulina*) within 50 km of the Project.
30 km	A 30 km study area was used to identify SACs (as well as proposed SACs) where bats are qualifying features. No such sites have been identified.
10 km	Statutory designated sites of international nature conservation value, e.g. SACs, SPAs and Ramsar sites (as well as proposed or potential SACs, SPAs) (other than where they are designated for bats, harbour porpoise, harbour seal, and grey seal). SPAs and Ramsar sites designated for bird species with large core foraging ranges were included up to 20 km. However, these are considered in **Application Document 6.9 Chapter 9 Ornithology**.
5 km	Statutory designated sites of national and local nature conservation value, e.g. SSSIs (also referencing Natural England Impact Risk Zones for SSSIs which can be viewed on the Multi-Agency Geographic Information for the Countryside (MAGIC) website (Department for Environment, Food & Rural Affairs , 2026)), National Nature Reserves (NNRs), and Local Nature Reserves (LNRs).
2 km	Non-statutory designated sites of nature conservation value, e.g. LWSs, Wildlife Trust Nature Reserves, RSPB reserves, Roadside Nature Reserves (Lincolnshire), Verge Nature Reserves (East Riding of Yorkshire), Notified Road Verges (Nottinghamshire), designated ancient woodland, and other notable habitats (e.g. Habitats of Principal Importance (HM Government, 2006)). Records of protected and notable species received from the Local Records Centres (LRCs).

Baseline Data Gathering and Forecasting Methods

Data sources

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

- Relevant 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 relevant LRCs contacted, and the most recent dates of data received were:
  - North and East Yorkshire Ecological Data Centre (data received in December 2025);
  - Greater Lincolnshire Nature Partnership (data received in January 2026); and
  - Nottinghamshire Biological and Geological Records Centre (data received in October 2025).
- Online data resources that were reviewed were:
  - The Natural England website (Natural England, n.d.) for information on statutory designated sites of nature conservation interest and to confirm reasons for designation and their condition;
  - Ordnance Survey (OS) 1:10,000, 1:25,000, 1:50,000 and 1:250,000 scale base mapping;
  - OS Terrain® 50 mid-resolution and LIDAR Composite 2017-50 cm (digital terrain model);
  - The MAGIC website (Department for Environment, Food & Rural Affairs , 2026) to identify the location (and details) of statutory designated sites, ancient woodland, Priority Habitats, and for any granted European Protected Species Licence applications;
  - The JNCC website (Joint Nature Conservation Committee, 2026) for site information and designation details of SACs, SPAs, and Ramsar sites;
  - Aerial imagery (Google Maps);
  - East Riding of Yorkshire Biodiversity Action Plan Strategy (East Riding of Yorkshire Council, 2010);
  - Lincolnshire Biodiversity Action Plan (BAP) (Greater Lincolnshire Nature Partnership, 2015);
  - Nottinghamshire Local BAP (Nottinghamshire Biodiversity Action Group, 2020);
  - Hull and East Yorkshire Local Nature Recovery Strategy (Hull and East Yorkshire Local Nature Partnership, 2026);
  - Ouse and Humber Strategic Sub-catchment Area BAP (JBA Consulting, 2010);
  - Woodland Trust Ancient Tree Inventory (Woodland Trust, n.d.) for records of veteran and ancient trees;
  - Environment Agency Ecology and Fish Data Explorer for species records of fish, macroinvertebrate and macrophyte species (Environment Agency, 2025);

- Environment Agency Catchment Data Explorer for data on WFD waterbodies and water catchments (Environment Agency, 2025);
- National Biodiversity Network (NBN) Gateway for open-source records of crayfish (National Biodiversity Network Atlas Partnership, 2025); and
- Data held by the relevant councils, and local groups and organisations such as Wildlife Trusts, where not already accessed through the LRCs.

Site visits and surveys

8.4.8 The requirement for ecological field surveys was informed by the desk-study and extended Phase 1 habitat survey (as presented in **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report**) in addition to analysis of the Project design as it evolved.

8.4.9 The Phase 1 habitat survey followed the standard JNCC method from the Handbook for Phase 1 Habitat Survey (Joint Nature Conservation Committee, 2016). In summary, this comprised walking over the habitat within and up to 50 m from the Order Limits (where accessible and safe to do so) and recording the habitats present. The survey was extended to include an appraisal of the potential suitability of the habitats present to support protected and notable species of flora or fauna. Field signs, habitat features with potential to support protected species, and any sightings or auditory evidence were recorded when encountered.

8.4.10 Field surveys were carried out to characterise the ecological baseline within the relevant survey areas, as presented in Table 8.8. Further details regarding the definition of these survey areas and any limitations are presented in the associated survey reports within **Application Documents 6.8.A3 to 6.8.A10** and **6.8.A12**.

8.4.11 Detailed field surveys for certain protected and notable species have not been carried out to inform the ecology assessment, as detailed in paragraphs 8.4.12 to 8.4.15.

8.4.12 Terrestrial invertebrate surveys were not carried out following the desk-study and extended Phase 1 habitat survey. The dominant habitat type within the Order Limits is arable, which is unlikely to support notable invertebrate assemblages. Observations of notable invertebrate species have been recorded through the desk-study and during other ecological surveys. Consideration for any mitigation required for terrestrial invertebrates is included in this chapter.

8.4.13 Detailed field surveys for reptiles were not carried out following the desk-study and extended Phase 1 habitat survey. It is acknowledged that the four more widespread reptile species (e.g. grass snake (*Natrix helvetica*), common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*), and adder (*Vipera berus*)) may be present within the Order Limits, where permanent land-take is required. However, the land within the Order Limits is dominated by agricultural fields which are of low suitability for reptiles. The most suitable reptile habitat recorded within the Order Limits includes areas of semi-improved grassland (e.g. along field margins, hedgerow bases, watercourses and woodland areas). The majority of these habitats will be retained and protected, or will be subject to only temporary disturbance. Permanent land-take will be limited to the pylon legs. Any modified culverts will also remain in place post construction. Observations of reptile species have been recorded through the desk-study and during other ecology surveys, and mitigation required for reptiles is included in this chapter.

8.4.14 Separate species-specific surveys for hedgehog (*Erinaceus europaeus*), brown hare (*Lepus europaeus*), polecat (*Mustela putorius*), and harvest mouse (*Micromys minutus*) were not carried out as part of the assessment, as observations of these species have been obtained through the desk-study and recorded during other ecological field surveys. Mitigation required for hedgehog, brown hare, polecat and harvest mouse is included in this chapter.

8.4.15 Surveys have not been carried out specifically for common amphibian species, i.e. common frog (*Rana temporaria*), common toad (*Bufo bufo*), smooth newt (*Lissotriton vulgaris*) and palmate newt (*Lissotriton helveticus*). Ponds and ditches located within and close to the Order Limits may support common amphibian species, and observations of these species have been obtained through the desk-study and during GCN surveys. Suitable terrestrial habitats for these species inside the Order Limits include hedgerows, scrub, semi-improved grassland and woodland. The mitigation proposed for reptiles and other species will also reduce potential effects on common amphibian species, along with the retention of and buffers applied to the ponds present on-site (where practicable).

Table 8.8 – Ecological surveys undertaken to characterise baseline conditions

Survey type	Survey method	Survey period	Survey area
Fixed wing flyover survey	The flyover provided orthophotographs of the survey area. The higher resolution photographs provided an up-to-date aerial imagery of habitats within the Order Limits and immediate surrounding area. This provided supplementary data to that gathered during the Phase 1 habitat survey and gave an indication of the habitats potentially present in sections of the Phase 1 survey area that could not be accessed during the Phase 1 habitat survey.	2023	Within Order Limits and immediate surrounding area. However, there are some minor gaps in the data due to design changes as the Project design has evolved.
Extended Phase 1 habitat survey Presented in **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report**	The survey was carried out in accordance with the JNCC Handbook for Phase 1 Habitat Survey (Joint Nature Conservation Committee, 2016). Invasive non-native plant species were also recorded where observed.	October 2023 to November 2025.Surveys are continuing in 2026; additional results and assessment will be provided in an addendum report.	Within and up to 50 m from the Order Limits.
Habitat Condition Assessments Presented in **Application Document 7.1 Biodiversity Net Gain Report**	Habitats were surveyed in accordance with the Statutory Biodiversity Metric Condition Assessments (Department for Environment, Food & Rural Affairs, 2025). Modular River Physical (MoRPh) surveys (for use in the BNG assessment) were carried out to assess the condition of rivers, streams and canals where required.	October 2023 to November 2025	Land inside the Order Limits

Survey type	Survey method	Survey period	Survey area
National Vegetation Classification (NVC) surveys Presented in **Application Document 6.8.A4 Appendix 8.4 Botanical Report**	The NVC surveys were carried out in accordance with the JNCC NVC Users' Handbook (Rodwell, 2006).	July and August 2025	Areas inside the Order Limits that would be impacted by the Project, where the Phase 1 habitat survey identified habitat as being particularly species diverse and/or sensitive and/or a type restricted in the UK/region.
Targeted woodland survey to supplement historical mapping review Presented in **Application Document 6.8.A4 Appendix 8.4 Botanical Report**	Targeted to areas of woodland (where accessible), that were identified during the desk-study review of historical mapping as potentially being of an age that would qualify as ancient woodland (woodland that has existed continuously since 1600), and that were inside the Order Limits. Noting that these Project identified areas of woodland have been termed Woodland with Characteristics of Ancient Woodland.	Summer 2026	Targeted woodland areas inside the Order Limits where accessible
Yellow bird's-nest Presented in **Application Document 6.8.A4 Appendix 8.4 Botanical Report**	A grid square survey method was used, which is a systematic sampling technique used in ecological and botanical studies to assess plant distribution, abundance, and diversity within a defined area.	August and September 2025	Bilkshill Plantation and adjacent plantation woodland, inside the Order Limits.
Hedgerow	Affected locations within the Order Limits where desk-based review of Phase 1 habitat survey data and aerial imaging identified hedges as being particularly species diverse and/or more than 30 years old, and potentially	October 2023 to Autumn 2026 Surveys are continuing in 2026. Data were not available in time for inclusion in this ES. A Hedgerow	Targeted hedgerows inside the Order Limits

Survey type	Survey method	Survey period	Survey area
	important under The Hedgerows Regulations 1997 (HM Government, 1997).	Report will be provided as an addendum report.	
Arboricultural Presented in **Application Document 7.14 Arboricultural Impact Assessment**	Surveys were carried out in accordance with the arboricultural survey methodology set out within **Application Document 7.14 Arboricultural Impact Assessment**, which follows BS 5837:2012 (British Standards Institution, 2012), with the exception that although low quality and very low quality (Category C and U) trees were recorded individually, tree measurement data for these trees were not captured, only those of high and moderate quality (Category A and B) trees.	July 2024 to February 2026	Within and up to 30 m from the Order Limits (excluding the FLL mitigation area)
Aquatic habitats Presented in **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**	Targeted sections of watercourses/ditches that would be crossed by the Project, either through the installation of a new crossing or modification of an existing crossing. Fish, macrophyte, and aquatic macroinvertebrate surveys were carried out in accordance with standard guidance (Beaumont, Taylor, Lee, & Welston, 2002), (Environment Agency, 2014), (Environment Agency, 2017), (WFD-UKTAG, 2014), and (WFD-UKTAG, 2023).	2024 and 2025	Targeted watercourses/ditches inside the Order Limits
Aquatic macrophytes	Targeted sections of watercourses/ditches that would be	Summer 2025	Targeted watercourses/ditches inside the Order Limits

Survey type	Survey method	Survey period	Survey area
Presented in **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**	crossed by the Project, either through the installation of a new crossing or modification of an existing crossing. Surveys were carried out in accordance with standard guidance (WFD-UKTAG, 2014).		
Aquatic macroinvertebrates Presented in **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**	Targeted sections of watercourses/ditches that would be crossed by the Project, either through the installation of a new crossing or modification of an existing crossing. Surveys were carried out in accordance with standard guidance (Environment Agency, 2014), (Environment Agency, 2017) and (WFD-UKTAG, 2023).	Spring and Autumn 2024 and Spring and Autumn 2025	Targeted watercourses/ditches inside the Order Limits
Fish Presented in **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**	Targeted sections of watercourses/ditches that would be crossed by the Project, either through the installation of a new crossing or modification of an existing crossing. Surveys were carried out in accordance with standard guidance (Beaumont, Taylor, Lee, & Welston, 2002).	Summer 2024 and Summer 2025	Targeted watercourses/ditches inside the Order Limits
GCN Presented in **Application Document 6.8.A12 Appendix 8.12 Great Crested Newt Report for Nottinghamshire** (in relation to Nottinghamshire only)	Great Crested Newt Habitat Suitability Index (HSI) surveys were carried out on accessible waterbodies in accordance with 'Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*)' (Oldham, Keeble, Swan, & Jeffcote, 2000).	eDNA surveys were carried out in Spring 2024, Spring 2025 and Spring 2026	Within and up to 250 m from the Order Limits in Nottinghamshire

Survey type	Survey method	Survey period	Survey area
	Following the HSI surveys, presence /likely absence surveys (environmental DNA (eDNA) survey) (Biggs, et al., 2014) were carried out on waterbodies that were assessed as being potentially suitable for breeding GCN.		
Bats – roosting Presented in **Application Document 6.8.A7 Appendix 8.7 Bat Roost Report**	Surveys were carried out in accordance with best practice guidance (Collins, 2023) and modifications agreed with Natural England (detailed in **Application Document 6.8.A7 Appendix 8.7 Bat Roost Report**), to identify bat roosts in trees that could be affected by the Project (noting that as a consequence of the Project's commitment to avoid the loss of buildings, no bat roost assessments were undertaken in respect of buildings or structures). This comprised daytime bat walkover surveys, ground level tree assessments and assessments of woodlands to determine where any further surveys were required, such as aerial inspection surveys or dusk emergence surveys where appropriate on targeted trees.	Daytime bat walkover and ground level tree assessment surveys conducted between October 2023 and July 2026. Aerial tree inspections conducted September to July 2026 Ground level tree assessments, aerial inspections, and dusk emergence surveys are continuing throughout the 2026 bat survey period; additional results and assessment will be provided in an addendum report.	Targeted trees inside the Order Limits
Bats – foraging and commuting Presented in **Application Document 6.8.A8**	Surveys were conducted in accordance with best practice guidance (Collins, 2023). Night-time bat walkover surveys were carried out and automated static detectors placed in suitable habitat, according to bespoke criteria, to obtain	April to October 2025.	Targeted habitat inside the Order Limits

Survey type	Survey method	Survey period	Survey area
Appendix 8.8 Bat Activity Report	information on species assemblage and an indication of activity levels across the Order Limits.		
Hazel dormouse Presented in **Application Document 6.8.A9 Appendix 8.9 Hazel Dormouse Report**	Habitat suitability assessments and nut searches were initially carried out, followed by nest tube surveys, in accordance with the latest guidance (Wells, Chanin, & Gubert, 2025).	September to December 2025	Suitable habitat with connectivity to Treswell Wood SSSI (known to support a hazel dormouse population) within Order Limits.
Otter and water vole Presented in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**	Targeted sections of watercourses/ditches that would be crossed by the Project, either through the installation of a new crossing or modification of an existing crossing. Surveys were carried out in accordance with standard guidance (Dean, 2021), (Strachan, Moorhouse, & Gelling, 2011), (Dean, Strachan, Gow, & Andrews, 2016), (Chanin, 2003).	Autumn (August and September) 2024 Spring (April to June) 2025 Autumn (July to September) 2025, with otter surveys also carried out up to December 2025. Surveys are continuing in 2026 for otter and water vole; additional results and assessment will be provided in an addendum report. For completeness, some 2026 surveys are included where the second visit to a watercourse was completed in time for inclusion and concluded the result or confirmed no suitability.	Targeted watercourses/ditches inside the Order Limits crossed by the Project.
Badger Presented in **Application Document 6.8.A5 Appendix 8.5 Badger Report (Confidential)**	Evidence of badger was recorded during ecological surveys. Dedicated badger surveys following standard guidance (Harris, Cresswell, & Jefferies, 1989) were carried out to confirm the locations and status of badger setts.	Between February 2024 and July 2026	Inside the Order Limits and up to 50 m where appropriate habitats.

Assessment Methods and Criteria

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

8.4.17 The impact assessment has been carried out in accordance with best practice guidance for EcIA, issued by CIEEM (Chartered Institute of Ecology and Environmental Management, 2024). The principal steps involved in the CIEEM approach can be summarised as:

- Ecological 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 features is evaluated, placing their relative biodiversity and nature conservation value into geographic context, which is then used to define the relevant ecological features that need to be considered further;
- The changes or perturbations predicted to result as a consequence of the Project (i.e. the potential impacts) and which could potentially affect relevant ecological features are identified and their nature described. Established best-practice, legislative requirements, or other incorporated design measures to minimise or avoid impacts are also described and are taken into account;
- The likely significant effects (beneficial or adverse) on relevant ecological features are then assessed and, where possible, quantified;
- Measures to avoid or reduce any likely significant effects, if possible, are then developed in conjunction with other elements of the design (including mitigation for other environmental disciplines) and, if necessary, measures to compensate for likely significant effects on features of nature conservation importance are also included;
- The residual effects of the Project are reported; and
- The potential for delivering ecological enhancements is considered.

Sensitivity/value of ecological feature

8.4.18 The CIEEM guidelines (Chartered Institute of Ecology and Environmental Management, 2024) make clear that there is no need to:

'"…carry out detailed assessment of [ecological] features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable'.

8.4.19 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. ecological features that are considered to be important and potentially affected by the Project. This does not mean that efforts have not been made to safeguard wider biodiversity.

8.4.20 To support a focused assessment, there was a need to determine the scale at which the relevant ecological features identified through the desk studies and field surveys

undertaken for the Project were of value. The value of each relevant ecological feature was defined with reference to the geographical level at which it matters.

8.4.21 The frames of reference that have been used for the assessment, based on paragraph 4.7 of the CIEEM guidelines (Chartered Institute of Ecology and Environmental Management, 2024), are:

- International (i.e. Ramsar sites, SACs and SPAs) (normally within the geographic area of Europe);
- UK or national (Great Britain, but considering the potential for certain ecological features to be more notable (of higher value) in England, with context relative to Great Britain as a whole);
- Regional (Yorkshire and the Humber, and East Midlands);
- County (East Riding of Yorkshire, Nottinghamshire, and North Lincolnshire);
- District (town or parish area, for example Garthorpe);
- Local (ecological features that do not meet criteria for valuation at a District or higher level, but that have sufficient value to merit retention or mitigation); and
- Site (common and widespread ecological features, 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).

8.4.22 Species populations were valued on the basis of their size, recognised status (such as BAP status), and legal protection.

8.4.23 In assigning values to species populations, it was important to consider the status of the species in terms of any legal protection. However, it was also important to consider other factors such as its distribution, rarity, population trends, and the size of the population that would be affected. For example, whilst otter is afforded European Protected Species status under the relevant legislation, and therefore conservation of the species is of significance at an international level, this does not mean that every otter is internationally important. It was important to consider each population in its context. 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.

8.4.24 Plant communities have been assessed in terms of their intrinsic value, and their value as habitat for protected and notable species.

8.4.25 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. For European Protected Species there is a requirement that the Project should not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

8.4.26 Assessing the value of features required consideration of both existing and future predicted baseline conditions. Therefore, the description and valuation of ecological 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.

8.4.27 All 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 impact assessment and are the relevant ecological features for the purposes of the EcIA.

Magnitude of ecology impacts

8.4.28 In line with paragraph 1.21 of the CIEEM guidelines (Chartered Institute of Ecology and Environmental Management, 2024), the terminology used within the EcIA draws a clear distinction between the terms impact and effect. For the purposes of this EcIA these terms are defined as follows:

'Impact – actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.

'Effect – outcome to an ecological feature from an impact. For example, the effects on a dormouse (sic) population from loss of a hedgerow.'

8.4.29 When describing potential impacts (and where relevant the resultant effects) consideration was given to the following characteristics likely to influence this:

- Positive or negative (beneficial or adverse) – i.e. is the change likely to be in accordance with nature conservation objectives and policy, and is that change:
  - Positive (beneficial) – a change that improves the quality of the environment, or halts or slows an existing decline in quality, e.g. increasing the extent of a habitat of conservation value; or
  - Negative (adverse) – a change that reduces the quality of the environment, e.g. destruction of habitat.
- Spatial extent – the spatial or geographical area or distance over which the impact or effect may occur under a suitably representative range of conditions.
- Magnitude – the size, amount or intensity and volume of an impact – this is described on a quantitative basis where possible.
- Duration – the time over which an impact is expected to last prior to recovery or replacement of the resource or feature. Consideration has been given to how this duration relates to relevant ecological characteristics such as a species' lifecycle. However, it is not always appropriate to report the duration of impacts in these terms. The duration of an effect may be longer than the duration of an activity or impact.
- Timing and frequency – i.e. consideration of the point at which the impact occurs in relation to critical life-stages or seasons.
- Reversibility – i.e. is the impact temporary or permanent. A temporary impact is one from which recovery is possible or for which effective mitigation is both possible and enforceable. A permanent effect is one from which recovery is either not possible or cannot be achieved within a reasonable timescale (in the context of the feature being assessed).

8.4.30 Combined, these characteristics form the magnitude criteria for impacts of the Project on important ecological features as summarised in Table 8.9.

Table 8.9 – Magnitude criteria for impacts

Magnitude	Magnitude criteria
Large	Changes to an ecological 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 ecological 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 ecological 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 ecological feature.

8.4.31 Inter-project cumulative effects result from the combined impacts of multiple developments on a receptor, which are detailed in **Application Document 6.21 Chapter 21 Inter-project Cumulative Effects**. Intra-project effects occur where, for example, combined noise, air quality and lighting impacts from the same project affect the same ecological receptor. These are detailed in **Application Document 6.20 Chapter 20 Intra-project Cumulative Effects**.

Significance of effects

8.4.32 For each ecological feature only those characteristics relevant to understanding the ecological effect of the Project and determining the 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 ecological features, as follows:

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

8.4.33 Paragraph 5.24 of the CIEEM guidelines (Chartered Institute of Ecology and Environmental Management, 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.'

8.4.34 Paragraphs 5.25 and 5.26 of the CIEEM guidelines (Chartered Institute of Ecology and Environmental Management, 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).'

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

8.4.36 There are a range of approaches for determining the significance of effects on ecological features. Whilst the CIEEM guidelines (Chartered Institute of Ecology and Environmental Management, 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 8.10, but still remain consistent with the CIEEM guidelines (Chartered Institute of Ecology and Environmental Management, 2024). 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 also 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 8.10 – Relating CIEEM assessment terms to those used in Application Document 6.5 Chapter 5 Environmental Impact Assessment Approach and Methodology

Effect classification terminology used in Application Document 6.5 Chapter 5 EIA Approach and Methodology	Equivalent CIEEM assessment
Major beneficial	Beneficial effect on structure/function or conservation status at Regional, National, or International level.
Moderate beneficial	Beneficial effect on structure/function or conservation status at County and District level.
Minor beneficial	Beneficial effect on structure/function or conservation status at Local level.
Negligible	No effect on structure/function or conservation status.
Minor adverse	Adverse effect on structure/function or conservation status at Local level.
Moderate adverse	Adverse effect on structure/function or conservation status at County and District level.

Effect classification terminology used in Application Document 6.5 Chapter 5 EIA Approach and Methodology	Equivalent CIEEM assessment
Major adverse	Adverse effect on structure/function or conservation status at Regional, National or International level.

Assumptions and Limitations

8.4.37 As set out in **Application Document 6.4 Chapter 4 Description of the Project** and shown in **Application Document 2.13 Trees and Important Hedgerows to be Removed or Managed Plans**, the following assumptions were taken into consideration for the ecology assessment with regard to vegetation removal and management, the definition of each category (removed, affected managed, potentially affected, and not affected) is provided in **Application Document 2.1 Guide to the Plans**:

Proposed overhead line:

- Tree canopies and stems
  - Any tree canopies or stems up to a distance of 25 m (depending on span length) either side of the proposed overhead line centreline would be 'removed'.
  - Any tree canopies or stems from 21 m and up to 33 m (depending on span length and the associated extent of removal required) either side of the proposed overhead line centreline would be 'affected managed'.
  - Any tree canopies or stems from 29 m and up to 50 m (depending on span length and should the flexibility afforded by the LoD be used) either side of the proposed overhead line centreline would be 'potentially affected'.
  - Any tree canopies or stems beyond 50 m of the proposed overhead line centreline would be 'not affected'.
- Hedgerows
  - Any hedgerow up to a distance of 33 m (depending on span length) either side of the proposed overhead line centreline would be 'affected managed';
  - Any hedgerow from 29 up to 50 m (depending on span length, and should the flexibility afforded by the LoD be used) of the proposed overhead line centreline would be 'potentially affected'; and
  - Any hedgerow over 50 m from the proposed overhead line centreline would be 'not affected'.

Construction access

- Vegetation including tree canopies and stems and hedgerows could be removed in the following areas:
  - Highway widening;

- Bellmouths;
- Construction access tracks (stone);
- Bridge working areas;
- Construction access tracks (trackway); and
- In bespoke locations along other construction access routes where there is no existing gap in the vegetation.

- Vegetation including tree canopies and stems and hedgerows would be affected managed in the following areas:
  - Visibility splays; and
  - Any canopy overhang in areas for some elements of highway widening, bellmouths and construction access tracks (stone) any of the areas listed as removed above.

Working areas

- Vegetation including tree canopies and stems and hedgerows would be removed in the following areas:
  - Pylon working areas;
  - Construction compounds;
  - Crossing protection (working area);
  - Stringing position (within the Equipotential Zone[10] (EPZ));
  - Drainage areas;
  - Flood compensation areas; and
  - Elements of third-party modification works (removal of exiting assets and installation of new assets).
- Vegetation including tree canopies and stems and hedgerows would be affected managed in the following areas:
  - Stringing positions (outside of the EPZ);
  - Crossing protection (within the netting span); and
  - Third party modification works (canopy overhang).
- Vegetation including tree canopies and stems and hedgerows would be potentially affected in the following areas:
  - Any canopy overhang in areas for elements of flood compensation areas, third party modification works, species mitigation areas, and other bespoke areas where appropriate.

[10] An Equipotential Zone (EPZ) on overhead lines is a safety control method used during conductor installation or replacement to ensure that workers and all conductive equipment in the working zone are kept at the same electrical potential. This eliminates dangerous touch and step voltages and reduces the risk of electric shock.

8.4.38 Unless otherwise stated, it has been assumed that vegetation within the Order Limits, but outside one of the areas listed above, could be potentially affected. This is because there is flexibility in the design within the Order Limits, 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**.

8.4.39 Suitably sized stand-off distances have been applied to the design of the Project to protect important habitat features during construction, including woodland, watercourses, and hedgerows, where practicable.

8.4.40 **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 was derived based on the Institute of Air Quality Management (IAQM) construction dust guidance (Institute of Air Quality Management , 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.

8.4.41 This has been used to inform the assessment presented in this chapter.

8.4.42 **Application Document 6.15 Chapter 15 Air Quality** presents an assessment of construction vehicle emissions on relevant ecological sites. The study area for assessment of construction vehicle emissions is an area within 200 m of the affected road network (ARN), which is determined by the screening of traffic data for the construction traffic routes. As such the study area can extend far from the Order Limits along the road network. The ARN for ecological receptors is defined where vehicle numbers exceed the National Highways DMRB LA 105 traffic screening criteria (National Highways, 2024). Roads which meet these criteria, the ARN, are presented in **Application Document 6.15.F2 Figure 15.2 Air Quality Construction Vehicle Emissions Study Area and Receptor Locations**. For the assessment of designated ecological sites, the criteria are considered in combination with other relevant plans and projects to determine whether further assessment is required. Therefore, the study area is based on the change in combined traffic from the Project and from other projects and plans (such as committed developments) in accordance with the requirements of Natural England's Standard Advice for Air Quality Impacts in Nationally Significant Infrastructure Projects (NSIPs) (Natural England, 2026) and IAQM Ecological guidance (Institute of Air Quality Management , 2020). Detailed information regarding the modelling of traffic data is provided in **Application Document 6.15 Chapter 15 Air Quality**. This has been used to inform the assessment presented in this chapter.

8.4.43 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**.

8.4.44 Information obtained during the desk-study from records provided to the Project by the LRCs, is dependent upon people and organisations having made and submitted records within the study area. A lack of records for a particular species does not necessarily mean that this species does not occur in the study area. Likewise, the presence of records for a target species does not automatically mean that these still

occur within the study area or are relevant in the context of the Project. The level of detail and accuracy of desk study records is reliant on the quality of information provided to the LRCs Furthermore, the precision of records provided by the LRCs can vary, with accuracy ranging from 100 m to 10 km, depending upon the source of the data. Therefore, it is not always possible to determine whether records relate to areas within or outside of the Order Limits, particularly if they are provided as a low-resolution grid square location. The desk study information has been used to provide contextual evidence of species presence within the wider landscape.

8.4.45 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 Documents 6.8.A3 to 6.8.A10**, **6.8.A12** and **Application Document 7.14 Arboricultural Impact Assessment**. There are no survey-specific constraints that represent a significant limitation or data gap, and the baseline that has been established is suitably robust.

8.5 Basis of Assessment

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

8.5.2 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

8.5.3 The ecology 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, vertical or longitudinal) or Order Limits.

8.5.4 The assumptions made regarding the use of flexibility for the assessment are set out in Table 8.11.

Table 8.11 – Flexibility assumptions

Element of flexibility	How this has been considered within the assessment
Horizontal LoD	Each pylon and conductor has been initially assessed in its current location and centreline as shown on **Application Document 2.4 Works Plans**. The assessment has then considered the potential for pylons to be moved horizontally within the LoD set out in **Application Document 6.4 Chapter 4 Description of the Project**. 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 from habitats such as woodland (including ancient woodland, and woodland recorded by the Project as having characteristics of ancient woodland, where possible), hedgerows and waterbodies. The assessment of effects on habitats could change

Element of flexibility	How this has been considered within the assessment
	due to the flexibility afforded by the horizontal LoD, but is required to be limited to only those essential and to take the woodland and its buffers into account. Similarly, in terms of protected and notable species, any horizontal pylon movement would be subject to legal compliance. Movements which would impact protected or notable species more adversely would be avoided where possible or the appropriate licence would be sought where required.
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 most ecological receptors. The exception to this would be if the height of certain pylons were increased which would avoid, or limit, tree and other taller vegetation removal, particularly in designated sites or ancient woodland. However, a worst case has been assumed, with the pylon heights as they are shown.
Longitudinal LoD	Each pylon and conductor has been assessed in its current location and centreline as shown on **Application Document 2.4 Works Plans**. 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 from habitats such as woodland (including ancient woodland and woodland recorded by the Project as having characteristics of ancient woodland where possible), hedgerows and waterbodies. The assessment of effects on habitats could change due to the flexibility afforded by the longitudinal LoD, but is required to be limited to only those essential and to take the woodland and its buffers into account. 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, or the appropriate licence would be sought where required.
Pylon footprint	The pylon footprint would have no material difference to the ecological assessment and therefore has not been considered.
Foundation type	Indicative foundation types are shown in **Application Document 6.4.A1 Appendix 4.1 Indicative Pylon Schedule**. The ecology assessment assumes all foundations would be piled as a worst-case scenario. 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.

Element of flexibility	How this has been considered within the assessment
	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 from habitats such as woodland (including ancient woodland and woodland recorded by the Project as having characteristics of ancient woodland where possible), hedgerows and waterbodies. The assessment of effects on habitats could change due to the flexibility in the design regarding the locations of temporary working areas, but is required to be limited to only those essential and to take the woodland and its buffers into account. 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, or the appropriate licence would be sought where required.
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. For all other watercourses, a culvert is proposed, except where water vole has been recorded. As detailed in **Application Document 7.3 Register of Environmental Actions and Commitments**, the Project will install clear span bridges (or suitably assessed and approved alternatives which also avoids affecting the bank within 5 m of the watercourse) in all locations where pre-construction surveys identify the presence of water vole, where it is feasible to do so. The span length will be such that it avoids impacts to vegetation within at least 5 m from the top of each bank. Flexibility has, however, been retained to revert to a culvert should water vole be found to be no longer present during pre-construction surveys. If it is not feasible to install a clear span bridge (or other suitably assessed alternative) where water vole is found to be present, alternative, suitable habitat will be created for the species under licence.
Modifications to third party assets – construction methodology	Allowance has been made within the Project design to modify/underground overhead third-party assets that would be 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 ecology 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. However, trenchless crossing methods would be used when crossing watercourses occupied by water vole. Furthermore, third party works will endeavour to use trenchless crossing methods for utility diversions beneath hedgerows instead of open cutting, in particular within the hazel dormouse licence area and in compliance with the dormouse Mitigation Licence from Natural England.

Optionality

8.5.5 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, associated construction access track and watercourse crossings C-220A, C-169A and BC-11A.
- Two alternative options for temporary construction access tracks to proposed pylon 4AF88:
  - Watercourse crossing 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-29A and BC-29B.
- Two alternative options for taking access off High Melwood (PAR 63) and the associated construction access track:
  - Bellmouth BM-078; or
  - Bellmouth BM-110.
- 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.

8.5.6 Where differences in effects between options have been identified, these are set out within section 8.9, with clear reference to the nature, extent, and significance of any resulting ecology effects.

Sensitivity Test

8.5.7 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 8.9 of this chapter.

8.6 Baseline Conditions

8.6.1 This section describes the ecological baseline conditions in the relevant study areas and survey areas, as detailed in Table 8.7 and Table 8.8.

8.6.2 Baseline conditions have been gathered from desk-based information and field surveys (see section 8.4). The full ecology baseline is presented in the supporting appendices to this chapter, **Application Documents 6.8.A1 to 6.8.A10** and **6.8.12**.

Existing Baseline

International statutory designated sites

8.6.3 All international statutory sites designated for nature conservation that are within the study area (as detailed in Table 8.7) are shown in **Application Document 6.8.F1 Figure 8.1 International Sites Designated for Nature Conservation within 10 km and National and Local Statutory Designated Sites within 5 km**.

8.6.4 There are six international designated sites within 10 km of the Order Limits, which are presented in Table 8.12, with the reasons for designation presented in **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**. All distances relate to the Order Limits but exclude the following:

- The proposed FLL compensation area (Route Section B); and
- The public right of way temporary diversion in the Adlingfleet area (Route Section B).

8.6.5 Potential impact pathways (non-ornithological) between each of the internationally designated sites and the Project are presented in Table 8.12. Where no potential impact pathways were identified, this is stated, and these designated sites were not taken through to the residual effects assessment presented in section 8.9.

8.6.6 Please refer to **Application Document 6.9 Chapter 9 Ornithology** for discussion of international statutory sites in relation to birds.

Table 8.12 – International statutory sites designated for nature conservation

Designation	Approximate distance from the Order Limits (km)	Closest Route Section	Potential impact pathway
Humber Estuary SAC	Partly within Order Limits	B	Direct: Potential for three trees on the boundary and one tree inside the SAC to be managed but not removed. Indirect: construction pollution (e.g. dust, and spread of INNS), hydrological connectivity to the Order Limits, disturbance of qualifying species (noise/vibration and light/visual).
Humber Estuary SPA	Partly within Order Limits	B	Direct: Potential for three trees on the boundary and one tree inside the SPA to be affected but not removed.

Designation	Approximate distance from the Order Limits (km)	Closest Route Section	Potential impact pathway
			Indirect: construction pollution (e.g. ai dust, and spread of INNS), hydrological connectivity to the Order Limits.
Humber Estuary Ramsar	Partly within Order Limits	B	Direct: Potential for three trees on the boundary and one tree inside the Ramsar to be affected but not removed. Indirect: construction pollution (e.g. dust, and spread of INNS), hydrological connectivity to the Order Limits, disturbance of qualifying species (noise/vibration and light/visual).
Thorne Moor SAC	2.69 km	C	No pathways have been identified with this Habitats site.
Thorne and Hatfield Moors SPA	2.69 km	C	No pathways have been identified with this Habitats site.
Hatfield Moor SAC	5.73 km	D	No pathways have been identified with this Habitats site.

National statutory designated sites

8.6.7 All statutory sites designated for nature conservation of National importance that were identified within the study area (as detailed in Table 8.7) are shown in **Application Document 6.8.F1 Figure 8.1 International Sites Designated for Nature Conservation within 10 km and National and Local Statutory Designated Sites within 5 km**.

8.6.8 There are 36 national statutory designated sites (SSSIs/NNRs) within the study area, which are presented in Table 8.13, with the reasons for designation presented in **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**. Please refer to this appendix for any additional designated sites included specifically for birds. All distances relate to the Order Limits but exclude the following:

- The proposed FLL compensation area (Route Section B); and
- The public right of way temporary diversion in the Adlingfleet area (Route Section B).

8.6.9 Potential impact pathways (non-ornithological) between each of the nationally designated sites and the Project are presented in Table 8.13. Where no potential impact pathways were identified, this is stated, and these designated sites were not taken through to the residual effects assessment presented in section 8.9.

Table 8.13 – National statutory sites designated for nature conservation

Designation	Approximate distance from the Order Limits (km)	Closest Route Section	Potential impact pathway
Brantingham Dale SSSI	Partly within Order Limits	A	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. dust and spread of INNS).
Humber Estuary SSSI	Partly within Order Limits	B	Direct: Potential for three trees on the boundary and one tree inside the SSSI to be affected but not removed. Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits, disturbance of qualifying species (noise/vibration light/visual).
Chesterfield Canal SSSI	Partly within Order Limits	E	Direct: Loss and disturbance of habitat. Indirect: temporary shading from bridge, construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Treswell Wood SSSI	Partly within Order Limits	E	Indirect: construction pollution (e.g. dust and spread of INNS), potential hydrological connectivity to the Order Limits. There will be no direct impacts on Treswell Wood SSSI, despite the slight overlap between the Order Limits and the SSSI boundary. This is secured via a commitment in Application Document 7.3 Register of Environmental Actions and Commitments.
Crowle Borrow Pits SSSI	Adjacent to the Order Limits (maintenance access route only)	C	Indirect: hydrological connectivity to the Order Limits.
Hatfield Chase Ditches SSSI	0.28 km	C	Indirect: Potential hydrological connectivity to the Order Limits.
Hewson's Field SSSI	0.39 km	D	No pathways have been identified with this SSSI.

Designation	Approximate distance from the Order Limits (km)	Closest Route Section	Potential impact pathway
Clarborough Tunnel SSSI	0.62 km	E	No pathways have been identified with this SSSI.
Mother Drain, Misterton SSSI	0.65 km	E	Indirect: hydrological connectivity to the Order Limits.
Ashton's Meadow SSSI	0.80 km	E	No pathways have been identified with this SSSI.
Eastoft Meadow SSSI	0.98 km	B	No pathways have been identified with this SSSI.
Rush Furlong SSSI	1.08 km	D	No pathways have been identified with this SSSI.
Haxey Grange Fen SSSI	1.37 km	D	Indirect: hydrological connectivity to the Order Limits.
Everthorpe Quarry SSSI	2.16 km	A	No pathways have been identified with this SSSI. This site is designated for its geological interest.
Belshaw SSSI	2.29 km	D	No pathways have been identified with this SSSI.
Castle Hill Wood SSSI	2.41 km	E	Indirect: hydrological connectivity to the Order Limits.
River Idle Washlands SSSI	2.49 km	E	Indirect: potential hydrological connectivity to the Order Limits.
Drewton Lane Pits SSSI	2.55 km	A	No pathways have been identified with this SSSI.
Thorne, Crowle, and Goole Moors SSSI	2.69 km	C	No pathways have been identified with this SSSI.
Humberhead Peatlands NNR	2.70 km	C	No pathways have been identified with this NNR.
Misson Line Bank SSSI	2.80 km	E	No pathways have been identified with this SSSI.
Misson Training Area SSSI	2.89 km	E	No pathways have been identified with this SSSI.
Melton Bottom Chalk Pit SSSI	3.02 km	A	This former quarry is designated for geological interest. No pathways have been identified with this SSSI.
Lea Marsh SSSI	3.13 km	E	No pathways have been identified with this SSSI.

Designation	Approximate distance from the Order Limits (km)	Closest Route Section	Potential impact pathway
Burton Bushes SSSI	3.25 km	A	No pathways have been identified with this SSSI.
South Cliffe Common SSSI	3.25 km	A	No pathways have been identified with this SSSI.
Spalford Warren SSSI	3.36 km	F	No pathways have been identified with this SSSI.
Gamston & Eaton Woods & Roadside Verges SSSI	3.37 km	E	No pathways have been identified with this SSSI.
Epworth Turbary SSSI	3.41 km	D	Indirect: potential hydrological connectivity to the Order Limits.
Laughton Common SSSI	3.65 km	D	Indirect: potential hydrological connectivity to the Order Limits.
Tuetoes Hills SSSI	3.79 km	D	No pathways have been identified with this SSSI.
Haxey Turbary SSSI	3.81 km	D	No pathways have been identified with this SSSI.
Wyedale SSSI	4.38 km	A	No pathways have been identified with this SSSI.
Sutton and Lound Gravel Pits SSSI	4.51 km	E	Indirect: potential hydrological connectivity to the Order Limits.
Scotton and Laughton Forest Ponds SSSI	4.94 km	D	No pathways have been identified with this SSSI.
Hotham Meadow SSSI	4.96 km	A	Indirect: potential hydrological connectivity to the Order Limits.

Local statutory designated sites

8.6.10 All local statutory sites designated for nature conservation of County to Regional importance within the study area (as detailed in Table 8.7) are shown in **Application Document 6.8.F1 Figure 8.1 International Sites Designated for Nature Conservation within 10 km and National and Local Statutory Designated Sites within 5 km.**

8.6.11 There are nine local statutory designated sites (LNRs), within the study area, which are presented in Table 8.14, with the reasons for designation presented in **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**. All distances relate to the Order Limits but exclude the following:

- The proposed FLL compensation area (Route Section B); and
- The public right of way temporary diversion in the Adlingfleet area (Route Section B).

8.6.12 No potential impact pathways were identified, as presented in Table 8.14, and as such, no LNRs were taken through to the residual effects assessment presented in section 8.9.

Table 8.14 – Local statutory sites designated for nature conservation

Designation	Approximate distance from the Order Limits (km)	Closest Route Section	Potential impact pathway
Beverley Parks LNR	0.64 km	A	No pathways have been identified with this LNR.
Owston Ferry Castle LNR	0.69 km	D	No pathways have been identified with this LNR.
Axholme Line LNR	1.80 km	D	No pathways have been identified with this LNR.
Phoenix LNR	3.48 km	B	No pathways have been identified with this LNR.
Phoenix Parkway LNR	4.01 km	B	No pathways have been identified with this LNR.
Conesby Quarry LNR	4.22 km	B	No pathways have been identified with this LNR.
Atkinson's Warren LNR	4.41 km	B	No pathways have been identified with this LNR.
Owlet LNR	4.46 km	D	No pathways have been identified with this LNR.
Theaker Avenue LNR	4.97 km	E	No pathways have been identified with this LNR.

Non-statutory local designated sites

8.6.13 There are 134 non-statutory sites designated for nature conservation (LWS, Candidate LWS, Historic LWS, Wildlife Trust Reserves, and RSPB reserves[11]) located within the study area (as detailed in Table 8.7), 19 of which are partially located within the Order Limits. These 134 sites are shown on **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km**. Some of these sites are both LWS and Wildlife Trust Reserves and are therefore represented by a single entry in Table 8.15. Three additional non-statutory designated sites which are outside of the 2 km study

[11] Effects relating to RSPB reserves and the bird species they support are assessed in **Application Document 6.9 Chapter 9 Ornithology**.

area are also included in Table 8.15, as they lie within 200 m of the ARN for which an assessment of construction vehicle emissions is presented in **Application Document 6.15 Chapter 15 Air Quality.** The non-statutory designated sites which lie within 200 m of the ARN are shown in **Application Document 6.15.F2 Figure 15.2 Air Quality Construction Vehicle Emissions Study Area and Receptor Locations**.

8.6.14 Within the East Riding of Yorkshire, in addition to LWS, there are two further categories which are not fully designated LWS: Candidate LWS and Historic LWS, which are described in the paragraphs below.

8.6.15 Table 16 in the East Riding Local Plan Update 2020 – 2039 (East Riding of Yorkshire Council, 2025) states:

'The original local sites are being reviewed against site selection guidelines set out in the latest Local Sites in the East Riding of Yorkshire. As well as sites that have been designated, there are candidate sites which have evidence to suggest they would qualify but have not yet been surveyed and assessed against the guidelines. There are also historic sites, which are former candidate LWS that lacked sufficient evidence to either confirm their status as candidate LWS or to delete them. It is a holding category until the status of the site can be determined through appropriate evidence. Currently evidence does not exist for the council to inform an assessment of the impact upon a historic LWS. Designated and Candidate Local Wildlife Sites are shown on the Policies Map Update.'

8.6.16 Paragraph 7.97 in the East Riding Local Plan Update 2020 – 2039 (East Riding of Yorkshire Council, 2025) states:

'Proposals that would have an adverse impact upon a Candidate, or Historic LWS should treat the site as a designated LWS or provide sufficient relevant and credible ecological data to enable the site to be assessed against the objective guidelines detailed in the Local Sites in the East Riding of Yorkshire.'

8.6.17 Therefore, National Grid considers Historic LWS and Candidate LWS as if they were designated LWS for the purposes of the assessment.

8.6.18 Deleted LWSs have been surveyed by the relevant authority and their value does not meet the current LWS guidelines. As such, these former sites have not been considered in the assessment as discrete ecological receptors.

8.6.19 All non-statutory sites designated for nature conservation listed in Table 8.15 are of County importance. The sites are shown in **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km** and the reasons for designation are provided in **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**. All distances relate to the Order Limits but exclude the following:

- The proposed FLL compensation area (Route Section B); and
- The public right of way temporary diversion in the Adlingfleet area (Route Section B).

8.6.20 Potential impact pathways (non-ornithological) between each of the non-statutory designated sites and the Project are presented in Table 8.15. Where no potential impact pathways were identified, this is stated, and these designated sites were not taken through to the residual effects assessment presented in section 8.9.

Table 8.15 – Local non-statutory sites designated for nature conservation

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
East Riding of Yorkshire sites				
Brantingham Dale Historic LWS	East Riding of Yorkshire	Partly within Order Limits	A	Direct: loss, disturbance and fragmentation of habitat. Indirect: construction pollution (e.g. dust and spread of INNS).
Jillywood Lane LWS	East Riding of Yorkshire	Partly within Order Limits Within 200 m of the ARN	A	Direct: loss, disturbance and fragmentation of habitat (would only occur through implementation of the LoD). Indirect: construction pollution (e.g. air quality/dust and spread of INNS), hydrological connectivity to the Order Limits.
Blacktoft Sands RSPB Reserve	East Riding of Yorkshire	Partly within Order Limits	B	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Broomfleet Pits LWS	East Riding of Yorkshire	Adjacent to the Order Limits	A	Indirect: construction pollution (e.g. dust and spread of INNS).
Woodale Historic LWS	East Riding of Yorkshire	Adjacent to the Order Limits	A	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Cliffs Plantation Candidate LWS	East Riding of Yorkshire	Adjacent to the Order Limits	A	Indirect: construction pollution (e.g. dust and spread of INNS).
Risby Park with Fishpond Wood LWS	East Riding of Yorkshire	10 m	A	Indirect: pollution (e.g. dust and spread of INNS) during maintenance activities.
Birkhill Wood LWS	East Riding of Yorkshire	0.11 km	A	Indirect: construction pollution (e.g. dust), hydrological connectivity to the Order Limits.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Drove Road LWS	East Riding of Yorkshire	0.12 km Within 200 m of the ARN	A	Indirect: construction pollution (e.g. air quality/dust), hydrological connectivity to the Order Limits.
Broomfleet Washlands LWS	East Riding of Yorkshire	0.30 km	A	Indirect: hydrological connectivity to the Order Limits.
Oxmardyke Washlands LWS	East Riding of Yorkshire	0.33 km	A	Indirect: hydrological connectivity to the Order Limits.
Woodhill Path, Cottingham LWS	East Riding of Yorkshire	0.44 km Within 200 m of the ARN	A	Indirect: hydrological connectivity to the Order Limits. Construction pollution (air quality)
Little Weighton Cutting Historic LWS	East Riding of Yorkshire	0.52 km	A	No pathways have been identified with this LWS.
Mount Airy Verge Candidate LWS	East Riding of Yorkshire	0.56 km	A	No pathways have been identified with this Candidate LWS.
Eppleworth Wood LWS	East Riding of Yorkshire	0.59 km	A	No pathways have been identified with this LWS.
Bentley Moor Wood LWS	East Riding of Yorkshire	0.73 km	A	No pathways have been identified with this LWS.
Sweatty Hill Plantation Historic LWS	East Riding of Yorkshire	0.75 km	A	No pathways have been identified with this Historic LWS.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Mill Beck and Fields LWS	East Riding of Yorkshire	0.77 km	A	Indirect: hydrological connectivity to the Order Limits.
Newport Pond LWS	East Riding of Yorkshire	0.96 km	A	No pathways have been identified with this LWS.
Raywell House LWS	East Riding of Yorkshire	1.13 km	A	No pathways have been identified with this LWS.
Newport Brick Ponds Historic LWS	East Riding of Yorkshire	1.19 km	A	No pathways have been identified with this Historic LWS
Watery Plump LWS	East Riding of Yorkshire	1.37 km	A	No pathways have been identified with this LWS.
Disused Railway and The Warrens, Weedley Dale Candidate LWS	East Riding of Yorkshire	1.39 km	A	No pathways have been identified with this Candidate LWS.
Little Wold Plantation LWS	East Riding of Yorkshire	1.41 km	A	No pathways have been identified with this LWS.
Moor Lane LWS	East Riding of Yorkshire	1.50 km	A	No pathways have been identified with this LWS.
Nut Wood and Wauldby Scroggs LWS	East Riding of Yorkshire	1.56 km	A	No pathways have been identified with this LWS.
Elloughton Dale East LWS	East Riding of Yorkshire	1.67 km	A	No pathways have been identified with this LWS.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Weedley Dale Candidate LWS	East Riding of Yorkshire	1.72 km	A	No pathways have been identified with this Candidate LWS.
Slipperbridge Pit Historic LWS	East Riding of Yorkshire	1.95 km	A	No pathways have been identified with this Historic LWS.
Beverley Westwood Waxcaps LWS	East Riding of Yorkshire	1.96 km	A	No pathways have been identified with this LWS.
Elloughton Lings Plantation LWS	East Riding of Yorkshire	1.97 km	A	No pathways have been identified with this LWS.
Figham Pastures LWS	East Riding of Yorkshire	More than 2 km from the Order Limits, but within 200 m of the ARN	Not applicable	Indirect: changes to air quality during construction
Dunswell Adits Candidate LWS	East Riding of Yorkshire	More than 2 km from the Order Limits, but within 200 m of the ARN	Not applicable	Indirect: changes to air quality during construction
Bridgehead Wildlife Trust Reserve	East Riding of Yorkshire	More than 2 km from the Order Limits, but within 200 m of the ARN	Not applicable	Indirect: changes to air quality during construction
Lincolnshire sites				
Sedge Hole Close Wildlife	Lincolnshire	Partly within Order Limits	D	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Trust Reserve/LWS				
Folly Drain North LWS	Lincolnshire	Partly within Order Limits	C	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Hatfield Waste Drain LWS	Lincolnshire	Partly within Order Limits	C	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
North Engine Drain, Belton LWS	Lincolnshire	Partly within Order Limits	C	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. /dust and spread of INNS), hydrological connectivity to the Order Limits.
Paupers' Drain LWS	Lincolnshire	Partly within Order Limits	B	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
River Torne LWS	Lincolnshire	Partly within Order Limits	C	Direct: loss and disturbance of habitat Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
South Engine Drain, Belton LWS	Lincolnshire	Partly within Order Limits	C	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Stainforth and Keadby Canal Corridor LWS	Lincolnshire	Partly within Order Limits	C	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Warping Drain Corridor LWS	Lincolnshire	Partly within Order Limits	D	Direct: loss and disturbance of habitat.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
				Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
South Moor Covert and Fishpond Plantation LWS	Lincolnshire	Partly within Order Limits	D	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Three Rivers LWS	Lincolnshire	Partly within Order Limits	C	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Keadby Boundary Drain LWS	Lincolnshire	0.32 km	C	Indirect: hydrological connectivity to the Order Limits.
Crowle Brick Pits LWS	Lincolnshire	0.46 km	C	Indirect: potential hydrological connectivity to the Order Limits.
River Idle LWS	Lincolnshire	0.47 km	D	No pathways have been identified with this LWS.
Keadby Warping Drain LWS	Lincolnshire	0.51 km	C	Indirect: hydrological connectivity to the Order Limits.
Rush Furlong Wildlife Trust Site	Lincolnshire	0.60 km	D	Indirect: potential hydrological connectivity to the Order Limits.
Langholme Wood Wildlife Trust Site	Lincolnshire	0.74 km	D	No pathways have been identified with this Wildlife Trust Site.
Warping Drain, Derrythorpe LWS	Lincolnshire	0.77 km	C	Indirect: hydrological connectivity to the Order Limits.
Langholme Wood LWS	Lincolnshire	0.83 km	D	No pathways have been identified with this LWS.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
South Soak Drain, Keadby LWS	Lincolnshire	1.05 km	C	Indirect: hydrological connectivity to the Order Limits.
Rush Furlong LWS	Lincolnshire	1.06 km	D	No pathways have been identified with this LWS.
Keadby Wetland LWS	Lincolnshire	1.17 km	C	Indirect: hydrological connectivity to the Order Limits.
Keadby Wet Grassland LWS	Lincolnshire	1.18 km	C	Indirect: hydrological connectivity to the Order Limits.
Belton Former Landfill LWS	Lincolnshire	1.48 km	D	No pathways have been identified with this LWS.
Burton upon Stather Brick Pit LWS	Lincolnshire	1.54 km	B	No pathways have been identified with this LWS.
New Godnow Drain West LWS	Lincolnshire	1.70 km	C	Indirect: potential hydrological connectivity to the Order Limits.
Belton Picnic Area LWS	Lincolnshire	1.80 km	D	No pathways have been identified with this LWS.
Old Dun Drain LWS	Lincolnshire	1.93 km	C	Indirect: potential hydrological connectivity to the Order Limits.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Nottinghamshire sites				
Dolegate Road, East Drayton Candidate LWS	Nottinghamshire	Partly within Order Limits	E	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. dust and spread of INNS).
Chesterfield Canal (Welham to Misterton) LWS	Nottinghamshire	Partly within Order Limits	E	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Caddow Wood (Southern Assarts) LWS	Nottinghamshire	Adjacent to the Order Limits	E	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Retford Gate Green Lane LWS	Nottinghamshire	Partly within Order Limits	E	Direct: loss and disturbance of habitat. Indirect: construction pollution (e.g. dust and spread of INNS).
Treswell Wood Wildlife Trust Reserve/LWS	Nottinghamshire	The LWS is adjacent to the Order Limits. The Wildlife Trust Site is partly within the Order Limits	E	Indirect: construction pollution (e.g. dust and spread of INNS), potential hydrological connectivity to the Order Limits.
Saundby Park Wood LWS	Nottinghamshire	2 m	E	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Marnham Railway Yard Candidate LWS	Nottinghamshire	6 m	E	Indirect: construction pollution (e.g. dust and spread of INNS).

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Fledborough to Harby Dismantled Railway LWS	Nottinghamshire	2 m	F	Indirect: construction pollution (e.g. dust and spread of INNS).
Tongs and Dogholes Woods LWS	Nottinghamshire	14 m	E	Indirect: construction pollution (e.g. dust and spread of INNS), hydrological connectivity to the Order Limits.
Mother Drain, Misterton LWS	Nottinghamshire	14 m	E	Indirect: construction pollution (e.g. dust), hydrological connectivity to the Order Limits.
High House Road Verges, Sturton le Steeple LWS	Nottinghamshire	21 m	E	Indirect: construction pollution (e.g. dust).
Beckingham Wood LWS	Nottinghamshire	68 m	E	Indirect: construction pollution (e.g. dust).
West Burton Meadow Wildlife Trust Reserve/LWS	Nottinghamshire	0.12 km	E	Indirect: construction pollution (e.g. dust).
Wheatley Wood LWS	Nottinghamshire	0.13 km	E	Indirect: construction pollution (e.g. dust).
Shaw Ponds LWS	Nottinghamshire	0.20 km	E	Indirect: construction pollution (e.g. dust).
Wooden Beck Hill Verges LWS	Nottinghamshire	0.22 km	E	Indirect: construction pollution (e.g. dust).

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Misterton Pasture LWS	Nottinghamshire	0.22 km	E	Indirect: construction pollution (e.g. dust).
Caddow Wood (Northern Assart) LWS	Nottinghamshire	0.23 km	E	Indirect: construction pollution (e.g. dust).
River Idle and Banks, West Stockwith LWS	Nottinghamshire	0.32 km	E	Indirect: hydrological connectivity to the Order Limits.
Tindale Drain LWS	Nottinghamshire	0.34 km	D	Indirect: hydrological connectivity to the Order Limits.
Bushstocks Lane Meadow LWS	Nottinghamshire	0.35 km	E	No pathways have been identified with this LWS.
North Wheatley Beck LWS	Nottinghamshire	0.36 km	E	No pathways have been identified with this LWS.
Chesterfield Canal (Misterton to West Stockwith) LWS	Nottinghamshire	0.38 km	E	Indirect: hydrological connectivity to the Order Limits.
Headon Verges LWS	Nottinghamshire	0.38 km	E	No pathways have been identified with this LWS.
Beast Wood Grassland LWS	Nottinghamshire	0.56 km	E	No pathways have been identified with this LWS.
Cowsland Stripe LWS	Nottinghamshire	0.59 km	E	No pathways have been identified with this LWS.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Clarborough Tunnel LWS and Wildlife Trust Reserve	Nottinghamshire	0.62 km	E	No pathways have been identified with this LWS/Wildlife Trust Reserve.
Maumhill Wood LWS	Nottinghamshire	0.66 km	E	No pathways have been identified with this LWS.
Old Trent, Marnham LWS	Nottinghamshire	0.69 km	F	No pathways have been identified with this LWS.
Clayworth Woodhouse Pond LWS	Nottinghamshire	0.73 km	E	No pathways have been identified with this LWS.
Skegby Road Triangle LWS	Nottinghamshire	0.73 km	F	No pathways have been identified with this LWS.
Walkeringham Claypits LWS and Wildlife Trust Reserve	Nottinghamshire	0.79 km	E	No pathways have been identified with this LWS.
Ashton's Meadow LWS and Wildlife Trust Reserve	Nottinghamshire	0.80 km	E	No pathways have been identified with this LWS and Wildlife Trust Reserve.
Lancaster Lane Hedge, Gringley LWS	Nottinghamshire	0.84 km	E	No pathways have been identified with this LWS.
Hutchinson's Holt LWS	Nottinghamshire	0.84 km	E	No pathways have been identified with this LWS.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Lover's Lane, Clayworth LWS	Nottinghamshire	0.89 km	E	No pathways have been identified with this LWS.
Muspitt Lane LWS	Nottinghamshire	0.89 km	E	No pathways have been identified with this LWS.
Kingshaugh Farm Earthwork LWS	Nottinghamshire	0.90 km	E	No pathways have been identified with this LWS.
Grovefield Stripe LWS	Nottinghamshire	1.08 km	E	No pathways have been identified with this LWS.
Fledborough Holme LWS	Nottinghamshire	1.11 km	F	Indirect: hydrological connectivity to the Order Limits.
West Burton Power Station LWS	Nottinghamshire	1.17 km	E	Indirect: hydrological connectivity to the Order Limits.
Retford Road Wood, Rampton LWS	Nottinghamshire	1.21 km	E	No pathways have been identified with this LWS.
Blue Stocking Lane, Clarborough LWS	Nottinghamshire	1.21 km	E	No pathways have been identified with this LWS.
South Clifton Grassland LWS	Nottinghamshire	1.29 km	F	No pathways have been identified with this LWS.
Bole Ings Drains LWS	Nottinghamshire	1.33 km	E	No pathways have been identified with this LWS.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
North Clifton Church LWS	Nottinghamshire	1.29 km	F	No pathways have been identified with this LWS.
Saundby Marsh Drains Candidate LWS	Nottinghamshire	1.34 km	E	Indirect: hydrological connectivity to the Order Limits.
Walkeringham Pasture LWS	Nottinghamshire	1.35 km	E	No pathways have been identified with this LWS.
Beckingham Marshes LWS and RSPB Reserve	Nottinghamshire	1.36 km	E	No pathways have been identified with this LWS and RSPB Reserve.
Misterton Soss Ponds LWS	Nottinghamshire	1.38 km	E	No pathways have been identified with this LWS.
Scott's Wood LWS	Nottinghamshire	1.46 km	E	No pathways have been identified with this LWS.
Soss Lane Grassland, Misterton LWS	Nottinghamshire	1.48 km	E	No pathways have been identified with this LWS.
Old Trent Oxbow, Spalford LWS	Nottinghamshire	1.49 km	F	No pathways have been identified with this LWS.
Grove Road Woodland LWS	Nottinghamshire	1.49 km	E	No pathways have been identified with this LWS.
Mother Drain East, Gringley LWS	Nottinghamshire	1.51 km	E	Indirect: hydrological connectivity to the Order Limits.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
West Burton Reedbed LWS	Nottinghamshire	1.52 km	E	No pathways have been identified with this LWS.
Burton Round Ditch LWS	Nottinghamshire	1.54 km	E	No pathways have been identified with this LWS.
Bole Ings LWS	Nottinghamshire	1.55 km	E	No pathways have been identified with this LWS.
Mill Lane, Clayworth LWS	Nottinghamshire	1.65 km	E	No pathways have been identified with this LWS.
Carr Road Drains Complex LWS	Nottinghamshire	1.66 km	E	Indirect: potential hydrological connectivity to the Order Limits.
Mill Road Verge LWS	Nottinghamshire	1.67 km	E	No pathways have been identified with this LWS.
Dunham Oxbow LWS	Nottinghamshire	1.79 km	F	Indirect: potential hydrological connectivity to the Order Limits.
Marsh Road Pond, Walkeringham Candidate LWS	Nottinghamshire	1.86 km	E	No pathways have been identified with this LWS.
Whinley's Road Woodland LWS	Nottinghamshire	1.90 km	E	No pathways have been identified with this LWS.
Dunham Dubs LWS	Nottinghamshire	1.90 km	F	No pathways have been identified with this LWS.
Fox Covert Drain, Misterton LWS	Nottinghamshire	1.93 km	E	Indirect: hydrological connectivity to the Order Limits.

Designation	County	Approximate distance from the Order Limits	Closest Route Section	Potential impact pathway
Askham Grassland LWS	Nottinghamshire	1.94 km	E	No pathways have been identified with this LWS.
River Trent, West Stockwith LWS	Nottinghamshire	2.00 km	D	Indirect: hydrological connectivity to the Order Limits.

Habitats

8.6.21 The habitat baseline is based on desk-study and field survey information available up to and including the end of November 2025. Every effort has been made to obtain land access to the full Order Limits, however where access was not available a combination of the high-definition aerial imagery produced for the Project (orthophotographs), past aerial imagery data available on Google Maps, and surveys from vantage points have overcome this limitation. Approximately 98 per cent of the Order Limits have been subject to on-the-ground Phase 1 habitat survey, as of the end of November 2025.

Ancient woodland and veteran trees

8.6.22 Ancient woodland includes all woodland that has existed continuously since 1600. Wooded continuously does not mean that there has been continuous tree cover across the whole site since 1600. Open ground, both temporary and permanent, is an important component of ancient woodlands. Further, the trees and shrubs in ancient woodlands may have been felled or cut for coppice at various times since 1600. As long as the area as a whole has remained as woodland, i.e. the coppice stools have regrown, or the stand has been replanted soon after felling, then it still qualifies as ancient woodland. As the woodland may have been cut over many times in the past, ancient woodland does not necessarily contain old trees (Sansum & Bannister, 2018), (Natural England and Forestry Commission, 2022). Ancient woodlands can be classified into different categories, including ancient semi-natural woodlands and plantations on ancient woodland sites (Natural England, 2026).

8.6.23 One area of designated ancient woodland recorded on the Ancient Woodland Inventory (Natural England, 2026) is located just within the Order Limits, but by a very small overlap with the BNG Opportunity Area only. A further area of designated ancient and semi-natural woodland is recorded on the Ancient Woodland Inventory within 50 m of the Order Limits. These comprise Treswell Wood lying immediately adjacent to/just within the Order Limits (BNG Opportunity Area of the Order Limits only) and part of Tongs and Dogsholes Wood at approximately 14 m from the Order Limits, both of which are Route Section E[12]. The areas of ancient woodland that are present within the study area are shown on **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km** and are presented in Table 8.16.

8.6.24 Ancient woodland takes hundreds of years to establish and is defined as an irreplaceable habitat (Natural England and Forestry Commission, 2022) and as such is a habitat of **National** importance.

8.6.25 As detailed in **Application Document 6.8.A4 Appendix 8.4 Botanical Report** and associated **Figure A8.4.3 Project Identified Woodland with Characteristics of Ancient Woodland**, and **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report**, a review of historic mapping identified eight areas of woodland inside the Order Limits, which are not currently part of the Ancient Woodland Inventory (Natural England, 2026), or the revised counties dataset (Natural England, 2026), but for which there is evidence that they that would potentially qualify as ancient woodland due to their age (woodland that has existed continuously since

[12] This area is not covered by the revised counties dataset.

1600). These Project identified features are termed Woodlands with Characteristics of Ancient Woodland, and are listed below:

- Woodland at Jillywood Lane, which forms part of Jillywood Lane LWS, in Route Section A;
- Socken Wood, in Route Section A;
- Brantingham (small wood adjacent to Ellerker Road), in Route Section A;
- South of Dog Horse Plantation, In Route Section D;
- Part of Dixon Wood, in Route Section D;
- Part of Wood Farm, in Route Section E;
- Saundby Park Wood, in Route Section E; and
- Pigeon Field, in Route Section F.

8.6.26 **Application Document 6.8.A4 Appendix 8.4 Botanical Report** also reports the results of the Phase 1 habitat surveys for these woodlands, and the results of targeted botanical surveys (where access was available).

8.6.27 The areas of woodland inside the Order Limits which have been recorded by the Project as Woodlands with Characteristics of Ancient Woodland are also considered to be of **National importance**.

Table 8.16 – Ancient woodland in the Ancient Woodland Inventory within 2 km of the Order Limits

Woodland	Type	Approximate distance from the Order Limits (km)	Closest Route section
Treswell Wood	Ancient semi-natural woodland	Partly within Order Limits	E
Part of Tongs and Dogsholes Wood	Ancient semi-natural woodland	0.01 km	E
Beckingham Wood	Ancient semi-natural woodland	0.07 km	E
Part of Tongs and Dogsholes Wood	Ancient replanted woodland	0.09 km	E
Part of Birkhill Wood	Ancient replanted woodland	0.11 km	A
Jillywoods	Ancient replanted woodland	0.12 km	A
Part of Birkhill Wood	Ancient semi-natural woodland	0.12 km	A
Wheatley Wood	Ancient semi-natural woodland	0.13 km	E
Eppleworth Wood	Ancient semi-natural woodland	0.59 km	A

Woodland	Type	Approximate distance from the Order Limits (km)	Closest Route section
Bentley Moor Wood	Ancient semi-natural woodland	0.84 km	A
Unnamed	Ancient semi-natural woodland	0.89 km	A
Nut Wood	Ancient replanted woodland	1.59 km	A

8.6.28 There are no ancient or veteran trees recorded within or up to 50 m from the Order Limits shown in the Woodland Trust's Ancient Tree Inventory (Woodland Trust, n.d.).

8.6.29 The arboricultural surveys carried out between July 2024 and February 2026 recorded 37 veteran trees and one veteran tree group within a 30 m study area of the Order Limits (not including the FLL mitigation area). Veteran trees are recorded and assessed in **Application Document 7.14 Arboricultural Impact Assessment.** Veteran trees are of **National importance**.

Priority Habitats

8.6.30 Habitats recorded on the Priority Habitat Inventory (Natural England, 2025) present within the Order Limits are listed in Table 8.17 and are shown in **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km**. Priority Habitats are of **up to County importance**.

Table 8.17 – Priority Habitats within the Order Limits

Priority Habitat	Total area inside the Order Limits (ha)
Traditional orchard	0.007 ha
Lowland meadows	0.01 ha
Reedbeds	0.04 ha
Mudflats	0.24 ha
Good quality semi-improved grassland	0.25 ha
Lowland calcareous grassland	0.86 ha
No main habitat but additional habitats present	0.91 ha
Lowland dry acid grassland	1.45 ha
Coastal saltmarsh	1.62 ha
Open mosaic	5.89 ha
Deciduous woodland	11.32 ha

8.6.31 The following habitats listed on the Priority Habitat Inventory (Natural England, 2025) were also identified in the study area, but lie outside of the Order Limits:

- Coastal and floodplain grazing marsh, closest area approximately 0.37 km northeast of the Order Limits;
- Lowland fens, closest area approximately 0.01 km south of the Order Limits;
- Ponds, closest area approximately 0.49 km northwest of the Order Limits;
- Purple moor grass and rush pasture, closest area approximately 1.64 km northwest of the Order Limits; and
- Reedbeds, coastal saltmarsh, closest area approximately 0.29 km southeast of the Order Limits.

8.6.32 Other Habitats of Principal Importance, as listed under Section 41 of the NERC Act 2006 (HM Government, 2006), present within the Order Limits and identified through the Phase 1 habitat survey were:

- Hedgerow; and
- River.

8.6.33 Additional areas of calcareous grassland were also identified during the Phase 1 habitat survey. These habitats are shown on **Figure A8.3.1 Phase 1 Habitat Survey Map** in **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report**.

8.6.34 Some of the ponds inside the Order Limits will meet the criteria of Priority Habitat (Joint Nature Conservation Committee, 2011), including those which support GCN. However, the characteristics of each pond were not surveyed in detail, as they will be retained as part of the Project, with the potential exception of one pond (Pond 15a, near to pylon 4AF39 in Route Section A) which could be lost if the working area for the pylon cannot be microsited (but which does not meet the criteria).

Important hedgerows

8.6.35 A desk-study exercise was carried out to identify hedgerows that could potentially be important and those that are considered unlikely to be important. The review was based upon the Phase 1 habitat survey data (**Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report**) and other data sources such as orthophotographs and Google Streetview imaging.

Other terrestrial habitats

8.6.36 A Phase 1 habitat survey, in addition to focused NVC and notable plant species surveys, was carried out to establish a robust habitat baseline within the Order Limits, to inform the ES and BNG calculations. Details of all other terrestrial habitats (in addition to the Priority Habitats discussed in paragraphs 8.6.30 to 8.6.33) are set out in **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report** and **Application Document 6.8.A4 Appendix 8.4 Botanical Report**.

8.6.37 The Order Limits contain a variety of habitats typical of intensively farmed rural landscapes, dominated by arable land with associated improved and poor semi-improved grassland. Additional habitats include woodland, scrub, watercourses, ponds, tall ruderal vegetation, and areas of ephemeral and short-perennial vegetation associated with disturbance. Field boundaries comprise fences, hedgerows, and ditches, with some hedgerows qualifying as species-rich.

8.6.38 Within the Order Limits, most semi-natural broadleaved woodland is of **Local importance**. Lowland mixed deciduous woodland is a Priority Habitat as is up to **County importance**. Parcels identified by the Project as having characteristics of ancient woodland are of potential **National importance**. Plantation broadleaved woodland includes Bilkshill Plantation (Route Section A), which is of **County importance** due to the presence of the rare plant yellow bird's-nest. A traditional orchard in Route Section A, also a Priority Habitat, is likewise of **County importance**. Other plantation broadleaved woodlands are of **Site importance**. Mixed semi-natural woodland and coniferous plantation woodland are also of **Site importance**. Mixed plantation woodland within Brantingham Dale (Route Section A) is of **County importance** and forms part of a LWS, while other mixed plantation woodland within the Order Limits is of **Site importance**.

8.6.39 The majority of scattered broadleaved trees within the survey area are considered to be of **Site importance**. Native black poplar (*Populus nigra* subsp. *betulifolia*) is one of Britain's rarest native trees, with a small and declining population in the UK, and is considered to be of **County importance**. Veteran trees are considered to be of **National importance**, reflecting their irreplaceable ecological, historical, and cultural importance.

8.6.40 Grasslands include semi-improved neutral and acid types of **Local importance**. Calcareous grassland outside Brantingham Dale SSSI is limited in extent and considered of **Local importance**. Within Brantingham Dale SSSI, calcareous grassland is locally degraded and scrub-encroached but is considered of **National** importance in the context of its contribution to the interest features of the SSSI. An area of semi-improved neutral grassland which forms part of Sedge Hole Close Wildlife Trust Reserve and LWS is present in Route Section D. The sward is species-rich and is recorded as lowland meadow Priority Habitat. This area is considered of **County importance**, reflecting its semi-natural character, high botanical diversity, and contribution to the wider LWS and Wildlife Trust Reserves network.

8.6.41 Standing water habitats comprise ponds, drains, wet ditches, and canals. Most ponds are small, shallow, and sparsely vegetated, and are considered of **Site importance**, except one pond supporting GCN, which is of **Local importance** (Route Section A). Larger fishing ponds adjacent to the Order Limits form part of Broomfleet Pits LWS (Route Section A) but are of **Local importance** due to limited conservation interest. Drains and wet ditches, including several LWS, are typically modified and managed, supporting common species, and are assessed as of **Site–Local importance**. The Chesterfield Canal SSSI (Route Section E) is of **National importance**.

8.6.42 Running water habitats include small streams and drainage channels, with natural streams of **Local importance** and modified field drains of **Site importance**. Semi-natural rivers, including the River Idle (on the boundary of Route Sections D and E) and River Torne (in Route Sections C and D) support aquatic and riparian flora and are of **Local importance**. The River Ouse (on the boundary of Route Sections A and B), forming part of the Humber Estuary SAC/SPA/Ramsar/SSSI, is of **International importance**.

8.6.43 Coastland habitats comprise intertidal mud and sand, and dense saltmarsh along the Humber Estuary, within SAC, SSSI, Ramsar, and Priority Habitat designations. These habitats are of **International importance**, reflecting statutory protection and ecological significance.

8.6.44 Ephemeral and short-perennial vegetation at Keadby Ash Tip in Route Section C forms part of the wider Open Mosaic Habitat on Previously Developed Land Priority Habitat and is considered to be of **Local importance**.

8.6.45 Hedgerows are present throughout the Order Limits and are of **County importance** for their ecological value, diversity, and contribution to habitat connectivity.

8.6.46 Other habitats of **Site importance** were identified within the Order Limits; these comprised dense and scattered scrub, mixed parkland/scattered trees, improved and poor semi-improved grassland, tall ruderal vegetation, marginal vegetation, arable land, amenity grassland, spoil and introduced shrub. These habitats are not considered further as part of this assessment.

Summary of habitats and their importance

8.6.47 Phase 1 habitats within the Order Limits have been assigned the following importance levels:

- Broadleaved woodland – semi-natural: **National** to **Local importance**;
- Broadleaved woodland – plantation: **County** and **Site importance**;
- Coniferous woodland – plantation: **Site importance**;
- Mixed woodland – semi-natural: **Site importance**;
- Mixed woodland – plantation: **County** and **Site importance**;
- Scrub – dense/continuous: **Site importance**;
- Scrub – scattered: **Site importance**;
- Broadleaved parkland/scattered trees: **National**, **County** and **Site importance**;
- Mixed parkland/scattered trees: **Site importance**;
- Acid grassland – semi-improved: **Local importance**;
- Neutral grassland – semi-improved: **County** and **Local importance**;
- Calcareous grassland – semi-improved: **National** (Brantingham Dale SSSI only) and **Local importance**;
- Improved grassland: **Site importance**;
- Poor semi-improved grassland: **Site importance**;
- Other tall herb and fern – tall ruderal: **Site importance**;
- Marginal and inundation – marginal vegetation: **Site importance**;
- Standing water: **National**, **Local** and **Site importance**;
- Running water: **International**, **Local** and **Site importance**:
- Intertidal mud/sand: **National importance**;
- Saltmarsh dense/continuous: **National importance**;
- Spoil: **Site importance**;
- Cultivated/disturbed land – arable: **Site importance**;

- Cultivated/disturbed land – amenity: **Site importance**;
- Cultivated/disturbed land – ephemeral/short perennial: **Local** and **Site importance**;
- Introduced shrub: **Site importance**;
- Native species rich hedge/hedgerow with trees: **County importance**;
- Native species poor hedge/hedgerow with trees: **County importance**; and
- Other miscellaneous habitats (buildings, bare ground, hardstanding, walls, fences and dry ditches): **Site importance**.

Protected and notable plant species

8.6.48 Yellow bird's-nest is of **County importance** and was observed in Bilkshill Plantation (central OS National Grid Reference SE9401030469) on 28 July 2025, therefore a grid square survey was carried out within a 3.22 ha area on 29 July 2025.

8.6.49 The grid square survey method for plants is a systematic sampling technique used in ecological and botanical studies to assess plant distribution, abundance, and diversity within a defined area. Further detail is provided in **Application Document 6.8.A4 Appendix 8.4 Botanical Report**.

8.6.50 Additional surveys of the remaining areas of the plantation woodland and woodlands in the vicinity of Bilkshill Plantation were carried out on 27 August and 2 September 2025 to establish the presence/likely absence of yellow bird's-nest in the wider area.

8.6.51 The results of the yellow bird's-nest survey are shown in **Figure A8.4.2 Yellow Bird's-nest Survey Results** in **Application Document 6.8.A4 Appendix 8.4 Botanical Report**.

8.6.52 A total of 1,029 flowering racemes (plants from 2025 season) and 593 dead racemes (remaining 2024 season plants) were recorded within the area of plantation woodland on Bilks Hill that lies within the Order Limits (3.22 ha). Approximately 500 racemes (2024 and 2025 flowering periods combined) were recorded within the area of woodland outside the Order Limits (surveyed 27 August 2025). No yellow bird's-nest was recorded in the additional woodland blocks that were surveyed.

8.6.53 Incidental records of protected or notable plant species recorded during field surveys are included in Table 4.9 of **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report** and are shown in associated **Figure A8.3.2 Records of Protected/Notable Plants and Invasive Non-native Plant Species**. Species recorded were:

- Black poplar (*Populus nigra subsp. betulifolia*).
- Bluebell (*Hyacinthoides non-scripta*).
- Burnet-saxifrage (*Pimpinella saxifraga*).
- Common restharrow (*Ononis repens*).
- Giant bellflower (*Campanula latifolia*).
- Harebell (*Campanula rotundifolia*).
- Salad burnet (*Poterium sanguisorba*)

- Water violet (*Hottonia palustris*).
- Wild strawberry (*Fragaria vesca*).
- Wild thyme (*Thymus drucei*).

Invasive plant species recorded during terrestrial habitat surveys

8.6.54 There were five invasive non-native plant species listed under Schedule 9 of the WCA 1981 (HM Government, 1981) recorded during the terrestrial ecological surveys within and up to 50 m from the Order Limits. Of these, four were inside the Order Limits, namely Japanese knotweed (*Reynoutria japonica*)[13], giant knotweed (*Reynoutia sachalinensis*), Himalayan balsam (*Impatiens glandulifera*) and Montbretia (*Crocosmia pottsii* x *aurea* = *C*. x *crocosmiiflora*). Variegated yellow archangel (*Lamiastrum galeobdolon* subsp. *argentatum*) was recorded just outside of the Order Limits. These INNS are shown on **Figure A8.3.2 Records of Protected/Notable Plants & Invasive Non-native Plant Species** in **Application Document 6.8.A3 Appendix 8.3 Habitat Survey Report**. Invasive non-native plant species are not of ecological value, but they do pose a risk to ecology and biodiversity and are subject to legislative requirements to prevent spread.

Invasive and non-native species recorded during aquatic surveys

8.6.55 Nuttall's waterweed (*Elodea nuttallii*), a species listed on the Invasive Alien Species Order (HM Government, 2019), was recorded during aquatic field surveys on watercourses within the Order Limits, along with Himalayan balsam, an INNS listed under Schedule 9 of the WCA 1981 (HM Government, 1981). Least duckweed (*Lemna minuta*), a non-native but non-invasive macrophyte species, was also recorded on field surveys within the Order Limits. Further details on the location of these INNS are included in **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**.

8.6.56 The aquatic surveys also recorded the non-native but now considered naturalised shrimp species *Crangonyx pseudogracilis/floridianus,* and the New Zealand mud snail (*Potamopyrgus antipodarum*) in surveyed watercourses within the Order Limits.

8.6.57 Desk-study records of INNS were found in sites within/hydrologically connected to the Order Limits. Further details on the location of these INNS are included in **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**. These included the following species, as identified in the WCA (HM Government, 1981) and or The Invasive Alien Species Order (HM Government, 2019): water fern (*Azolla filiculoides*), Himalayan balsam, Canadian waterweed (*Elodea canadensis*), New Zealand pigmyweed (*Crassula helmsii*), parrot's feather (*Myriophyllum aquaticum*), Japanese knotweed, giant hogweed (*Heracleum mantegazzianum*), Nuttall's waterweed, andChinese mitten crab (*Eriocheir sinensis*).

8.6.58 Desk-study records of invasive (but non-designated) species within/hydrologically connected to the Order Limits included demon shrimp (*Dikerogammarus haemobaphes*), the shrimp species *Crangonyx pseudogracilis/floridanu*, zebra mussel (*Dreissena polymorpha*), quagga mussel (*Dreissena rostriformis bugensis*),

[13] The current accepted scientific name for Japanese knotweed is *Reynoutria japonica* after genetic and structural research led experts to reclassify the plant into the genus Reynoutria. However, Japanese knotweed is still referred to by its former scientific name, *Fallopia japonica,* in some UK guidance and legislation.

the amphipod *Gammarus tigrinus,* and the plant species least duckweed, and hemlock (*Conium maculatum*).

8.6.59 Desk-study records of non-native but non-invasive species within/hydrologically connected to the Order Limits included New Zealand mud snail, the freshwater polychaete *Hypania invalida*, Caspian mud shrimp (*Chelicorophium curvispinum*), Asiatic clam (*Corbicula fluminea*), acute bladder snail (*Physella acuta*), bladder snail (*Physella gyrina*), and bloody-red mysid (*Hemimysis anomala*).

Bats

8.6.60 As set out in Table 8.8, survey effort for bats is ongoing and has included bat activity surveys, ground level tree assessments for bat roost suitability and aerial inspections of potential roost features (tree climbing).

8.6.61 The existing baseline for bats, which includes the methods for the desk-study and field surveys, and the results are detailed within the following documents:

- **Application Document 6.8.A7 Appendix 8.7 Bat Roost Report**; and
- **Application Document 6.8.A8 Appendix 8.8 Bat Activity Report**.

8.6.62 None of the statutory or non-statutory designated sites in the study area are designated for bat conservation. One statutory site, Phoenix Parkway LNR, mentions bats in the description and is approximately 4 km from the Order Limits. The woodland inside this LNR provides habitat for species, including bats, but no pathways to this receptor have been identified see Table 8.14.

8.6.63 Following the completion of the desk-study, and the bat activity field surveys carried out between April and October 2025 **(Application Document 6.8.A8 Appendix 8.8 Bat Activity Report**), the following bats have been identified within the study area:

- Brown long-eared bat (*Plecotus auritus*);
- Common pipistrelle (*Pipistrellus pipistrellus*);
- Soprano pipistrelle (*Pipistrellus pygmaeus*);
- Nathusius' pipistrelle (*Pipistrellus nathusii*);
- Daubenton's bat (*Myotis daubentonii*);
- Brandt's bat (*Myotis brandtii*);
- Whiskered bat (*Myotis mystacinus*);
- Leisler's bat (*Nyctalus leisleri*);
- Noctule (*Nyctalus noctula*); and
- Barbastelle (*Barbastella barbastellus*).

8.6.64 In addition, records of unidentified myotis (*Myotis* spp.) and unidentified pipistrelle (*Pipistrellus* spp.) were recorded.

Foraging and commuting bats

8.6.65 A combination of night-time bat walkover surveys, vantage point surveys, and automated static bat detector surveys were carried out as described in **Application Document 6.8.A8 Appendix 8.8 Bat Activity Report**.

8.6.66 During the night-time bat walkover surveys across the survey area, common pipistrelle was the dominant species overall, with soprano pipistrelle frequently recorded and locally abundant at some survey locations. Noctule, myotis bats, brown long-eared bat, Nathusius' pipistrelle, and Leisler's bat were recorded more intermittently, although some survey areas supported notable activity from these species during individual survey months. Seasonal patterns varied between survey locations, with some locations showing peak activity in May and others showing higher activity later in the season.

8.6.67 During the automated static bat detector deployment, across all locations, common pipistrelle was the dominant species, accounting for the majority of bat passes and reflecting its generalist ecology and widespread distribution. Other species, including soprano pipistrelle, myotis bats, noctule, Leisler's bat, and brown long-eared bat, were recorded regularly but in lower numbers, while Nathusius' pipistrelle occurred only sporadically and in very low numbers.

8.6.68 The vantage point surveys recorded regular bat activity across the survey area, with all locations supporting bats during all survey periods. Activity was consistently dominated by common pipistrelle, which was recorded in substantial numbers at several vantage points.

8.6.69 The bat activity surveys carried out between April and October 2025 confirm that the Order Limits supports several species of bats, as listed in paragraph 8.6.63. Activity was recorded across all survey locations throughout the active season. Watercourses, and well-connected woodland and hedgerow features supported the highest levels of activity. Although arable dominated areas supported comparatively lower activity levels, bats were recorded consistently across the survey area, demonstrating its function within the wider ecological network.

Bat assemblage

8.6.70 With relation to the CIEEM's mitigation guidelines (Reason & Wray, 2025), survey locations in the Northern England geographic region have been grouped together, and the nature conservation value is of **County importance**; and survey locations in the Central England/Midlands geographic region have been grouped together and the nature conservation value is also of **County importance**.

Roosting bats

8.6.71 **Application Document 6.8.A7 Appendix 8.7 Bat Roost Report** sets out baseline data for roosting bats including the methodology for and results of desk-study and field survey carried out to July 2026. The results of further aerial tree assessments to be undertaken after July 2026 to complete the required three surveys visits will be provided in an addendum alongside an updated assessment.

8.6.72 The results of the surveys carried out up to and including 15 July 2026 are summarised below.

8.6.73 Ground level tree assessments (GLTA) were carried out between October 2023 and December 2025 for trees within the Order Limits and a 30 m buffer. A total of 910 trees were visually assessed during the GLTAs, and 589 of these were identified as supporting potential roost features. Trees classified as having negligible or none bat roost suitability (Negligible PRF) during the GTLAs were excluded from further consideration as they do not provide features suitable for roosting bats.

8.6.74 Of the 589 trees with roost potential, 141 were classified as provisional PRF-M (potential roost features suitable for multiple bats or larger roosts) or FAR (further assessment required) and were taken forward for detailed aerial assessment based on their location within areas of impact. However, due to design changes, 18 of the 141 trees subject to detailed aerial assessment, now fall outside of any impacted areas and are no longer included in the assessment.

8.6.75 Of the 123 trees remaining in the impacted areas after the design changes, following aerial inspection, 50 trees were confirmed as PRF-I and 23 as PRF-M, while 12 trees were reclassified as Negligible PRF and excluded from further consideration. A total of 38 trees could not be inspected due to access or safety constraints and therefore retain their precautionary (FAR and provisional PFR-M) classifications assigned during the GTLAs.

8.6.76 As of 15 July 2026, no bat roosts had been located during any of the aerial inspection assessments. A total of 79 trees have been sufficiently climbed to satisfy Bat Conservation Trust guidance (Collins, 2023) with 44 trees requiring further aerial inspection surveys or dusk emergence surveys to refine or complete their categorisation. These surveys were conducted during the rest of the 2026 survey season (16 July to 30 September 2026) however, due to the time required for data processing and reporting prior to submission, the results will be reported in an addendum report.

8.6.77 Given the number of trees containing confirmed and potential roost features within the survey area and recognising that further survey work remains outstanding for trees currently categorised as FAR where access has not yet been secured, the survey area currently supports a substantial potential tree roost resource. Applying a precautionary approach while surveys remain ongoing, a precautionary value of **County importance** has therefore been assigned to roosting bats associated with trees within the Order Limits and wider survey area.

8.6.78 Further survey requirements will be determined based on the confirmed or provisional roost potential of each tree and where the tree is located. Trees that will be impacted, as shown in **Application Document 2.13 Trees and Important Hedgerows to be Removed or Managed Plans**, will be subject to additional survey effort where potential roost features are present. This may include further detailed aerial inspections, dusk emergence surveys or pre-construction surveys depending on the roost potential category and whether the initial aerial inspection has confirmed or refined the presence of suitable features. The results of any further surveys will be presented in an addendum report.

Hazel Dormouse

8.6.79 The data received from the Nottinghamshire Biological and Geological Records Centre returned 69 records of hazel dormouse within the 2 km study area (dated between 2015 and 2026). The majority were located within Treswell Wood in Route Section E (designated as a SSSI/LNR/Wildlife Trust Reserve) with the closest record being approximately 0.18 km from the BNG Opportunity Area and 0.53 km from areas of the Order Limits in which construction works will occur. Treswell Wood is known to support hazel dormouse through a reintroduction programme, see below. No records for hazel dormouse were received from the North and East Yorkshire Ecological Data Centre, or the Greater Lincolnshire Nature Partnership.

8.6.80 Nottinghamshire Wildlife Trust also supplied records of hazel dormouse, associated with Treswell Wood and other surrounding woodlands. As a result of the Nottinghamshire Dormouse Project (which involved building on an earlier reintroduction effort from 1995), the reintroduction of hazel dormouse between 2013 and 2015, the Nottinghamshire Wildlife Trust have experienced multiple successful years of hazel dormouse breeding and non-breeding across Treswell Wood, Eaton Wood, Silcock Wood, and Gamston Wood. The closest of these to the Project is Treswell Wood, this woodland is located adjacent to/just within the Order Limits due to a BNG Opportunity Area (at closest point, and 0.53 km from areas of the Order Limits in which construction works will occur). Eaton Wood, Gamston Wood and Silcock Wood lie approximately 3.36 km west, 3.26 km west and 3.90 km west from the Order Limits respectively, and are therefore beyond the study area. Targeted nest tube surveys were carried out, which focused on hedgerows inside the Order Limits with connectivity to Treswell Wood. **Application Document 6.8.A9 Appendix 8.9 Hazel Dormouse Report** sets out the scope of the hazel dormouse surveys in line with the Hazel Dormouse Mitigation Handbook (Wells, Chanin, & Gubert, 2025) which includes the method for the desk-study and field surveys, and the results.

8.6.81 Evidence of hazel dormouse was recorded during each of the three survey visits, with eight confirmed hazel dormouse nests, and three potential hazel dormouse nests recorded in total. These results are outlined in Table 4.2 and shown in **Figure A8.9.2 Hazel Dormouse Survey Results** of **Application Document 6.8.A9 Appendix 8.9 Hazel Dormouse Report**. Nest tube H10 18 was the only location to record signs of hazel dormouse across all three survey visits, with this refugium located very close to Treswell Wood, which contains a known population of hazel dormouse, indicating the expansion of hazel dormouse from this site. An unusual record of a daytime-active juvenile hazel dormouse was observed during the first survey visit in September. The Order Limits are well connected to other habitats (woodland and hedgerows) suitable for hazel dormouse in the wider landscape.

8.6.82 Hazel dormouse has undergone a long decline in Britain, and monitoring of populations in established woodlands shows a continuing decrease. Between 2000 and 2022, the National Dormouse Monitoring Programme shows that the population has fallen by 70 per cent. They are locally extinct within 14 English counties within their historical range, and in a further six (including Nottinghamshire) they are known only from reintroduced populations. Other than a single native population in Cumbria, native populations are now only found south of a line between Flintshire and Suffolk (People's Trust for Endangered Species, 2023).

8.6.83 As a result of the continued decline, they are recognised as Vulnerable to extinction in Britain under IUCN Red List criteria, although recent empirical studies suggest that this should be elevated to Endangered, with a decline greater than 50 per cent in ten years (People's Trust for Endangered Species, 2023).

8.6.84 The population of hazel dormouse within the Order Limits is of **Regional importance**. It is one of two reintroduced populations of hazel dormouse present within the East Midlands (along with Chambers Farm in Lincolnshire). All indicators point towards a successful reintroduction scheme, with hazel dormouse being recorded over the long-term as having moved out from the initial release site and expanding its range such that long-term survival is highly likely (People's Trust for Endangered Species, 2019).

Water Vole and Otter

8.6.85 Nottinghamshire Biological and Geological Records Centre returned 50 water vole records, and Greater Lincolnshire Nature Partnership returned 597 water vole records in the 2 km study area; 58 of these records are inside the Order Limits. These included recordings of live sightings, latrines, droppings, burrows and feeding remains. No records of water vole were returned from North and East Yorkshire Ecological Data Centre within ten years of the data being issued.

8.6.86 Within the study area, nine records of otter were received from the LRCs (one from North and East Yorkshire Ecological Data Centre, two from Nottinghamshire Biological and Geological Records Centre, and six from Greater Lincolnshire Nature Partnership), these include recordings of a live sighting of a young kit, roadkill, dead adults, and field signs. Four of the nine LRC records are within the Order Limits.

8.6.87 The methods for assessing habitat suitability for otter and water vole are detailed in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**. Habitat suitability assessments were carried out at 247 watercourses that would be crossed by the Project. There were 224 watercourses scoped in for further survey for water vole, with 23 watercourses scoped out. There were 229 watercourse crossings scoped in for further survey for otter, with 18 watercourses scoped out.

8.6.88 Results are shown in Table 4.3 and Table 4.4 and in **Figure A8.6.2 Survey Results and Habitat Suitability Assessments for Water Vole** and **Figure A8.6.3 Survey Results and Habitat Suitability Assessments for Otter** in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**.

8.6.89 Water vole surveys were carried out in 2024, 2025 and 2026, typically following the habitat suitability assessments in accordance with the methods outlined in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**. Field signs searched for included latrine sites and/or droppings, feeding stations, burrows, lawns, prints, and runways.

8.6.90 Otter surveys were carried out concurrently with the water vole surveys in accordance with the methods outlined in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**. Field signs searched for included spraints, footprints, feeding remains, slides or haul-outs, resting sites and holts. Camera traps (trail cameras) were also deployed on watercourses and features where resting places for otter were recorded during the initial surveys.

8.6.91 Water vole was found present on 33 watercourses (24 watercourse crossings plus one alternative location for a crossing), directly affected by the Project due to a crossing point. Within the survey area, a further 92 crossing points were identified as having suitability to support water vole.

8.6.92 During the otter surveys, otter evidence was recorded on 11 watercourses and one waterbody within the survey area, nine of which would be directly affected by the Project due to a crossing point. It is also noted that otter evidence was recorded incidentally during other survey work carried out for the Project where otter was not the target species:

- Otter family group (8 January 2025), and a well-used path and spraint (20 May 2026) observed during wetland bird surveys.
- Otter observed on the River Ouse during an engineering walk-over (01 October 2024)

- Otter observed hunting in the channel of the River Ouse during a wetland bird survey (03 October 2024).

8.6.93 The location of potential holts and layups are confidential, and details are provided in the confidential/unredacted version of in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**.

8.6.94 A potential otter holt was found on a watercourse within the Order Limits, and two potential holt entrances to the same feature were found adjacent to a lake approximately 30 m from the Order Limits.

8.6.95 Potential layups were also identified on two watercourses, both within the Order Limits. Further monitoring of these potential layups was not undertaken as the vegetation was low post-management and insufficient to provide cover to any otter seeking refuge during the Winter and Spring months.

8.6.96 The potential but unconfirmed holt on the watercourse is not expected to be impacted by the Project as the Order Limits have been adjusted to provide a 30 m buffer from this feature. The potential holt was also monitored by trail cameras between December 2025 and May 2026, which returned a single visit by an adult otter in February 2026. This visit was considered too brief to be proof of an active resting place as a resting (or sleeping) event is determined to be a period of 15 minutes or more of inactivity at a holt (Findlay, 2026).

8.6.97 Attempts to monitor the potential holt adjacent to the lake, by trail cameras in December 2025 and January 2026 were unsuccessful due to interference with the camera traps. Subsequently the trail camera was repositioned and monitoring extended through to mid-August 2026.

8.6.98 Following monitoring of the potential holts with camera traps, no resting places (i.e. active holt) where substantive rests or periods of inactivity of greater than 15 minutes were recorded. Therefore, there are currently no active otter resting places (holts) present within the Order limits. Monitoring will be repeated pre-construction to determine usage status prior to closure.

8.6.99 The National Water Vole Database Project Report (Glossop & Morse, 2024) has reported a 39 per cent decline in water vole distribution across the UK between January 2006 and December 2022. For England alone the figure stands at a 31 per cent decline. Habitat loss and the distribution of American mink (*Neovison vison*) are both significant factors in water vole decline.

8.6.100 Water vole is listed as a species of Endangered status on both the Great Britain and England Red List for Mammals (Mathews & Harrower, 2020). Water vole are also listed as a species of importance in the Nottinghamshire and Nottingham Local Nature Recovery Strategy (Nottinghamshire County Council, 2025), a key species in the Greater Lincolnshire Local Nature Recovery Strategy (Lincolnshire County Council, 2023), and a Priority Species in the Hull and East Yorkshire Local Nature Recovery Strategy (Hull and East Yorkshire Local Nature Partnership, 2026).

8.6.101 Nottinghamshire Wildlife Trust has also undertaken a water vole recovery project between 2023 and 2026 which has included habitat enhancement, release of 214 captive bred water vole, and American mink control which has resulted in the removal of 202 mink from the population throughout Nottinghamshire (Nottinghamshire Wildlife Trust, 2025). Considering the decline of water vole in England, the presence of water vole within the Order Limits, and suitable habitat recorded throughout, the population of water vole within the Order Limits is assessed as being of **County importance**.

8.6.102 The fifth otter survey of England (Environment Agency, 2010) indicated that species numbers are on the rise in England, with a 58.8 per cent rise in positive site records in 2009–2010 compared to early 1970s. Otter is listed as a species of importance in the Nottinghamshire and Nottingham Local Nature Recovery Strategy (Nottinghamshire County Council, 2025), a key species in the Greater Lincolnshire Local Nature Recovery Strategy (Lincolnshire County Council, 2023), and a Priority Species in the Hull and East Yorkshire Local Nature Recovery Strategy (Hull and East Yorkshire Local Nature Partnership, 2026).

8.6.103 Taking into account the field signs and suitable habitat recorded for otter across the Order Limits, the population of otter within the Order Limits is assessed as being of **County importance**.

Badger

8.6.104 The desk-study identified records of individual badgers, signs of their presence (such as latrines), and details of setts. The desk-study contained 354 records (213 in Lincolnshire, 139 in Nottinghamshire, and two in the East Riding of Yorkshire) of badger setts in the 2 km study area.

8.6.105 Badger surveys were carried out between February 2024 and July 2026. The surveys were carried out in accordance with standard guidance (Harris, Cresswell, & Jefferies, 1989) and searched for setts and other field signs. Where badger setts were found, each sett was assessed to determine its type (main, annex, subsidiary or outlier) and current usage. Details regarding the methods used are presented in **Application Document 6.8.A5 Appendix 8.5 Badger Report (Confidential)**.

8.6.106 In total, 116 badger setts were identified in the survey area; this included 54 setts in the Order Limits, and 52 setts between the Order Limits and a 50 m buffer. Additionally, ten badger setts beyond 50 m from the Order Limits were recorded where appropriate to the assessment (i.e. to aid the classification of setts within 50 m of the Order Limits). These are included in the results for information but are expected to be beyond the reach of disturbance resulting from the construction of the Project; this should, however, be reviewed once final construction methods (notably any piling required for pylon construction) are finalised.

8.6.107 The setts recorded comprise 14 main setts, four annexes, 23 subsidiaries, and 74 outliers. One of the setts has not been classified due to access limitations but was observed from adjacent land and recorded as being partially used. This sett will need to be surveyed before construction to confirm the sett type and usage.

8.6.108 Badgers are considered a widespread species nationally and are not considered threatened in terms of conservation status (Judge, Wilson, Macarthur, McDonald, & Delahey, 2017) (Mathews, et al., 2018) (Mathews, et al., 2018). Therefore, legal protection is afforded primarily to secure its general welfare and to address threats from illegal persecution. Given this, it is considered that the populations of badger associated with the Project are of **Local importance**.

Great crested newt- Nottinghamshire only

8.6.109 As explained in section 8.3 Summary Scope of the Assessment, and through the discussions with Natural England summarised in Table 8.6, the Project has agreed with Natural England that a DLL can be issued to cover any potential impact on GCN and ensure legal compliance for the Project within the East Riding of Yorkshire and North Lincolnshire. Therefore, assessment of GCN within these counties is

scoped out of the ES. However, as Natural England cannot offer DLL for any projects in Nottinghamshire, in an approach agreed by Natural England, the Project will seek a Mitigation Licence for Nottinghamshire only and therefore impacts to GCN in Nottinghamshire are scoped into the assessment. The survey methods and baseline used in the assessment are presented in **Application Document 6.8.A12 Appendix 8.12 Great Crested Newt Report for Nottinghamshire.**

8.6.110 The desk-study did not identify any GCN records within the Order Limits. A total of 23 records across 15 locations[14] were returned by the Nottinghamshire Biological and Geological Records Centre. None of the records were within the Order Limits, and the closest record (dated 2021) was approximately 1.06 km northeast of the Order Limits in the Beckingham Marshes area (Route Section E).

8.6.111 An initial desk-study review of aerial imagery and mapping identified a total of 43 waterbodies within the survey area. Of these, three waterbodies were scoped out of further assessment following further review due to their size (over 2,000 m^2). A further six waterbodies were scoped out following a detailed review of the orthophotos and phase 1 habitat data (where the pond was present within 50 m of the Order Limits) which confirmed that no waterbodies were present at the locations indicated on the OS mapping.

8.6.112 The remaining 34 waterbodies were taken forward for field surveys. Subsequently, seven waterbodies were scoped out of further assessment because they were dry at the time of the Habitat Suitability Index (HSI) assessment visit. Additionally, seven waterbodies were not surveyed due access restrictions.

8.6.113 A HSI assessment was therefore completed on 20 waterbodies and 17 of those were subject to eDNA sampling. Three ponds for which an HSI assessment was conducted were found to be dry at the time of the eDNA survey, and therefore no samples were taken.

8.6.114 During the eDNA surveys conducted over the 2024, 2025 and 2026 survey seasons, positive eDNA results were returned for three waterbodies (P073B, P083C and P097D), as shown on **Figure A8.12.2 Great Crested Newt Survey Results (Nottinghamshire)** within **Application Document 6.8.A12 Appendix 8.12 Great Crested Newt Report for Nottinghamshire**. This indicates that GCN were present in these waterbodies. None of these three waterbodies lie inside the Order Limits, the closest is P097D which is 30 m from the Order Limits (Biodiversity Net Gain Opportunity Area at Treswell); the other two waterbodies are located 90 m (P073B) and 230 m (P083C) from the Order Limits.

8.6.115 Negative eDNA results were returned for the remaining 14 waterbodies.

8.6.116 Seven waterbodies in the survey area could not be surveyed due to land access restrictions. All of these waterbodies will be retained and no construction works will be carried out within 50 m of the waterbodies therefore core terrestrial habitat will not be impacted. All seven waterbodies are over 500 m from confirmed GCN waterbodies, and lie between 12 m (this is to an existing road, which would act as a barrier to GCN movement) and 248 m from the Order Limits. Further attempts will be made to gain access to these waterbodies to confirm the presence or likely absence of GCN prior to construction, however if this cannot be established, a precautionary approach would be applied where works could impact suitable terrestrial GCN habitat and they would be included in any mitigation licence application.

[14] In some cases multiple records were recorded at the same grid reference on different dates.

8.6.117 GCN is widespread throughout much of lowland England and Wales and is strictly protected under UK legislation. GCN is listed as a species of importance in the Nottinghamshire and Nottingham Local Nature Recovery Strategy (Nottinghamshire County Council, 2025).

8.6.118 Only three waterbodies were confirmed to support GCN in the survey area; approximately 18 per cent of those surveyed. Additionally, the GCN populations in the three waterbodies would not be part of the same metapopulation as they are located over 7 km from each other.

8.6.119 Therefore, although GCN is a species of importance at a county level, with the limited number of waterbodies supporting this species in the survey area, the population of GCN within the Order Limits is assessed as being of **Local importance**.

Reptiles

8.6.120 North and East Yorkshire Ecological Data Centre returned two grass snake records within the 2 km study area. The closest record (dated 2015) is approximately 0.94 km northeast of the Order Limits in the Adlingfleet area (Route Section B).

8.6.121 Greater Lincolnshire Nature Partnership returned two common lizard records, one adder record, and 13 grass snake records within the 2 km study area. Due to the low resolution of the record locations, it is unknown if any of the reptiles were recorded inside the Order Limits (see paragraph 8.4.44). The closest records (to an accuracy of 100 m), both for a grass snake, are approximately 0.12 km from the Order Limits, in the areas of Belton (Route Section D), and north of Keadby (Route Section B).

8.6.122 Nottinghamshire Biological and Geological Records Centre returned 11 grass snake records within the 2 km study area. The closest record (dated 2023) is approximately 60 m east of the Order Limits, in the Woodbeck area (Route Section E).

8.6.123 During the Phase 1 habitat survey, an incidental sighting of a grass snake was recorded just outside of the Order Limits in an area of semi-improved tussocky grassland, part of which lies inside the Order Limits. The grassland area is close to Staddlethorpe Broad Lane, in Route Section A.

8.6.124 The land within the Order Limits is mostly arable, which is of limited value to reptiles. However, there are pockets of potentially suitable habitat, including woodland, tussocky grassland, ponds (where the surrounding connective habitat is suitable), and watercourse corridors. Grassland and other features, including log piles, inside Brantingham Dale were noted during the Phase 1 habitat survey as having suitability to support reptiles. Melwood Upper Quarry Local Geological Site (as shown in **Application Document 6.12.F3 Figure 12.3 Geologically Designated Sites**) was noted during the Phase 1 habitat survey to offer a mosaic of habitats formed from quarrying activities that are potentially suitable for reptiles, including unvegetated slopes and mounds, scattered scrub, grassland and waterbodies. Land at Keadby Power Station also offers a mosaic of habitats suitable for reptiles, including grassland, ephemeral/short perennial, woodland edge, scrub, and ditches.

8.6.125 It is possible that reptiles (excluding sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*), due to their known distribution and habitat requirements) may be present across the Project, in areas of suitable habitat within the Order Limits. However, they are unlikely to occur in high numbers as the land inside the Order Limits is predominantly arable and therefore sub-optimal for reptiles. All reptiles are protected from intentional injury or killing under the WCA 1981 (HM Government,

1981) and are Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006). Reptiles are therefore considered to be of **Local importance**.

Terrestrial Invertebrates

8.6.126 North and East Yorkshire Ecological Data Centre returned records of the following Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) within the 2 km study area:

- small heath butterfly (*Coenonympha pamphilus*), and
- Alder leaf beetle (*Agelastica alni*).

8.6.127 Greater Lincolnshire Nature Partnership returned records for the following Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) within the 2 km study area:

- Green-brindled crescent moth (*Allophyes oxyacanthae*);
- Small phoenix moth (*Ecliptopera silaceata*);
- Necklace ground beetle (*Carabus monilis*);
- Crucifix ground beetle (*Panagaeus cruxmajor*);
- Five-banded weevil-wasp (*Cerceris quinquefasciata*);
- Sallow moth (*Cirrhia icteritia*);
- Tormentil mining bee (*Andrena tarsata*);
- Shaded broad-bar moth (*Scotopteryx chenopodiata*);
- Cinnabar moth (*Tyria jacobaeae*);
- Small heath butterfly;
- Wall (or wall brown) butterfly (*Lasiommata megera*);
- Dark crimson underwing moth (*Catocala sponsa*);
- Blood-vein moth (*Timandra comae*);
- Mouse moth (*Amphipyra tragopoginis*);
- Buff ermine moth (*Spilosoma lutea*);
- Beaded chestnut moth (*Agrochola lychnidis*);
- Oak hook-tip moth (*Watsonalla binaria*);
- Small square-spot moth (*Diarsia rubi*);
- Mottled rustic moth (*Caradrina morpheus*);
- White ermine moth (*Spilosoma lubricipeda*); and
- Large heath butterfly (*Coenonympha tullia*).

8.6.128 The resolution of the grid references provided do not show precise locations where these species have been recorded. However, it is possible that the five-banded weevil-wasp (recorded close to Keadby Power Station (Route Section C)), and sallow

moth (recorded in the Crowle area (Route Section C)) have been recorded inside the Order Limits, as the accuracy of these records is to 100 m. The five-banded weevil-wasp is typically found in southern England and is associated with sandy, disturbed areas and brownfield sites (Buglife, 2026).

8.6.129 Nottinghamshire Biological and Geological Records Centre returned records of the following Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) within the 2 km study area:

- Wood white butterfly (*Leptidea sinapis*);
- Brown hairstreak butterfly (*Thecla betulae*); and
- Latticed heath moth (*Chiasmia clathrate*).

8.6.130 Wood white butterfly and brown hairstreak butterfly were recorded approximately 1.62 km and 1.63 km from the Order Limits, respectively, in the Walkeringham area (Route Section E). Latticed heath moth was recorded approximately 1.86 km northeast of the Order Limits, at West Burton Power Station (Route Section E).

8.6.131 Designated sites which are partly inside, or are adjacent to, the Order Limits and are designated for, or are noted to support, terrestrial invertebrates are:

- Humber Estuary SSSI (shown in **Application Document 6.8.F1 Figure 8.1 International Sites Designated for Nature Conservation within 10 km and National and Local Statutory Designated Sites within 5 km**);
- South Moor Covert and Fishpond Plantation LWS (shown in **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km**);
- Caddow Wood (Southern Assarts) LWS (shown in **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km**); and
- Treswell Wood LWS (shown in **Application Document 6.8.F2 Figure 8.2 Nature Conservation Non-Statutory Designated Sites and Priority Habitat within 2 km**).

8.6.132 Information relating to these designated sites is provided in **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information**.

8.6.133 The land inside the Order Limits is dominated by agricultural fields, which are unlikely to support notable invertebrate assemblages. However, areas of more suitable habitat include riparian habitats associated with watercourses, pockets of semi-improved neutral grassland and woodland within and adjacent to the Order Limits. Melwood Upper Quarry Local Geological Site (as shown in **Application Document 6.12.F3 Figure 12.3 Geologically Designated Sites**) has been identified as offering a mosaic of habitats suitable for invertebrates, and brimstone butterfly (*Gonepteryx rhamni*) and peacock butterfly (*Aglais io*) were noted during the Phase 1 habitat survey.

8.6.134 A terrestrial invertebrate survey carried out on land adjacent to Keadby Power Station (Route Section C) in 2017 (Keadby Generation Limited, 2021) recorded a highly diverse assemblage, with 498 species identified across a wide range of taxonomic groups. A total of 44 species (approximately 9 per cent) were assigned a recognised nature conservation status, including four Species of Principal Importance. Several records were of County and Regional importance, including rare

and very rare species associated with bare ground, short sward vegetation and dung resources. The solitary bee and wasp assemblage represented approximately 12 per cent of the British fauna, and included the five-banded weevil-wasp, recorded as a significant northward range extension, which conferred Regional importance for nature conservation for this species alone. The terrestrial invertebrate assemblage was strongly associated with the site's mosaic of short sward, bare ground and developing scrub and woodland, which together supported a high number of specialist and scarce species. Overall, the site at Keadby Power Station was considered to support terrestrial invertebrate interest of **National importance**, principally associated with the short sward and bare ground habitats, while the bees, wasps and ants (aculeate Hymenoptera) assemblage was considered to be of at least **Regional importance**.

8.6.135 Although the terrestrial invertebrate assemblage has been recorded to be up to **National importance**, this may be limited to land at Keadby Power Station. Other areas of suitable habitat within the Order Limits may also support rare species, however the majority of the land is arable and therefore unlikely to support notable invertebrate assemblages. Other habitats inside the Order Limits are likely to support terrestrial invertebrate assemblages of **Local importance**.

Other Species of Principal Importance

8.6.136 Species of Principal Importance in England as listed under Section 41 of the NERC Act 2006 (HM Government, 2006), not noted elsewhere in the existing baseline, were identified through a desk-study and incidental field sightings.

8.6.137 The desk-study identified records of common toad, brown hare, harvest mouse, and hedgehog within the 2 km study area. The land within the Order Limits, which predominantly comprises farmland habitats, is suitable to support these species.

Common toad

8.6.138 Common toad is a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006), and is protected from advertising and sale under the WCA 1981 (HM Government, 1981).

8.6.139 North and East Yorkshire Ecological Data Centre returned three common toad records within the 2 km study area. The closest record (dated 2022) is approximately 0.86 km northeast of the Order Limits, in the Beverley area (Route Section A).

8.6.140 Greater Lincolnshire Nature Partnership returned four common toad records within the 2 km study area. The closest record (dated 2022) is approximately 40 m southwest of the Order Limits, in the Crowle area (Route Section C).

8.6.141 Nottinghamshire Biological and Geological Records Centre did not return any common toad records within 2 km of the Order Limits, dated within the last ten years.

8.6.142 There are aquatic habitats (ponds) and suitable terrestrial habitats (for example, woodland, hedgerows, and rough/unmanaged grassland) within the Order Limits in all Route Sections.

8.6.143 It is likely that common toad is present across the Project in suitable habitat within the Order Limits where there are suitable breeding ponds nearby. Common toad is therefore considered to be of **Local importance**.

Brown hare

8.6.144 Brown hare is a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) and is widespread and abundant on low ground across the UK.

8.6.145 North and East Yorkshire Ecological Data Centre returned seven brown hare records within the 2 km study area. The closest record is approximately 10 m from the Order Limits, in the Broomfleet area (Route Section A).

8.6.146 Greater Lincolnshire Nature Partnership returned 54 brown hare records within the 2 km study area. The are two records within, or close to, the Order Limits (uncertainty due to the accuracy of the grid references provided, see paragraph 8.4.44), one of these records is in the Graizelound area (Route Section D) and the other east of Crowle (Route Section B).

8.6.147 Nottinghamshire Biological and Geological Records Centre returned 63 brown hare records within the 2 km study area, dated within the last ten years. This includes records within the Order Limits in the areas of Gringley on the Hill and Treswell (Route Section E). There are a further five records either within, or close to, the Order Limits (uncertainty due to the accuracy of the grid references provided) in Route Section E.

8.6.148 During surveys conducted by the Project, there was an incidental sighting of a brown hare within the Order Limits, in Route Section E. Brown hare was also recorded in a field just outside the Order Limits, close to Creyke Beck Power Station, in Route Section A.

8.6.149 Suitable habitats present within the Order Limits include arable fields, woodland edge, hedgerows, and rough grassland. When considering the habitat quality, an assumption has been made that brown hare is likely to be present across the Project in suitable habitat within the Order Limits and is of **Local importance**.

Harvest mouse

8.6.150 Harvest mouse is a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006), and is a Nottinghamshire BAP species (Nottinghamshire Biodiversity Action Group, 2020).

8.6.151 Nottinghamshire Biological and Geological Records Centre returned two harvest mouse records within the 2 km study area (both dated 2024). One of the records is inside the Order Limits, along the A57, in the Darlton area (on the boundary of Route Sections E and F).

8.6.152 Greater Lincolnshire Nature Partnership returned one harvest mouse record within the 2 km study area, dated 2019. The record is approximately 0.74 km from the Order Limits, southeast of Luddington (Route Section B).

8.6.153 North and East Yorkshire Ecological Data Centre did not return any harvest mouse records within the 2 km study area, dated within the last ten years.

8.6.154 During surveys conducted by the Project, an incidental sighting of a harvest mouse nest was recorded approximately 80 m southeast of the Order Limits, in Route Section A.

8.6.155 Evidence from the Mammal Society's National Harvest Mouse Survey (Sousa, 2025) indicates that harvest mouse populations in northeastern England are patchily

distributed, with low to moderate predicted habitat suitability. County-level evidence from the Atlas of the Terrestrial and Semi-aquatic Mammals of Lincolnshire (Manning, 2016) further recognises harvest mouse as under-recorded and likely more widespread than existing records suggest, with populations known to fluctuate widely even at managed sites. In Nottinghamshire, the Guidelines for the Selection of Local Wildlife Sites (Crouch, 2018) describe harvest mouse as scarce within the county, having undergone a significant decline, and now persisting in a limited number of strongholds, primarily associated with nature reserves. The species is identified as being of county conservation concern, and sites supporting harvest mouse where breeding is considered likely may qualify for designation as an LWS.

8.6.156 Land within the Order Limits includes suitable habitat for this species, comprising tall grassland, farmland margins, reeds, and hedgerows. Given the presence of a small number of recent records within and near the Order Limits, the availability of suitable habitat, and limitations of survey coverage within the region, an assumption has been made that harvest mouse could be present across the Order Limits. However, in the absence of evidence of breeding within the Order Limits, the species does not meet county-level designation criteria and is therefore considered to be of **Local importance**.

Hedgehog

8.6.157 Hedgehog is a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) and is widespread and abundant across the UK, but declining. Hedgehog is also a Nottinghamshire BAP species (Nottinghamshire Biodiversity Action Group, 2020).

8.6.158 North and East Yorkshire Record Centre returned 82 hedgehog records within the 2 km study area. The closest record is approximately 20 m from the Order Limits, in the Ousefleet area (Route Section B).

8.6.159 Greater Lincolnshire Nature Partnership returned 60 hedgehog records within the 2 km study area. The is one record within, or close to, the Order Limits (uncertainty is due to the resolution of the grid references provided), in the Belton area (Route Section D).

8.6.160 Nottinghamshire Biological and Geological Records Centre returned 48 hedgehog records within the 2 km study area. The closest record (with an accuracy of 1 m) is approximately 74 m from the Order Limits, in the Sturton le Steeple area (Route Section E). Suitable habitats present within the Order Limits include hedgerow, woodland, scrub and grassland habitat. When considering the habitat quality, an assumption has been made that hedgehog is likely to be present in suitable habitat across the Order Limits and is of **Local importance**.

Polecat

8.6.161 Polecat is a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006).

8.6.162 Nottinghamshire Biological and Geological Records Centre did not return any polecat records within the 2 km study area. Two polecat-ferret records were returned, the closest of which was located approximately 0.14 km northwest of the Order Limits, in the North Wheatley area (Route Section E). These are likely to be hybrid polecat-ferrets, which is a hybrid between a wild European polecat (*Mustela putorius*) and a domesticated ferret (*Mustela putorius furo*).

8.6.163 Greater Lincolnshire Nature Partnership and North and East Yorkshire Ecological Data Centre also did not return any polecat records within the 2 km study area, dated within the last ten years.

8.6.164 In England, suitable habitat includes farmland with hedgerows and small woodlands and watercourse banks. The Vincent Wildlife Trust website (Vincent Wildlife Trust, 2025) informs that the polecat '*has spread out from its historical stronghold in mid-Wales and recolonised much of central and southern England*'. A report issued by the Vincent Wildlife Trust in 2016 regarding the distribution and status of the polecat in Britain 2014-2015 (Croose, 2016) states:

'Records in Yorkshire were concentrated in the eastern Yorkshire Dales, between Ripon and Harrogate, on the boundaries of vice counties Mid-west Yorkshire and North-west Yorkshire. The verifiable records were a combination of true polecats and polecat-ferrets'

'…A few records were received from South-west Yorkshire (two verifiable as true polecats and one as polecat-ferret), mostly concentrated on the boundaries of Nottinghamshire and North Lincolnshire. Three records were received from South-east Yorkshire; one polecat-ferret and two unverifiable. A small number of records were received from North-east Yorkshire and these were all unverifiable'.

8.6.165 It is therefore potentially more likely that polecats are present, or more widely distributed, within the Route Sections which lie within the counties of North Lincolnshire and Nottinghamshire. These include Route Sections B to F, with this species likely less abundant (if present) in Route Section A, which lies within East Riding of Yorkshire.

8.6.166 If present, wild European polecat is considered to be of up to **County importance**, due to its more restricted known distribution in this area of the UK.

Aquatic Macrophytes

8.6.167 The desk-study returned no records of protected and/or notable aquatic macrophyte taxa within the Order Limits but did return records of notable and/or protected species desk-study records within the 2 km study area (**Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**).

8.6.168 The stretch of Paupers Drain within the Order Limits (Route Section B) forms part of Paupers Drain LWS, which is known to support a rich diversity of wetland macrophytes. None of the species listed on the LWS citation are notable except for the mention of stoneworts, some of which are endangered, although the citation does not cite any specific species (see also **Application Document 6.8.A2 Appendix 8.2 Designated Sites Information** and **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**).

8.6.169 Chesterfield Canal SSSI is within the Order Limits (Route Section E). The citation for the Chesterfield Canal SSSI (Natural England, 1988) references the canal supporting a nationally uncommon aquatic plant community, including nationally scarce species. The desk-study identified white water-lily (*Nymphaea alba*) and water soldier (*Stratiotes aloides*) at Chesterfield Canal, 2 km east of the Order Limits (Route Section E). These species are designated Least Concern in the Red List for Great Britain (Stroh, et al., 2025), but are included in the Nottingham Rare Plant Species list (Wood & Woods, 2021). White water-lily is considered rare for Nottinghamshire, and water soldier is listed as extinct as a native plant in Nottinghamshire and

restricted in distribution in Nottinghamshire (Wood & Woods, 2021). Desk-study records of the round-fruited rush (*Juncus compressus*) were also found in Chesterfield Canal; this species is designated Vulnerable on the Red List for Great Britain (Stroh, et al., 2025). None of these species were recorded during the Project-specific surveys of the Chesterfield Canal (**Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**).

8.6.170 Desk-study records of large-flowered hemp-nettle (*Galeopsis speciosa*) were recorded in Misterton Carr Drain, 1.8 km west of the Order Limits in Route Section E. This species is designated Endangered on the Red List for Great Britain (Stroh, et al., 2025).

8.6.171 Mother Drain flows through the Order Limits in Route Section E and is connected to the Mother Drain, Misterton SSSI, 0.65 km east of the Order Limits. The Mother Drain, Misterton SSSI supports a diverse abundance of macrophyte species, which includes sand leek (*Allium scorodoprasum*) which, although is of Least Concern on the Red List for Great Britain (Stroh, et al., 2025), this is its only location within Nottinghamshire, according to the Mother Drain, Misterton SSSI citation (dated 1993) (Natural England, 1993). No recent records of this species were recorded in the desk-study.

8.6.172 The East Riding of Yorkshire BAP (East Riding of Yorkshire Council, 2010) lists UK BAP species which could be associated with aquatic habitats within the Order Limits. These include narrow small reed (*Calamagrostis stricta*), divided sedge (*Carex divisa*), greater water parsnip (*Sium latifolium*), marsh stitchwort (*Stellaria palustris*), and tubular water dropwort (*Oenanthe fistulosa*). However, the locations of these records are not listed and therefore their proximity to the Project cannot be determined.

8.6.173 The Nottinghamshire Local BAP (Nottinghamshire Biodiversity Action Group, 2020) lists several vascular plant species of conservation concern which could be associated with aquatic habitats within the Order Limits, including marsh stitchwort which is a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) and is designated Endangered on the Red List for Great Britain (Stroh, et al., 2025). However, the locations of these records are not listed, and therefore their proximity to the Project cannot be determined. The Lincolnshire BAP (Greater Lincolnshire Nature Partnership, 2015) also lists greater water parsnip as a Priority Species for the Lincolnshire area, with plans to aid its recovery through replanting. The locations are unspecified and therefore proximity to the Project cannot be determined.

8.6.174 The Order Limits also cross the Humber Estuary SSSI, which has a notable vascular plant assemblage as part of its designation, which includes:

- Divided sedge (*Carex divisa*), a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006), designated Vulnerable on the Red List for Great Britain (Stroh, et al., 2025) and a UK BAP priority vascular plant species (Joint Nature Conservation Committee, 2007);
- Slender hare's-ear (*Bupleurum tenuissimum*), a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006), designated Least Concern on the Red List for Great Britain (Stroh, et al., 2025) and a UK BAP priority vascular plant species (Joint Nature Conservation Committee, 2007); and

- Spiral tasselweed (*Ruppia cirrhosa*), designated Vulnerable on the Red List for Great Britain (Stroh, et al., 2025).

8.6.175 No notable species of macrophytes were recorded during the aquatic macrophyte field surveys (**Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**); however, water-violet (which is designated Vulnerable on the Red List for Great Britain (Stroh, et al., 2025)) was recorded during other ecological field surveys on a drain adjacent to Carr Lane (Route Section B).

8.6.176 Due to the presence of species designated Vulnerable on the Red List for Great Britain within the Order Limits and desk-study records of designated Vulnerable or Near Threatened on the Red List for Great Britain, aquatic macrophytes are considered of **County importance**.

Aquatic Macroinvertebrates

8.6.177 One desk-study record of white-clawed crayfish (*Austropotamobius pallipes*) was recorded in North Soak Drain in 2021. This record is 1.5 km upstream of the Order Limits, and 3.5 km upstream of crossing B-05 in Route Section C. This species is protected under the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) (Council of Europe, 1979), Annex II and Annex V of the Habitats Directive (HM Government, 2017), is listed as Endangered on the IUCN Red List (International Union for Conservation of Nature , 2026), and is also protected under Schedule 5 of the WCA 1981 (HM Government, 1981). White-clawed crayfish are also a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006). This record is from an unknown source (provided through LRC searches) and did not show up on an Environment Agency (Environment Agency, 2025) or NBN (National Biodiversity Network Atlas Partnership, 2025) data search. The validity of this record is therefore unconfirmed. With this in mind, an extended catchment-wide desk-study search was conducted. No records of white-clawed crayfish were found, but records of the invasive signal crayfish species (*Pacifastacus leniusculus*) were found to be in a small tributary connected to the River Trent. It is therefore assumed that white-clawed crayfish are unlikely to be present in this catchment, noting that the signal crayfish actively displace their native counterparts and transmit disease (crayfish plague (*Aphanomyces astaci*)), to which they are immune, but which is fatal to white-clawed crayfish.

8.6.178 The East Riding of Yorkshire BAP (East Riding of Yorkshire Council, 2010), the Nottinghamshire Local BAP (Nottinghamshire Biodiversity Action Group, 2020), the Lincolnshire BAP (Greater Lincolnshire Nature Partnership, 2015) and The Ouse and Humber Strategic Sub-catchment Area BAP (Yorkshire Humber Drainage, 2010) also reference white-clawed crayfish as a Priority Species recorded within the respective areas of consideration.

8.6.179 Other notable species of macroinvertebrates recorded during the desk-study in data collected by the Environment Agency (Environment Agency, 2025) are listed below (all of which are considered Nationally Scarce, occurring in 16–100 hectads in Great Britain, and includes rare species qualifying under the main IUCN criteria 2001 (Foster, 2010)):

- The stonefly (*Amphinemura standfussi*) was recorded in North Cave Beck and Sands Drain, both of which are hydrologically connected to Mill Beck in Route Section A.

- The water boatman (*Corixa affinis*) was recorded in North Cave Beck, hydrologically connected to Mill Beck in Route Section A.
- The hill soldier fly (*Oxycera pardalina*) was recorded in Mill Beck, 1.3 km from Route Section A.
- Riffle beetle (*Riolus subviolaceus*) was recorded in North Cave Beck and Sands Drain, both of which are hydrologically connected to Mill Beck in Route Section A. This species was also recorded in Mill Beck itself, but outside the Order Limits.
- The river orb mussel (*Sphaerium rivicola*) was recorded in Mill Beck in Route Section A, and in Hatfield Waste Drain in Route Section C (record is outside the Order Limits).
- Diving beetle (*Hygrotus quinquelineatus*) was recorded in North Cave Beck, hydrologically connected to Mill Beck in Route Section A.
- Caddisfly (*Limnephilus politus*) was recorded in North Engine Drain, in Route Section C.
- Records of swollen river mussel (*Unio tumidus*) were recorded in North Soak Drain and the River Torne in Route Section C.
- Lister's river-snail (*Viviparus contectus*) was recorded in Hatfield Waste Drain, 2.5 km from Route Section C.

8.6.180 Field surveys recorded the beetle (*Riolus subviolaceous*) on Mill Beck (Route Section A). This species is Nationally Scarce, occurring in 16–100 hectads in Great Britain (Foster, 2010). Field surveys also recorded the diving beetle (*Stictonectes Lepidus*) in Brewcarrs Drain (Route Section B/C). This species is designated as IUCN Near Threatened (Foster, 2010). There are no statutory designations associated with either of these species.

8.6.181 Due to the presence of notable species within the Order Limits, aquatic macroinvertebrates are considered of **County importance**.

Fish

8.6.182 Multiple desk-study records of European eel were found in watercourses hydrologically connected to those within the Order Limits:

- North Cave Beck, hydrologically connected to Mill Beck in Route Section A;
- Sands Drain, 890 m from the Order Limits, hydrologically connected to Ings Drain and Ellerker Beck (Route Section A);
- River Humber (Route Section A) and Ferry Drain (Route Section D);
- Unnamed drain connected to East Drayton (Route Section E);
- Eastoft Moors Drain, which is connected to Bewcarrs Drain (Route Section C) and Eastoft Boundary Dyke (Route Section C);
- River Trent, which is connected to Fledborough Beck (Route Section F);
- Catchwater Drain (Route Section E) and the confluence of Catchwater Drain and Lee Beck (Route Section E);
- North Beck (Route Section E);

- River Ouse (Route Section B);
- Healey's Drain (Route Section D);
- Doncaster Drain, which is connected to Lound Rates Drain and Paunch Drain (Route Section D);
- Long Hirst Drain (Route Section D);
- River Idle (Route Section E);
- Weir Dyke (Route Section B);
- Unnamed drain hydrologically connected to Lea Beck (Route Section E);
- Unnamed drain to North Beck (Route Section E);
- Unnamed drain (Route Section E);
- Unnamed drain (Route Section F);
- Unnamed drain (Route Section F); and
- Unnamed drain (Route Section F).

8.6.183 European eel was also found during field surveys on Mill Beck (Route Section A), East Drayton (Route Section E), Wheatley Beck (Route Section F), and Fledborough Beck (Route Section F).

8.6.184 European eel is listed as Critically Endangered on the IUCN Red List (International Union for Conservation of Nature , 2026). It is also a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) and is listed on Appendix II of the Bonn Convention, last updated June 2026 (Convention on the Conservation of Migratory Species of Wild Animals, 2021). The species is protected under the Eels (England and Wales) Regulations 2009 (HM Government, 2009), as well as the Salmon and Freshwater Fisheries Act 1975 (HM Government, 1975). It is also listed on the Nottinghamshire Local BAP (Nottinghamshire Biodiversity Action Group, 2020).

8.6.185 Desk-study records of brown/sea trout (*Salmo trutta*) were found in watercourses hydrologically connected to those within the Order Limits. They were recorded in North Cave Beck, which is hydrologically connected to Mill Beck and in Sands Drain which is hydrologically connected to Ings Drain, and within Ellerker Beck (all in Route Section A). They are also present in the River Humber (Route Section A), which is hydrologically connected to Market Weighton Canal, Blacktoft Channel, and River Trent (Route Sections A/B).

8.6.186 Brown/sea trout were also recorded during fish eDNA surveys of Fledborough Beck (Route Section F) (see **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**).

8.6.187 Brown/sea trout are a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006).This species is also protected under the Salmon and Freshwater Fisheries Act 1975 (HM Government, 1975).

8.6.188 Desk-study records of barbel (*Barbus barbus*) were found in the River Trent, which is connected to Fledborough Beck (Route Section F). Barbel is protected under Schedule 4 of the Habitats Regulations (HM Government, 2017), and also protected under the Salmon and Freshwater Fisheries Act 1975 (HM Government, 1975).

8.6.189 Desk-study records of spined loach (*Cobitis taenia*) were found in River Trent, which is connected to Fledborough Beck (Route Section F), and in Market Weighton Canal (Route Section A). The River Trent is also connected to many smaller watercourses along the length of the Order Limits. Records of this species were also found on the Old Trent (Route Section F). Spined loach is protected under Appendix III of the Bern Convention (Council of Europe, 1979) and under the Salmon and Freshwater Fisheries Act 1975 (HM Government, 1975).

8.6.190 Desk-study records of herring (*Clupea harengus*) were found in the River Humber, 4.1 km from Market Weighton Canal (Route Section A). Records of the species were also found in the River Ouse and River Trent (Route Sections B). Herring is a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) and is protected under the Salmon and Freshwater Fisheries Act 1975 (HM Government, 1975).

8.6.191 Desk-study records of European smelt (*Osmerus eperlanus*) were found in the River Humber (Route Section A) and River Ouse (Route Section B), 4.1 km from Market Weighton Canal (Route Section A) and also hydrologically connected to Blacktoft Warping Drain (Route Section A). The species has also been observed in the River Trent (which is hydrologically connected to the Project. European smelt is a Species of Principal Importance under Section 41 of the NERC Act 2006 (HM Government, 2006) and is protected under the Salmon and Freshwater Fisheries Act 1975 (HM Government, 1975).

8.6.192 Desk-study records of bullhead (*Cottus gobio*) were found in watercourses hydrologically connected to those within the Order Limits. They were recorded in the following watercourses in Route Section A: North Cave Beck, 3.5 km from the Order Limits but hydrologically connected to Mill Beck; in Sands Drain, 680 m from the Order Limits, hydrologically connected to Ings Drain and Ellerker Beck. Furthermore, records of bullhead were found in Wheatley Beck (Route Section E), North Cave Beck (Route Section A) and Fledborough Beck (Route Section F).

8.6.193 Field surveys recorded bullhead in Wheatley Beck (Route Section E), East Drayton (Route Section E), and Fledborough Beck (Route Section F). Bullhead is listed as an Annex II species of the Habitats Directive (see **Application Document 6.8.A10 Appendix 8.10 Aquatic Ecology Report**).

8.6.194 River lamprey (*Lampetra fluviatilis*) and sea lamprey (*Petromyzon marinus*) are listed as qualifying features (but not primary reasons) for the designation of the Humber Estuary SAC and reasons for notification for its SSSI status (Route Section A).

8.6.195 Additionally, several fish are listed as Priority Species in the East Riding of Yorkshire BAP, comprising sea lamprey, river lamprey, Atlantic salmon (*Salmo salar*), European smelt, and spined loach. The Nottinghamshire Local BAP lists 13 fish species of conservation concern: allis shad (*Alosa alosa*), twaite shad (*Alosa fallax*), European eel, spined loach, bullhead, river lamprey, sea lamprey, brook lamprey (*Lampetra planeri*), European smelt, nine-spined stickleback (*Pungitius pungitius*), Atlantic salmon, brown/sea trout, and grayling (*Thymallus thymallus*). The Lincolnshire BAP also lists European eel, spined loach, sea and river lamprey, European smelt, brown/sea trout, and Atlantic salmon (Greater Lincolnshire Nature Partnership, 2015).

8.6.196 Due to the presence of many protected fish species, including the potential for migratory (diadromous) fish species in watercourses hydrologically connected to

those within the Order Limits and the presence of Species of Principal Importance, fish are considered to be of **Regional importance**.

Future Baseline

8.6.197 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.

8.6.198 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 there would be any significant changes to ecologically important features due to climate change 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 the end of 2031 (proposed overhead line becomes operational) or 2032/2033 (completion of reinstatement works), 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 recorded during surveys carried out to inform this assessment, given that planning policy will likely continue to minimise the loss of biodiversity features and seek no net loss.

8.6.199 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 significantly alter the baseline conditions or change the outcome of the assessment presented in this chapter.

8.7 Potential Effects

8.7.1 Based on the assessment scope (see section 8.3), the following sections describe how construction (C), operation (O), and maintenance (M) activities are likely to affect ecology 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 8.18 sets out the impact pathways that have the potential to result in an effect on the receptors identified in section 8.6.

Construction

8.7.2 The potential impacts that could result from the construction of the Project are:

- Permanent and temporary direct habitat loss and temporary disturbance and fragmentation of designated sites;

- Permanent and temporary direct habitat loss and temporary disturbance and fragmentation of Priority Habitats, long established woodland including designated ancient woodlands present on the Ancient Woodland Inventory and woodland recorded by the Project as Woodland with Characteristics of Ancient Woodland, and veteran trees;
- Permanent and temporary direct loss and temporary disturbance of habitats, including those used by protected and notable species;
- Incidental mortality of protected and notable species;
- Disturbance to protected or notable species from noise, vibration, visual disturbance and lighting;
- Pollution and dust impacts on designated sites, and notable habitats and other habitats used by protected and notable species; and
- Introduction of INNS leading to the degradation of the habitat quality of designated sites and notable habitats, including those used by protected species.

Air quality

8.7.3 Five non-statutorily designated LWSs and one Wildlife Trust Reserve were identified within 200 m of the ARN (i.e. roads on which, when considering additional construction traffic due to the Project, vehicle numbers exceed the National Highways DMRB LA 105 traffic screening criteria (National Highways, 2024)), and assessed in accordance with IAQM Ecological guidance (Institute of Air Quality Management , 2020). The ARN and modelled receptor locations are displayed in **Application Document 6.15.F2 Figure 15.2 Air Quality Construction Vehicle Emissions Study Area and Receptor Locations**.

8.7.4 Table 15.17 in **Application Document 6.15 Chapter 15 Air Quality** shows the modelled oxides of nitrogen (NOx) concentrations predicted at each ecological receptor location representing the non-statutory designated sites.

8.7.5 The results show that the modelled NOx concentrations are below the Air Quality Assessment Level (AQAL) (critical level of 30 µg/m^3). Worst-case changes (increases) in NOx concentrations at Jillywood Lane LWS and Bridgehead Yorkshire Wildlife Trust Reserve as a consequence of Project related construction traffic are forecast to be 0.1µgm^3 or 0.3 per cent of the critical level for NOx, changes at other locations are so small as to be effectively zero. The contribution of the Project to nitrogen deposition rates are an order of magnitude less than NOx and therefore would not show in the modelling, being effectively zero (i.e. less than 0.00 kgN/ha/yr). Ammonia emissions will also be imperceptible since the majority of construction vehicles will be Heavy Good Vehicles or other diesel or electric vehicles which do not emit ammonia.

8.7.6 As assessed in **Application Document 6.15 Chapter 15 Air Quality**, as the changes in NOx concentrations are less than 1 per cent of the AQAL at all six ecological receptors, in accordance with the IAQM Ecological guidance (Institute of Air Quality Management , 2020) effects are considered to be negligible and **not significant**. Therefore, impacts to ecological receptors due to construction vehicle emissions are not considered further in this chapter.

8.7.7 It should be noted that the assessment results presented in **Application Document 6.15 Chapter 15 Air Quality** represent the effects of the Project in isolation only as,

in accordance with IAQM Ecological guidance (Institute of Air Quality Management , 2020), there is no requirement to undertake a separate in-combination assessment for these sites as they are not protected under either The Conservation of Habitats and Species Regulations 2017 (HM Government, 2017) or the Wildlife and Countryside Act 1981 (HM Government, 1981).

Changes to groundwater levels, quality and flow from undergrounding

8.7.8 The groundwater risk assessment presented in **Application Document 6.12.A4 Appendix 12.4 Preliminary Qualitative Groundwater Risk Assessment** has assessed the potential risks associated with changes to groundwater levels, quality and groundwater flow due to dewatering, on groundwater receptors, and informs the impact assessment presented in **Application Document 6.12 Chapter 12 Geology and Hydrogeology**.

8.7.9 The risk assessment concluded that dewatering to reduce groundwater levels is unlikely to be required for most Project elements, and where dewatering may be required, radius of influence calculations have not identified any potential effects on groundwater receptors. Therefore, the temporary construction effects from dewatering are considered to be negligible and for groundwater and groundwater receptors this would result in an overall negligible effect, which would be not significant. Therefore, adverse effects on designated and notable habitats due to changes in groundwater levels, quality and flow from undergrounding works are not predicted and are not discussed further in this chapter.

Operation

8.7.10 The potential impacts that could result from the operation of the Project are:

- Habitat fragmentation by the proposed overhead line, creating a barrier to species dispersal; this is considered only in **Application Document 6.9 Chapter 9 Ornithology**.

Maintenance

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

- Temporary direct disturbance of habitats, including those which lie in designated sites and Priority Habitat, through the use of proposed maintenance access tracks; and
- Pollution impacts and the introduction of INNS through the use of proposed maintenance access tracks, leading to the degradation of existing habitat quality and reduction in native species due to being outcompeted.

8.7.12 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 effects associated with potential refurbishment and routine maintenance works are not assessed separately to construction effects in section 8.9.

Potential Effects

8.7.13 Table 8.18 sets out the potential effects on receptors identified in section 8.6 and shows whether there is the potential for effects during the construction (C)and operation (O) phases, or during maintenance (M).

Table 8.18 – Summary of potential ecology effects at each phase of the Project

Receptor	Potential effect	Description	C	O	M
Designated sites					
Humber Estuary SAC/SPA/Ramsar/SSSI	Degradation of habitat	Degradation of habitat in specific locations of the designated sites due to dust and other pollution impacts.	✓		✓
Humber Estuary SAC/Ramsar/SSSI	Temporary disturbance to grey seal	Potential for temporary disturbance to grey seal, should they travel as far inland along the River Ouse as the Order Limits.	✓		
Humber Estuary SAC/SPA/Ramsar/SSSI	Management of one tree	Potential for one tree inside the boundary of the designated sites to be affected but not removed.	✓		✓
Brantingham Dale SSSI	Temporary direct habitat loss and disturbance. Potential permanent tree and scrub management	Temporary vegetation loss and disturbance associated with overhead line clearance and installation of pilot wires and potential permanent tree and scrub management.	✓		✓
Chesterfield Canal SSSI	Temporary shading	The construction of a clear span bridge, or other suitably assessed alternative, over the canal may temporarily shade aquatic plants, if present in that location. The bridge would be removed upon completion of the construction works.	✓		
	Permanent habitat management and temporary disturbance	Tree and vegetation management associated with overhead line installation.	✓		
Designated sites located within and up to 250 m from the Order Limits, and/or 50 m from the route(s) used by construction vehicles on the public highway up to	Degradation of habitat	Degradation of habitat in specific locations of these designated sites due to dust, other pollution impacts and spread of INNS.	✓		✓

Receptor	Potential effect	Description	C	O	M
250 m from the proposed bellmouths:					
Humber Estuary SAC/SPA/Ramsar/SSSI					
Brantingham Dale SSSI					
Chesterfield Canal SSSI					
Treswell Wood SSSI					
Brantingham Dale Historic LWS					
Jillywood Lane LWS					
Blacktoft Sands RSPB Reserve					
Broomfleet Pits LWS					
Woodale Historic LWS					
Cliffs Plantation Candidate LWS					
Risby Park with Fishpond Wood LWS					
Birkhill Wood LWS					
Drove Road LWS					
Sedge Hole Close Wildlife Trust Reserve/LWS					
Folly Drain North LWS					
Hatfield Waste Drain LWS					
North Engine Drain, Belton LWS					
Paupers' Drain LWS					
River Torne LWS					

Receptor	Potential effect	Description	C	O	M
South Engine Drain, Belton LWS					
Stainforth and Keadby Canal Corridor LWS					
Warping Drain Corridor LWS					
South Moor Covert and Fishpond Plantation LWS					
Three Rivers LWS					
Dolegate Road, East Drayton Candidate LWS					
Chesterfield Canal (Welham to Misterton) LWS					
Caddow Wood (Southern Assarts) LWS					
Retford Gate Green Lane LWS					
Treswell Wood Wildlife Trust Reserve/LWS					
Saundby Park Wood LWS					
Marnham Railway Yard Candidate LWS					
Fledborough to Harby Dismantled Railway LWS					
Tongs and Dogholes Woods LWS					
Mother Drain, Misterton LWS					

Receptor	Potential effect	Description	C	O	M
High House Road Verges, Sturton le Steeple LWS Beckingham Wood LWS West Burton Meadow Wildlife Trust Reserve/LWS Wheatley Wood LWS Shaw Ponds LWS Wooden Beck Hill Verges LWS Misterton Pasture LWS Caddow Wood (Northern Assart) LWS					
Designated sites with potential hydrological links to the Order Limits, see Table 8.12, Table 8.13, Table 8.14, and Table 8.15	Degradation of habitat	Potential for degradation of habitat due to changes to water quality.	✓		✓
Jillywood Lane LWS	Temporary and permanent direct habitat loss, management and disturbance. Fragmentation of habitat	If the horizontal LoD is used in this area, there is potential for temporary vegetation loss and permanent ongoing management associated with overhead line clearance and installation of pilot wires. Permanent loss of trees may occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	✓		✓
Brantingham Dale Historic LWS	Temporary and permanent direct habitat loss, management and disturbance. Fragmentation of habitat.	Overhead line clearance will result in permanent loss and management of trees and potentially disturbance of other vegetation inside the Historic LWS. Permanent loss of trees would occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	✓		✓

Receptor	Potential effect	Description	C	O	M
Dolegate Road, East Drayton Candidate LWS	Temporary direct habitat loss, fragmentation and disturbance	Temporary vegetation loss, fragmentation and disturbance associated with construction access and undergrounding of third-party asset (NGED 13).	✓		✓
Stainforth and Keadby Canal Corridor LWS	Permanent direct habitat management and temporary disturbance	Vegetation management and disturbance associated with overhead line clearance and installation of pilot wires.	✓		✓
Hatfield Waste Drain LWS	Temporary direct habitat loss and disturbance	Temporary vegetation loss and disturbance for scaffolding.	✓		
North Engine Drain, Belton LWS	Permanent and temporary direct habitat loss, management and temporary disturbance.	Permanent vegetation management and temporary disturbance associated with overhead line clearance and installation of pilot wires. Potential temporary habitat loss required for indicative visibility splay.	✓		✓
River Torne LWS	Temporary and permanent direct habitat loss, management and disturbance.	Permanent vegetation management and temporary disturbance for overhead line clearance and installation of pilot wires. Potential temporary habitat loss for scaffolding. Temporary vegetation loss also likely required for temporary construction access and associated potential bellmouth upgrade and visibility splay.	✓		✓
South Engine Drain, Belton LWS	Temporary direct habitat loss and disturbance	Temporary vegetation loss and disturbance potentially required for temporary construction access, associated bellmouth BM-068, and visibility splays for bellmouths BM-068 and BM-015.	✓		
Folly Drain North LWS	Temporary direct habitat loss and disturbance	Temporary vegetation loss for construction access and for undergrounding a third-party asset.	✓		
South Moor Covert and Fishpond Plantation LWS	Temporary direct habitat loss and disturbance	Undergrounding a third-party asset (NPG-25) may impact the LWS through temporary habitat loss and disturbance.	✓		
Warping Drain Corridor LWS	Permanent and temporary direct habitat loss, management and disturbance	Permanent habitat management and temporary disturbance required for overhead line clearance and installation of scaffolding and potential permanent removal of trees. Temporary vegetation loss and disturbance would also occur due to a construction	✓		✓

Receptor	Potential effect	Description	C	O	M
		access road that runs within the LWS boundary for approximately 185 m.			
Retford Gate Green Lane LWS	Permanent and temporary direct habitat loss, management and disturbance	Temporary impacts to vegetation to facilitate site access and potential permanent removal and management of trees for overhead line clearance.	✓		
Habitats					
Ancient woodland	Damage to irreplaceable habitat	Works inside root protection areas (at Tongs and Dogsholes Woods) could cause damage to tree roots and impact the health of the trees.	✓		✓
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Woodland recorded by the Project as Woodland with Characteristics of Ancient Woodland (not included on Ancient Woodland Inventory)	Permanent and temporary direct habitat loss and disturbance	Tree and vegetation loss associated with overhead line clearance and installation of pilot wires. Permanent loss of trees may occur where reinstatement is not possible due to the operational requirements of the proposed overhead line, trees removed to above ground level only. This applies to: • Jillywood Lane (not affected as part of current design, but if LoD used to the north then could oversail in two small areas) • Socken Wood (oversailed in two places); • Part of Brantingham woodland, adjacent to Ellerker Road (only if the LoD is used); • Part of Dixon Wood (only if the LoD is used); • Part of Wood Farm (oversailed, construction access road also impacts edge of this woodland); and • Pigeon Field (only if the LoD is used, then potential to be oversailed for small section to the south).	✓		✓

Receptor	Potential effect	Description	C	O	M
		The undergrounding of a third-party asset could potentially impact a very small area of woodland south of Dog Horse Plantation, likely minor limb management in one corner if full working width of third-party asset (NPG-24) is needed. Saundby Park may require minor limb management for a short section of existing adjacent track for access of third-party asset works (NGED-06) if needed).			
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		
Veteran trees	Permanent loss of irreplaceable habitat	Permanent loss of irreplaceable habitat (one veteran tree) to facilitate construction works, only if LoD is used.	✓		
	Management or pruning of veteran trees	Management or pruning of veteran trees assigned affected managed to facilitate overhead line clearance and other works as set out in **Application Document 7.14 Arboricultural Impact Assessment**.	✓		✓
Broadleaved woodland – semi-natural, including Priority Habitat Broadleaved woodland – plantation	Permanent and temporary direct habitat loss, disturbance and fragmentation	Temporary habitat loss and disturbance would be required to facilitate construction access, pylon working areas, overhead line clearance and installation of pilot wires. Temporary loss and disturbance of woodland may also occur due to the undergrounding of third-party assets. Permanent loss of trees would occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	✓		✓
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Neutral grassland – semi-improved	Temporary direct loss and disturbance of habitat	Temporary loss and disturbance may occur to facilitate construction works, e.g. construction access routes and visibility splays, stringing positions, scaffolding and undergrounding third party assets (including access).	✓		✓

Receptor	Potential effect	Description	C	O	M
	Permanent direct loss of habitat	Permanent loss associated with pylon 4ZQ68.	✓		
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Native species-rich hedge/hedgerow with trees Native species-poor hedge/hedgerow with trees	Temporary direct loss and disturbance of habitat	Temporary loss and disturbance may occur to facilitate construction works, e.g. construction access routes and visibility splays, road widening, stringing positions, scaffolding and undergrounding third party assets.	✓		✓
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Open water – standing water (Ponds)	Direct loss or damage of habitat	Potential damage or loss of one small pond inside the working area for pylon 4AF39.	✓		
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Running water, including river Priority Habitat	Temporary fragmentation and disturbance of habitat	The installation or upgrading of culverts for construction access and the undergrounding of third-party assets (if open cut techniques are used) could temporarily fragment and disturb watercourses, including ditches.	✓		
	Permanent direct loss of habitat	Upgrading/modification of existing culverts could result in permanent habitat loss, if existing culverts are made bigger.	✓		
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Cultivated/disturbed land – ephemeral/short perennial	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Lowland calcareous grassland	Temporary habitat loss and disturbance	Temporary habitat loss/damage and disturbance would be required to facilitate construction access.	✓		

Receptor	Potential effect	Description	C	O	M
	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Coastal saltmarsh Priority Habitat	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Mudflats Priority Habitat	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Priority Habitat – No main habitat but additional habitats present	Temporary habitat loss and disturbance	Part of one of the pylon working areas (4AF77) located north of the River Ouse lies within an area mapped as '*no main habitat but additional habitats present*' (Natural England, 2025), with the possible presence of reedbed and saltmarsh habitat. The Phase 1 habitat survey recorded the area inside and adjacent to the pylon working area to be poor semi-improved grassland, so reedbed and saltmarsh habitats would not be directly impacted at this location. This potential impact is therefore not carried through to the residual effects assessment in Table 8.20. Strips of habitat directly north and south of Chesterfield Canal are mapped as '*no main habitat but additional habitats present*' (Natural England, 2025), with the possible presence of reedbed. Chesterfield Canal (a designated SSSI) would be crossed using a clear span bridge, or other suitably assessed alternative. The scaffolding either side of the SSSI would be set back from the boundary of the SSSI, retaining bankside vegetation. Therefore, any reedbed habitat (if present) would not be directly impacted at this location. This potential impact is therefore not carried through to the residual effects assessment in Table 8.20.			
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓

Receptor	Potential effect	Description	C	O	M
Lowland dry acid grassland Priority Habitat and open mosaic Priority Habitat	Temporary habitat loss and disturbance	Temporary habitat damage and disturbance could occur due to construction access routes.	✓		✓
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Lowland meadows Priority Habitat	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Reedbeds Priority Habitat	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Good quality semi-improved grassland (non-priority)	Temporary habitat loss and disturbance	Temporary loss and disturbance of habitat to facilitate construction access and associated potential bellmouth upgrade (BM-015 in Route Section C).	✓		
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Traditional orchard Priority Habitat	Permanent direct loss of habitat	Potential loss and disturbance of habitat if the LoD is used for the proposed overhead line.	✓		
	Degradation of habitat	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Priority Habitat located outside the Order Limits, in the wider study area: • Coastal and floodplain grazing marsh; • Lowland fens; and • Purple moor grass and rush pastures.	Degradation of habitat	Degradation of habitat due to dust and other pollution impacts, including changes to water quality.	✓		✓

Receptor	Potential effect	Description	C	O	M
Species					
Yellow bird's-nest	Direct loss and disturbance	Direct impacts to plants due to pylon working areas (pylons 4ZQ78 and 4ZQ77), access, stringing works, and overhead line clearance (between 4ZQ78 and 4ZQ76) requiring felling and management of trees within woodland at or in the vicinity of the top of Bilks Hill.	✓		✓
Other protected and notable plant species: bluebell, burnet-saxifrage, common restharrow, giant bellflower, harebell, salad burnet, wild strawberry, wild thyme.	Direct loss and disturbance	Potential impacts to plants if present inside construction working areas	✓		✓
Terrestrial invertebrates	Temporary and permanent direct loss, disturbance and fragmentation of habitat and incidental mortality	Temporary impacts to habitats used by invertebrates may occur to facilitate construction works, e.g. construction access routes and visibility splays, pylon working areas, stringing positions, scaffolding and undergrounding third-party assets. Permanent loss may occur where permanent road widening is required and tree clearance is required for the proposed overhead line. New areas of suitable habitat may be created under the pylons where the land can no longer be used for crop growing.	✓		✓
	Incidental mortality/harm	Direct impacts may occur particularly during initial stages of vegetation clearance and ground works.	✓		✓
GCN (Nottinghamshire only)	Temporary and permanent direct loss/fragmentation of habitats used by GCN for foraging or shelter.	The majority of habitat impacted by the Project is sub-optimal for GCN (e.g. arable land). Temporary impacts to habitats used by GCN may occur to facilitate construction works, e.g. construction access routes, scaffolding, undergrounding third-party assets and habitat creation in the mitigation planting areas and BNG Opportunity Area.	✓		✓

Receptor	Potential effect	Description	C	O	M
	Incidental mortality/harm	Direct impacts may occur particularly during initial stages of vegetation clearance and ground works.	✓		✓
Reptiles	Temporary and permanent direct loss/fragmentation of terrestrial and aquatic habitats used by reptiles for foraging, breeding, or shelter.	The majority of habitat impacted by the Project is sub-optimal for reptiles (e.g. arable). Temporary impacts to habitats used by reptiles may occur to facilitate construction works, e.g. construction access routes, pylon working areas, stringing positions, scaffolding and undergrounding third-party assets.	✓		✓
	Temporary disturbance	Temporary disturbance of habitats and displacement of reptile species associated with the habitats could occur due to noise, visual disturbance, vibration, obstructions and habitat alteration. This also includes effects as a result of dust generation and deposition.	✓		✓
	Incidental mortality/harm	Direct impacts on certain reptile species may occur particularly during initial stages of vegetation clearance and ground works.	✓		✓
Bats – roosting	Direct loss of roosts through removal of trees. Incidental mortality or temporary disturbance of roosting bats present in roosts.	There is the potential for the works to remove/reduce or damage trees that are used by primarily common and widespread bat species for shelter, protection and/or breeding. No confirmed roosts located to date, however surveys are continuing.	✓		✓
	Temporary disturbance/displacement to roosting bats	Construction noise/vibration and lighting may disturb roosting bats.	✓		✓
Bats – foraging and commuting	Temporary and permanent direct loss/fragmentation of	There could be both temporary habitat loss, where habitats would be reinstated after construction, and permanent habitat loss, where habitats cannot be reinstated. For habitats like trees and woodland,	✓		✓

Receptor	Potential effect	Description	C	O	M
	foraging and commuting habitat	reinstatement may not be feasible, given the operational requirements of the proposed overhead line. Habitat fragmentation may affect bat species that depend on continuous vegetation for foraging, commuting and shelter.			
	Habitat degradation	Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging resource available to foraging bats.	✓		✓
Hazel dormouse	Temporary and permanent direct loss/fragmentation of habitats used by hazel dormouse for foraging, breeding, or shelter.	Temporary loss and disturbance would occur to facilitate construction works, e.g. construction access routes and visibility splays, stringing positions, scaffolding and undergrounding third-party assets. Permanent loss of trees would occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	✓		✓
	Habitat degradation	Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging resource available to hazel dormouse.	✓		✓
	Temporary disturbance/ displacement of hazel dormouse	Construction noise/vibration and lighting may temporarily disturb/displace hazel dormouse.	✓		✓
	Incidental mortality/harm	Direct impacts to hazel dormouse could occur, particularly during initial stages of vegetation clearance and ground works.	✓		✓
Otter and water vole	Permanent and temporary direct habitat loss, disturbance and fragmentation	Permanent habitat loss, disturbance and fragmentation may occur where the construction access tracks and working areas cross or lie near to watercourses. Impacts would be temporary where crossings are removed after construction and habitats can be reinstated.	✓		
	Habitat degradation	Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging, commuting and resting resources available to otter and water vole.	✓		✓

Receptor	Potential effect	Description	C	O	M
	Temporary disturbance/displacement of these species	Construction noise/vibration and lighting may disturb/displace these species.	✓		✓
	Incidental mortality/harm	Direct impacts could occur, particularly during initial stages of vegetation clearance and ground works. Otter and water vole could also become trapped in excavations.	✓		✓
Badger	Direct loss or disturbance to active badger setts and incidental mortality of badger	Direct impacts could occur to badgers occupying setts, particularly during the initial stages of vegetation clearance and ground works. Badger could also become trapped in excavations or could come into contact with construction vehicles. Construction noise/vibration and lighting may disturb and temporarily displace badger.	✓		✓
	Permanent and temporary loss, disturbance and fragmentation of foraging and commuting habitat	There could be both temporary habitat loss, where habitats would be reinstated after construction, and permanent habitat loss, where habitats cannot be reinstated. For areas of woodland, reinstatement of trees may not be feasible, given the operational requirements of the overhead line; however, ground level vegetation could be reinstated.	✓		✓
	Habitat degradation	Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging resources available to this species.	✓		✓
Species of Principal Importance: • Common toad; • Hedgehog; • Polecat; and • Harvest mouse.	Permanent and temporary direct habitat loss, disturbance and fragmentation	Temporary loss and disturbance would occur to facilitate construction works, e.g. construction access routes, bellmouths and visibility splays, stringing positions, scaffolding and undergrounding third party assets. Permanent loss of trees would occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	✓		✓
	Incidental mortality/harm or temporary disturbance	Direct impacts could occur, particularly during initial stages of vegetation clearance and ground works. Animals could also	✓		✓

Receptor	Potential effect	Description	C	O	M
		become trapped in excavations. Construction noise/vibration and lighting may disturb these species.			
	Habitat degradation	Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging, commuting and resting resources available to these species.	✓		✓
Aquatic macrophytes	Shading	Potential temporary shading of aquatic macrophytes due to the construction of clear span bridges (or other suitably assessed alternatives).	✓		
	Habitat loss	Temporary habitat loss, disturbance and fragmentation due to construction access tracks (including bridges and new culverts) and working areas that cross or lie near to watercourses. Permanent habitat loss due to modification/extension of existing culverts. Temporary habitat loss, disturbance and fragmentation due undergrounding of third-party assets (if open cut techniques are used). .	✓		
	Habitat degradation	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Aquatic macroinvertebrates	Habitat loss	Temporary habitat loss, disturbance and fragmentation due to construction access tracks (including bridges and new culverts) and working areas that cross or lie near to watercourses. Permanent habitat loss due to modification/extension of existing culverts. Temporary habitat loss, disturbance and fragmentation due undergrounding of third-party assets (if open cut techniques are used).	✓		

Receptor	Potential effect	Description	C	O	M
	Habitat degradation	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
Fish	Habitat degradation	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	✓		✓
	Habitat fragmentation	Temporary loss/fragmentation and disturbance of habitat associated with the installation or modification/extension of culverts for construction access and the undergrounding of third-party assets (if open cut techniques are used).	✓		
	Lighting	Temporary disturbance to fish species due to light during construction.	✓		
	Noise and vibration	Temporary disturbance to fish species due to noise and vibration during construction.	✓		

8.8 Mitigation

Embedded Measures

8.8.1 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.

8.8.2 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 this ecology 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 & Net Zero, 2025) and National Policy Statement for Electricity Networks Infrastructure (EN-5) (Department for Energy Security & 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.
- EDM04: The Project has been designed to use existing watercourse crossing points as far as practicable to minimise the introduction of new crossings and associated impacts.
- 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.

- DE6: The Project will use existing watercourse crossing points as far as practicable to minimise the introduction of new crossings and associated impacts.
- DE7: Large or sensitive watercourses, for example those designated as main rivers, and those with Water Framework Directive (WFD) status, will be crossed by the construction access track using temporary clear span bridges (or suitably assessed and approved alternatives).
- DE8: 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. The span length will be such that it avoids impacts to the banks, including the marginal and bankside vegetation (with the exception of trees and hedgerows) 5 m from the tops of the watercourse banks. Works to manage tree stems and canopies and hedgerows to facilitate bridge works may be undertaken within 5 m from the tops of the watercourse banks, but no root removal or ground disturbance will be permitted. All works to manage vegetation would be overseen by an ECoW.
- DE9: Soffit heights at clear span crossings would be set on a site-specific basis, following more detailed survey and design work by the appointed Main Works Contractor(s). On watercourses with a high or good WFD status for invertebrates, soffits will be set as high as is practicable above the Q95 water level, accounting for site-specific constraints and to reduce impacts to ecology. Watercourses without those designations or sensitivities would be crossed by suitable means, with crossings designed to ensure continued flow conveyance and to prevent any barrier effects to aquatic ecology.
- DE10: Clearly demarcated, dedicated access routes will be provided during construction.
- DE14: All known veteran trees within, and which have canopy overhanging, the Order Limits will be retained with the exception of T4 Common Oak - *Quercus robur* which cannot be retained if the flexibility afforded by the Limits of Deviation were to be used. The locations of veteran trees are shown within Appendix D of **Application Document 7.14 Arboricultural Impact Assessment.**
- DE15: No tree pruning and or coppicing (inclusive of works within the Root Protection Areas) will occur on the following trees
  - T112 native Black Poplar - Populus nigra; and
  - T113 native Black Poplar - Populus nigra.

  Whilst located outside the Order Limits, these trees, by virtue of proximity, may overhang or grow beneath the ground into the land within the Order Limits. The locations of these trees are shown within **Application Document 7.14 Arboricultural Impact Assessment.**
- DE17: To avoid affecting habitat within the Humber Estuary Ramsar, Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), and Special Protection Area (SPA) designated sites, the following three trees (Hawthorn - Crataegus monogyna) would be retained due to being located on the boundary (and therefore roots and canopy being within the designated site):
  - Category B tree (T85);
  - Category B tree (T86); and
  - (Category C tree (not numbered).

A further Category C tree (Hawthorn) is located within the boundary of the above sites and would also be retained. The locations of these trees are shown within **Application Document 7.14 Arboricultural Impact Assessment**, noting that Category C trees are not numbered.

- ARB18: National Grid has committed to a 3:1 replacement for individual trees and individual trees within small groups. The Project will prioritise (where possible and practicable) the replanting for individual trees and small groups of individual trees within the Order Limits.
- DE19: Pylons will be situated a minimum of 16 m from the top of bank of any designated main river and a minimum of 3.5 m from the top of bank of any ordinary watercourses.
- 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.

- GG06: Land used temporarily will be reinstated to its pre-construction condition and use (or as agreed with the relevant landowner). Hedgerows, fences, and walls (including associated earthworks and boundary features) will be reinstated to a similar style and quality to those that were removed, unless otherwise agreed.
- E21: In any location where a bridge and/or other construction works encroach into the 5 m watercourse buffer where the presence of water vole has been confirmed, the Project will provide appropriate habitat enhancement in proximity and in advance of the installation of those works, in accordance with the applicable licence from Natural England.
- E23: No vegetation clearance or canopy reduction will occur within Crowle Borrow Pits Site of Special Scientific Interest (SSSI).
- 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.

8.8.3 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:

- Sensitive routeing and siting to develop the proposed overhead line alignment and Order Limits to avoid or reduce as far as practicable the impacts upon designated sites, ancient woodland, veteran trees, areas of long established woodland, Priority Habitats, and other identified receptors. This is in line with NPS EN-1 (Department for Energy Security & Net Zero, 2025) and NPS EN-5 (Department for Energy Security & Net Zero, 2025).
- The crossing of the River Ouse has been designed to be upstream of its confluence with the River Trent to minimise the width of the crossing of the Humber Estuary SAC, SPA, Ramsar and SSSI, in addition to Blacktoft Sands RSPB Reserve. Installation of the proposed overhead line will avoid direct impacts to habitats inside these designated sites, with the exception of potential management (but not removal) of up to four trees which are covered by **Application Document 7.3 Register of Environmental Actions and Commitments** measure DE17 (above).
- The proposed overhead line has been routed to be broadly parallel with the existing 400 kV overhead line (taking into account the other environmental, socio-economic and technical considerations) to minimise the potential for effects on the interest features of the Humber Estuary designated sites.
- The Project design incorporates three areas of water vole habitat enhancement (mitigation areas), which will be created where clear span bridges (or suitably assessed and approved alternatives which also avoids affecting the bank within 5 m of the watercourse) cannot be provided, as further explained in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. The mitigation areas are shown in **Figure A8.6.2 Survey Results and Habitat Suitability Assessments for Water Vole** in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**. The water vole mitigation areas will provide suitable alternative habitat for water voles which are displaced under licence from areas of watercourses which will be impacted during construction. **Application Document 7.8 Outline Landscape and Ecology Management Plan** outlines how the water vole mitigation areas will be managed.
- The Project design incorporates an otter mitigation area. There is one location where the closure of a potential otter holt may be required due to the undergrounding works of a third-party asset. Use of the potential holt is not confirmed at this time. The location of the existing potential holt and proposed mitigation area are confidential, and details are provided in the confidential/unredacted version of **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**. The mitigation area is provided in the design as a precautionary measure, ensuring that if the holt is confirmed to be active during pre-construction surveys, a suitable alternative resting/breeding site would be provided prior to its closure. **Application Document 7.8 Outline Landscape and Ecology Management Plan** outlines how the otter mitigation area will be managed.

- The Project design incorporates areas inside the Order Limits for the installation of an artificial badger sett in the event that a main badger sett cannot be retained and must be closed. The location of the sett and proposed mitigation area are confidential, and details are provided in **Application Document 6.8.A5 Appendix 8.5 Badger Report (Confidential)**.
- Siting of the proposed infrastructure within the Order Limits to minimise potential impacts on protected habitats and species. Micro-siting of pylons during the design process has taken into account swing of the proposed overhead lines to avoid or minimise loss of woodland and trees as far as practicable.
- 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.
- The Project design incorporates areas of proposed mitigation planting across the Order Limits; these are discussed in **Application Document 7.8 Outline Landscape and Ecology Management Plan** and shown on **Application Document 6.4.F1 Figure 4.1 Proposed Project Design.** These areas have been chosen with a view to extend existing habitats, for example woodland areas, and/or provide links between existing areas of habitat.

Control and Management Measures

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

8.8.5 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 7.8 Outline Landscape and Ecology Management Plan** which are secured by Requirement 4 of **Application Document 3.1 Draft Development Consent Order**, 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 ecological 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**.
- GG05: A record of condition (held within an Aftercare Management Plan will be produced by the Main Works Contractors(s)). It will cover the working area(s) that may be affected by the construction activities prior to the works commencing. These surveys will identify and record the condition of features such as trees, woodland, hedgerows, walls and fences, and will comprise of photographic, descriptive, and locational baseline evidence/information. Records will be available for comparison. The land will be reinstated to a condition no worse than shown on the record of condition (or as agreed with the relevant landowner). Exceptions to

reinstatement will be replacing mature vegetation and replanting directly beneath the proposed overhead line where it may cause operational safety concerns.

- GG07: Where sensitive features are to be retained within the Order Limits, an appropriate protective area will be established using appropriate demarcation and signage will be inspected, repaired and replaced as necessary.
- 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.
- GG12: Vehicles and vessels will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. The operators of plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so. Electric or other low carbon plant and equipment will be used where available and where practicable.
- GG14: The storage of topsoil or other soft building materials within the Order Limits will be made inaccessible to badgers (e.g. through fencing to ground-level). All mounds within 30 m of works will require regular checks for the presence of protected species.
- GG15: Fuels, oils and chemicals will be stored responsibly, away from sensitive water receptors. Where practicable, they will be stored >15 m from watercourses, ponds and groundwater dependent terrestrial ecosystems. Where it is not practicable to maintain a >15 m distance, additional measures will be identified by the Main Works Contractor(s) These measures may include double bunded bowsers.
- GG16: All refuelling, soiling and greasing of construction plant and equipment will take place above drip trays and also away from drains as far as is reasonably practicable. Vehicles and plant will not be left unattended during refuelling. Appropriate spill kits will be made easily accessible for these activities.
- GG17: Potential hazardous materials used during construction will be safely and securely stored including use of secondary containment where appropriate.
- GG19: Runoff across the site will be controlled through a variety of methods including header drains, buffer zones around watercourses, on-site ditches, silt traps and bunding. There will be no intentional discharge of site runoff to ditches, watercourses, drains (including highway drainage systems), or sewers without appropriate treatment and agreement of the appropriate authority. All practicable steps will be put in place to prevent pollution of watercourses. In the case of an emergency, protocols will be followed as per a Emergency Response Plan to be produced by the Mains Work Contractor(s) in accordance with GG25.
- GG20: Wheel washing facilities will be provided at each compound and intermittently along construction access tracks. Road sweepers will be deployed on public roads where necessary to prevent excessive dust or mud deposits. Dry sweeping of large areas will be avoided.
- GG21: Earthworks and stockpiled soil will be protected by covering, seeding or using water suppression.
- 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).

- GG25: An Emergency Response Plan will be developed by the Mains Work Contractor(s) for the construction phase which will outline procedures to be implemented and to be followed in case of unplanned events, including but not limited to site flooding and pollution incidents.
- GG30: The construction work area will be reinstated to pre-existing conditions as far as reasonably practical in line with a Soil Management Plan and the Department for Environment, Food and Rural Affairs (Defra) Code of Construction Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009). This will include a commitment to develop and comply with the measures set out within an Aftercare Management Plan (including the aftercare period) prior to the completion of construction.
- ARB01: All construction, operation and maintenance works will be undertaken in accordance with the approaches and measures set out within **Application Document 7.8 Outline Landscape and Ecology Management Plan**.
- ARB02: The Mains Works Contractor(s) will, where necessary, produce and comply with a site-specific Arboricultural Method Statement (AMS) including a Tree Protection Plan. The site-specific AMS will will detail specified methodologies to limit, mitigate or manage the impact on trees.
- ARB03: The Project, and specific construction tasks, will take a hierarchical approach to trees, aiming to retain as many trees as practicable in the first instance by applying Engineering Recommendation G136 Vegetation Management Near Electricity Equipment – Principles of Good Practice (Energy Networks Association, 2020), and avoiding total loss of habitat where practicable (i.e. by pruning, pollarding or coppicing rather than complete tree removal).
- ARB04: Following detailed design and prior to construction (of relevant parts of the Project), relevant surveys will be undertaken of arboricultural features that may be impacted or need to be removed to ensure any tree/hedgerow removal is reduced as far as practicable.
- ARB06: Construction exclusion zones (CEZ) will be established, which will encompass Root Protection Areas and be shown on a Tree Protection Plan to be produced prior to start of construction. CEZs are to be implemented for the duration of construction and will be demarcated by tree protection fencing. Where access only is required, temporary ground protection measures would be installed to prevent soil compaction and root damage. Where works within a CEZ are required, supervision of the works will be undertaken by an ArbCoW and any additional recommendations followed.
- ARB08: Where pruning to the crown or roots is necessary (such as where tree pruning is required to achieve electrical safety clearances), this will be undertaken in accordance with BS 3998:2010 (British Standards Institution, 2010).

- ARB09: Prior to construction near trees, requirements for facilitation pruning to avoid injurious contact are to be determined with arboricultural supervision by the ArbCoW.
- ARB10: Where practical, stockpiles, material storage, vehicle tracking, and soil bunds will be located away from trees and hedgerows. This is to ensure no damage occurs to these features and that works remain outside of the root protection area of the features. Works that cannot be undertaken without entering into a Root Protection Area will be addressed within a site-specific Arboricultural Method Statement (AMS).
- ARB11: To minimise as far as practicable, the impacts to designated ancient woodlands will be protected throughout the works, with a minimum exclusion zone of 15 m offset from the edge of the ancient woodland. (**Application Document 2.9 Habitats of Protected Species and Important Habitats**). For any necessary works within the Root Protection Areas, an ArbCoW will be consulted to agree the working method if breaking ground is required and to remove compaction risks.
- ARB12: In order to construct the Project, including to provide the necessary electrical clearances required to construct and maintain a safe and reliable power grid, under the supervision of the ArbCoW for the Project the following veteran trees can be managed in the following ways:
  - T12 Ash – *Fraxinus excelsior* (canopy reduction of up to 6 m in targeted areas to a suitable growing union to achieve required canopy clearance from the proposed overhead line. Any thinning or branch removal within the remaining canopy would be specifically agreed with the ArbCoW in advance of any works being undertaken);
  - T13 Ash – *Fraxinus excelsior* (canopy reduction of up to 6 m in targeted areas to a suitable growing union to achieve required canopy clearance from the proposed overhead line. Any thinning or branch removal within the remaining canopy would be specifically agreed with the ArbCoW in advance of any works being undertaken);
  - T36 White Willow – *Salix alba* (pollard to a height of 2 m for clearance for the proposed overhead line and scaffolding);
  - T49 Crack Willow - *Salix fragilis* (targeted canopy reduction on northwestern side of canopy above Norfolk Bank Lane. Temporary highway widening intersects with the Root Protection Area (RPA). Options for no-dig construction methods, such as cellular confinement systems to be explored during detailed design and implemented where practicable. The Project recognises that the highway widening will result in disturbance within the RPA of T49. Following construction, remediation measures may include, but are not limited to, reinstatement of original soils, decompaction, soil aeration, and addition of soil amelioration products, for example seaweed extracts and mulching.
  - T67 – Crack Willow - *Salix fragilis* (targeted canopy reduction on western side of canopy above Tongue Lane. Temporary highway widening intersects with the RPA. Options for no-dig construction methods, such as cellular confinement systems to be explored during detailed design and implemented where practicable. The Project recognises that the highway widening will result in disturbance within the RPA of T67. Following construction, remediation measures may include, but are not limited to, reinstatement of

original soils, decompaction, soil aeration, and addition of soil amelioration products, for example seaweed extracts and mulching);

- T77 Common Oak – *Quercus robur* (should the flexibility afforded by the LoD be used, height reduction of approximately 3 m from growing tips to suitable growing union, rebalance canopy by removing approximately 3 m of the lateral spread of the northern canopy to suitable growing unions to create a rounded, more balanced canopy);
- T83 Common Oak – *Quercus robur* (should the flexibility afforded by the LoD be used for the temporary construction access, RPA protection and potentially targeted crown pruning may be required. All works to be specifically agreed with the ArbCoW in advance of any works being undertaken. Options for No-dig construction methods, such as cellular confinement systems to be explored during detailed design and implemented where practicable. Following construction, remediation measures may include but are not limited to reinstatement of original soils, decompaction, soil aeration, and addition of soil amelioration products for example seaweed extracts and mulching);
- T90 Crack Willow - *Salix fragilis* (should the flexibility afforded by the LoD be used, coppice stems to a height of 2 m from ground level);
- T130 White Willow - *Salix alba* (should the flexibility afforded by the LoD be used, height reduction of up to 3 m from the growing tips to a suitable union. For RPA protection, options for No-dig construction methods, such as cellular confinement systems to be explored during detailed design and implemented where practicable. Following construction, remediation measures may include but are not limited to reinstatement of original soils, decompaction, soil aeration, and addition of soil amelioration products for example seaweed extracts and mulching);
- T144 White Willow – *Salix alba* (should the flexibility afforded by the LoD be used, , prune limbs on the eastern side of the canopy to achieve a minimum clearance of 3 m. All cuts to be made to suitable growing unions. If pollarding is required, pollard to existing pollard points (approximately 3 m);
- T157 White Willow – *Salix alba* (coppice stems to a height of 2 m from ground level);
- T214 Crack Willow – *Salix fragilis* (pollard to a height of 2 m from ground level for clearance for the proposed overhead line and scaffolding. Bellmouth 111 intersects with the RPA. Options for no-dig construction methods, such as cellular confinement systems to be explored during detailed design and implemented where practicable. The Project recognises that the proposed bellmouth 111 will result in disturbance within the RPA of T214. Following construction, remediation measures may include but are not limited to reinstatement of original soils, decompaction, soil aeration, and addition of soil amelioration products for example seaweed extracts and mulching);
- T215 Crack Willow – *Salix fragilis* (pollard to a height of 2 m from ground level for clearance for the proposed overhead line and scaffolding. Bellmouth 111 intersects with the RPA. No-dig construction methods, such as cellular confinement systems to be explored during detailed design and implemented where practicable. The Project recognises that the proposed bellmouth 111 will result in disturbance within the RPA of T215. Following construction, remediation measures may include but are not limited to reinstatement of

original soils, decompaction, soil aeration, and addition of soil amelioration products for example seaweed extracts and mulching);

  - T216 White Willow – *Salix alba* (pollard to a height of 2 m from ground level for clearance for scaffolding. Bellmouth 111 intersects with the Root Protection Area. No-dig construction methods, such as cellular confinement systems to be explored during detailed design and implemented where practicable. The Project recognises that the Proposed bellmouth 111 will result in disturbance within the RPA of T216. Following construction, remediation measures may include but are not limited to reinstatement of original soils, decompaction, soil aeration, and addition of soil amelioration products for example seaweed extracts and mulching.);
  - T219 White willow – *Salix alba* (pollard to a height of 10 m from ground level);
  - T240 White Willow – *Salix alba* (should the flexibility afforded by the LoD be used, pollard to a height of 2 m from ground level, stringing position to be micro-sited to avoid impacts);
  - T245 White willow – *Salix alba* (should the flexibility afforded by the LoD be used for the proposed overhead lines, pollard to a height of 11 m from ground level. If the flexibility afforded by the LoD brings pylon working area into the RPA, RPA protection options for No-dig construction methods, such as cellular confinement systems to be explored during detailed design and implemented where practicable. Following construction, remediation measures may include, but are not limited to, reinstatement of original soils, decompaction, soil aeration, and addition of soil amelioration products, such as, seaweed extracts and mulching);
  - T246 White willow – *Salix alba* (pollard to a height of 2 m from ground level);
  - T252 White Willow – *Salix alba* (should the flexibility afforded by the LoD be used, pollard to a height of 3 m from ground level, or as required to achieve suitable clearance); and
  - G41 Crack Willow – *Salix fragilis* (targeted canopy clearance pruning on western side of canopy. Coppice stems to a height of 2 m from ground level).

- ARB13: The canopies of two veteran trees T44 and T46, both White willow – *Salix alba*) are currently managed by the local authority due to their proximity to the highway. Depending on their current management cycle and the Project's requirements, additional/interim canopy management may be required to be undertaken by the Project to avoid accidental damage by traffic. Should this be required all works will be agreed in advance with the ArbCoW and would be akin to the degree of management currently undertaken. The locations of these veteran trees are shown within **Application Document 7.14 Arboricultural Impact Assessment**.
- ARB14: Following completion of construction in an area surrounding the Root Protection Area of a retained veteran tree, remediation should be agreed with the relevant Local Planning Authority (LPA) and the Arboricultural Clerk of Works (ACoW). If required remediation should be undertaken with ACoW supervision. Remediation works may include, but are not limited to:
  - Mulching the trees rooting area;
  - Soil decompaction, using an airspade or similar;

  - Soil improvement additives;
  - Halo pruning of competing vegetation;
  - Remediation pruning, such as phased retrenchment pruning;
  - Establishment of a permanent exclusion zone through the installation of fencing or dead hedging to prevent soil compaction or disturbance;
  - Land management changes, such as the creation of permanent agricultural headlands;
  - Companion/shelter planting with suitable species, potentially trees raised from local veteran tree provenance; and
  - Habitat creation using wildlife boxes, erection of deadwood and other measures.

- E01: The Main Works Contractor(s) will comply with relevant protected species legislation. Appropriate licences will be obtained where necessary from Natural England for all works affecting protected species as identified in the ES and through pre-construction surveys. All applicable works will be undertaken in accordance with the relevant requirements and conditions set out in those licences.
- 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.
- E03: Where there will be a risk of animal entrapment, a means of escape will be provided for all excavations left open overnight. In the unlikely event that a trapped animal is encountered, the ECoW (or suitable alternative such as the named ecologist on a species licence for the Project) will be contacted immediately for further advice.
- E04: Excluding those surrounding excavations and topsoil, temporary construction fences will retain a gap beneath to allow badgers to pass through, avoiding severance of commuting routes to foraging or watering areas.
- E05: To control the spread of invasive non-native species (INNS) of plants, in accordance with the Wildlife and Countryside Act 1981 (H.M. Government, 1981), any plant or machinery that has been used in areas infested with INNS (both terrestrial and aquatic), such as Japanese knotweed *(Reynoutria japonica)* and Himalayan balsam (*Impatiens glandulifera*), will be thoroughly cleaned. Water used to clean vehicles will be controlled to prevent the spread of the plant (through seeds, rhizomes or fragments for example).
- E06: Appropriate exclusion zones will be demarcated and enforced around areas of INNS (informed by an up-to-date site walkover) to avoid spread or propagation (through seeds, rhizomes, or fragments, etc.). An Invasive and Non-Native Species Management Plan will be produced pre-construction and complied with at the applicable phase, to detail required eradication methods (where necessary) for INNS present on-site and biosecurity controls to prevent spread.

- E07: All habitats suitable for common reptiles (e.g. grass snake *(Natrix helvetica)*, common lizard *(Zootoca vivipara)*, slow worm *(Anguis fragilis)*, and adder *(Vipera berus)* will be subject to two-stage habitat manipulation that will take place between mid-March and mid-October. Replacement hibernacula and refugia will be provided where possible using logs from trees removed.
- E08: Alternative roost structures (bat boxes) will be provided (with landowner consent) on suitable retained trees within the Order Limits or areas outside of the Order Limits as agreed with landowners.
- E09: Any tree that requires management and/or removal will be subject to a pre-works re-assessment by a suitably experienced and licenced ecologist, to check that the baseline conditions have not changed. Where the removal/reduction of a tree categorised as Preliminary Roost Assessment Follow-up Survey –PRF-I (potential roost features suitable for an individual or small number of bats) or Preliminary Roost Assessment Follow-up Survey – PRF-M (potential roost features suitable for multiple bats or larger roosts) cannot be avoided, and the presence of a bat roost has not been confirmed through survey, the tree will be soft felled/pruned under an ecological watching brief. The ecologist present will be registered to use the Level 2 Natural England Bat Survey Class Licence and will carry out a pre-construction check to confirm roost absence. In addition to the PRF-M trees, all PRF-I trees that have not previously been subject to an aerial inspection will be assessed at height by an ecologist registered to use the Level 2 Natural England Bat Survey Class Licence where possible to do so. Trees not safe to climb may require dusk surveys as an alternative method. All trees with confirmed bat roosts that cannot be retained would be felled under a granted Bat Mitigation Licence from Natural England, and would be subject to stated mitigation and procedures detailed within the licence.
- E10: Where the works require the removal of sections of hedgerow, the gap will be no greater than the width required to facilitate safe construction. Hedgerows and trees will be retained beneath conductors where practicable on a like for like basis or improved. Where hedgerow removals are necessary, ‘dead hedging’ will be used (where appropriate and safe to do so) in the interim periods to retain connectivity during construction. This will be required across gates of access tracks (including to the side of bellmouths, whilst maintaining safe visibility), overhead line stringing. In particular through the hazel dormouse licence area by Treswell Wood. Dead hedging can comprise vegetation arisings or artificial provision, such as willow screening panels or Heras fencing covered in camouflage netting. Sections of hedgerow that require temporary removal to facilitate construction of the Project will be reinstated post construction to the same (or improved) condition. For example, species-poor gappy hedgerows would be replaced with intact species-rich hedgerows where practicable. Hedgerows will be retained unless sections require removal for construction access tracks, bellmouths and visibility splays. Working areas will retain a 5 m buffer where possible. Any hedgerow clearance required to facilitate construction activities will be undertaken in the same calendar year as the planned construction activities where practicable. Third party works will endeavour to use trenchless crossing methods for utility diversions beneath the hedgerow instead of open cutting, in particular within the hazel dormouse licence area, and in compliance with the dormouse Mitigation Licence from Natural England.
- E11: Where there are existing ponds (as shown on Ordnance Survey mapping) within the Order Limits, with the exception of PO15 in Route Section A, these will

not be impacted as part of the works. A 10 m buffer will also be applied where practicable, where not practicable any works within 10 m of a pond will be undertaken under the supervision of an ECoW, and would need to be in compliance with the relevant GCN Licence Natural England for that section of the Project.

- E12: Stand-off buffers to all watercourses of 10 m will be maintained where practicable, where not practicable including at a new or modified crossing point, or where third party undergrounding works are necessary any works within 10 m of a watercourse will be overseen by an ECoW and would need to be in compliance with relevant protected species Licences from Natural England.
- E13: Where a water crossing is not a bridge structure, a method statement will be developed and complied with to ensure works within watercourse crossings include suitable measures to allow the passage of otters, water vole and fish throughout construction (i.e., during fluctuating water levels).
- E14: Where works require dewatering of surface waterbodies known to contain fish, fish will be removed and or relocated (which will require appropriate permits such as an FR2 licence from the Environment Agency).
- E15: Where any in-channel works are required on a watercourse, works will be completed outside of the fish spawning season (16 March to 16 June inclusive) and fish migratory seasons (species-specific, dependent on the waterbody) subject to likely fish presence, as confirmed through pre-construction fish surveys.
- E16: In the event that pumping of water is required, the intake will be fitted with a mesh screen to prevent the entrapment of elvers in compliance with The Eels (England and Wales) Regulations 2009 (HM Government, 2009)
- E17: Pre-commencement and pre-construction surveys (to identify any changes to the baseline) and a tree survey (to British Standard (BS) 5837:2012 (British Standards Institution, 2012)) will be undertaken to inform the locations of environmental construction exclusion zones (CEZs). The location of specific protective measures (i.e., fencing and signage) around the CEZs will be set out it the site specific AMS. Reinstatement Planting Plan, secured by Requirement 8 in Schedule 2 of **Application Document 3.1 Draft Development Consent Order**, will define detailing habitat reinstatement and creation measures.
- E18: Wherever practicable, habitat connectivity will be retained by using existing access routes, reducing working widths through existing habitats, and maintaining connectivity through green and blue corridors such as hedgerows and watercourses.
- E19: Natural England has agreed to the use of a District Level Licence (DLL) approach to mitigate effects on great crested newt *(Triturus cristatus)* within East Yorkshire and North Lincolnshire. Implementation of the DLL will be conducted and overseen by Natural England. A Mitigation Licence from Natural England will be applied for and adhered to for works within Nottinghamshire
- E22: Construction exclusion zones (CEZs) will be established prior to construction to define working areas and ensure protection of retained habitats throughout the Project. Where practicable, no construction works (temporary or permanent) will occur within the following environmental buffers:
  - 10 m of a woodland block (or as detailed in the **Application Document 7.14 Arboricultural Impact Assessment**);

- 15 m of designated ancient and other woodland recorded by the Project as having characteristics of ancient woodland;
- 5 m of a hedgerow, plus Root Protection Areas (RPAs) for retained trees within the hedgerow;
- 10 m of a pond (holding water);
- 5 m of the top of a ditch;
- 10 m of an ordinary watercourse; and
- 16 m of a main river.

Where CEZs cannot be established, any works within buffers will be discussed with the applicable Clerk of Works prior to the works commencing and appropriate mitigation will be implemented.

- E24: Vegetation clearance will be required to facilitate temporary visibility splays. Any clearance will not be beyond that which is necessary for road user safety. Vegetation will be reinstated post construction as per the Reinstatement Planting Plan, which is secured by Requirement 8 of Schedule 2 of **Application Document 3.1 Draft Development Consent Order**.
- E25: **Jillywood Lane - woodland recorded by the Project as having characteristics of Ancient Woodland**. Any future detailed design will take into consideration the extent of the linear woodland and its associated buffer to reduce potential impacts as far as practicable. All affected trees will be soft felled. Any trees removed within the area of linear woodland will not be removed to below ground level and not grubbed out to reduce the impact to soil and ground flora. Any wood chipping will be done outside of the woodland and removed, to protect the ground flora.
- E26: **Brantingham Dale and Brantingham Dale SSSI**. Works within Brantingham Dale and all Brantingham woodland areas will restrict tree loss to only those essential for the proposed overhead line clearance, and essential working areas such as pylon working areas where pylons are unavoidably located within the woodland. All affected trees in Brantingham Dale will be soft felled. Where trees are coppiced and/or felled to facilitate the construction of the Project, sufficient trees (quantity agreed with the ArbCOW and ECoW) will be placed within the woodland and/or mitigation planting areas in locations agreed with the ECoW in the form of log piles (and not wood chips). For those not used for log piles, these will not be left as woodchip within the woodlands. Any trees removed within the area of yellow bird's-nest or SSSI will not be removed to below ground level and not grubbed out to reduce the impact to soil and ground flora, including yellow bird's-nest and the calcareous grassland within the SSSI. No other access during construction will be taken for works through the woodlands to protect ground flora and retained trees.
- E27: **Socken Wood - woodland recorded by the Project as having characteristics of Ancient Woodland**. Works within Socken Wood will restrict tree loss to only those essential for the proposed overhead line clearance. All affected trees in Socken Wood will be soft felled. Where trees are coppiced and/or felled to facilitate the construction of the Project, sufficient trees (quantity agreed with ArbCoW and ECoW) will be placed within the woodland and/or mitigation planting areas in locations agreed with the ECoW in the form of log piles (and not wood chips). For those not used for log piles, these will not be left

as woodchip within the woodlands. Any trees removed within the area identified by the Project as Woodland with Characteristics of Ancient Woodland will not be removed to below ground level and not grubbed out to reduce the impact to soil and ground flora. No other access will be taken for works through the woodlands to protect ground flora and retained trees.

- E28: **Triangle area of trees at Brantingham off Ellerker Road - woodland recorded by the Project as having characteristics of Ancient Woodland**. Any future detailed design will take into consideration the extent of the woodland block and its associated buffer to reduce potential impacts as far as practicable. All affected trees will be soft felled. Any trees removed within the area of woodland will not be removed to below ground level and not grubbed out to reduce the impact to soil and ground flora. Any wood chipping will be done outside of the woodland and removed, to protect the ground flora.
- E29: **Caddow Wood (Southern Assarts) Local Wildlife Site.** Stringing activities will maintain a 15 m buffer to eastern boundary of the woodland.
- E30: **Dixon Wood - woodland recorded by the Project as having characteristics of Ancient Woodland**. Any future detailed design will take into consideration the extent of the woodland block and its associated buffer to reduce potential impacts as far as practicable. Any trees affected that overhang the Order Limits from the area of woodland will be managed as little as practicable. and avoiding impacts to soil and ground flora. No trees will be removed. Any wood chipping will be done outside of the woodland and removed, to protect the ground flora.
- E31: **South of Dog Horse Plantation - woodland recorded by the Project as having characteristics of Ancient Woodland**. Any future detailed design will take into consideration the extent of the woodland block and its associated buffer to reduce potential impacts as far as practicable. Works will comprise minor trimming of overhanging canopy if essential for the third party works access (NPG-24). No works will be undertaken within the woodland. Any branches removed will be chipped outside of the woodland and removed, to protect the ground flora.
- E32: **Wood Farm - woodland recorded by the Project as having characteristics of Ancient Woodland**. Works within the Wood will restrict tree loss to only those essential for the proposed overhead line clearance and associated construction road access and third party works. All affected trees will be soft felled. Any trees removed within the area identified by the Project as Woodland with Characteristics of Ancient Woodland will not be removed to below ground level and not grubbed out to reduce the impact to soil and ground flora. Any wood chipping will be done outside of the woodland and removed, to protect the ground flora.
- E33: **Saundby Park Wood - woodland recorded by the Project as having characteristics of Ancient Woodland**. Works will be restricted to minor trimming of overhanging canopy of the existing track if essential for the third party works access (NGED-06). No works will be undertaken within the woodland. Any branches removed will be chipped outside of the woodland and removed, to protect the ground flora.
- E34: **Pigeon Field - woodland recorded by the Project as having characteristics of Ancient Woodland**. Any future detailed design will take into consideration the extent of the woodland block and its associated buffer to reduce potential impacts as far as practicable. All affected trees will be soft felled. Any

trees removed within the area of woodland will not be removed to below ground level and not grubbed out to reduce the impact to soil and ground flora.

- E35: Calcareous grasslands will be avoided as far as practicable. Should access be required across calcareous grassland, any topsoil and subsoil stripped will be kept separate from surrounding habitats and reinstated on completion. During storage of the topsoil, it will be protected from damage and pollution, and reinstated as soon as practicable. If reseeding is required to secure the topsoil during storage, an appropriate seed mix for calcareous grassland will be used. The topsoil will be reinstated in accordance with the **Application Document 7.8 Outline Landscape and Ecology Management Plan.**
- E36: Vegetation clearance and management (scrub, hedgerows, trees) within the hazel dormouse licence area will be restricted to minimal temporary required for construction related activities, by width and by height. Retaining managed but still above ground hedgerows beneath overhead lines and in stringing areas, will continue to provide habitat and connectivity and reduce required mitigation to replace it during construction. All personnel working in suitable hazel dormouse habitat will receive training and site briefings to raise awareness of hazel dormouse, their legal protection, and the mitigation measures to be implemented.
- E37: Vegetation clearance within suitable dormouse habitat will follow a two-stage clearance method designed to minimise the risk of disturbance or mortality. This will comprise:
  - Initial reduction of woody vegetation to just above ground level during the winter period; and
  - Subsequent removal of ground vegetation, stools and roots during the Spring period.

  These works will be overseen by a suitably experienced ecologist named or accredited on the hazel dormouse mitigation licence. Where appropriate and safe to do so, dead hedging (or other suitable alternatives) will be considered and installed until the removed hedging can be reinstated. All works will be conducted in compliance with the dormouse Mitigation Licence from Natural England.
- E38: To satisfy Natural England licensing requirements, for construction activities within the hazel dormouse licence area, vegetation removal must be limited to only that essential for the Project such as the width of the actual construction access track (e.g. <5 m) and no wider through hedgerows. The construction access road should be reduced down from the wider working width of the construction access track (e.g. 12 m) to <5 m where it passes through hazel dormouse habitat.
- E40: Pre-construction badger surveys will be undertaken to identify the current status of setts to inform a Natural England licence. A 30 m buffer will be applied to all active badger setts identified to avoid disturbance or closure unless secured under a licence and appropriately mitigated. The application of these buffers will be implemented through:
  - The definition of construction working areas and exclusion zones within the Order Limits;
  - Pre-construction ecological checks and marking out of protection zones;
  - The use of protective fencing or other demarcation where required; and
  - Environmental management measures.

All works will be overseen by an ECoW or named or accredited ecologist on the badger licence for the Project. Further mitigation requirements for badger are set out in **Application Document 6.8.A5 Appendix 8.5 Badger Report (Confidential)**.

- E41: Pre-construction otter surveys will be undertaken to identify the current status of potential holts and resting sites, and to identify any new ones, should they be present. Survey results will inform a Natural England licence should one be required. A 30 m buffer will be applied to avoid disturbance or destruction unless secured under a licence and appropriately managed. Where a 30 m buffer cannot be applied but the location will not be directly affected, temporary acoustic and visual barriers will be used to reduce disturbance as far as practicable. All works will be overseen by an ECoW or named or accredited ecologist on the otter licence for the Project.
- E42: In locations where construction access tracks require the temporary removal of hedgerows, to minimise loss the loss of habitat, where feasible and safe to do so, these works will be pinched and a reduced swathe of vegetation removed.
- E43: For hedgerows under the proposed overhead line, there will be short-term temporary coppicing to facilitate the stringing of the conductors. In these small sections, hedgerows will be cut to stump and will be allowed to grow back on completion of stringing works.
- E44: To reduce habitat disturbance and loss, the Indicative Crossing Protection measures to cross the Network Rail testing track between proposed pylons 4AF255 and 4AF256 will be constructed only if deemed necessary and in the interest of operational safety for Network Rail users.
- E45: Vegetation within Local Wildlife Sites (LWS) will be avoided as far as is practicable. Where vegetation loss cannot be avoided within these sites, the works will be undertaken and overseen by an ECoW. The following LWS have vegetation loss and management marked within the LWS boundary:
  - Jillywood Lane LWS;
  - Brantingham Dale Historic LWS;
  - Stainforth and Keadby Canal Corridor LWS;
  - North Engine Drain, Belton LWS;
  - River Torne LWS;
  - South Engine Drain, Belton LWS;
  - Folly Drain North LWS;
  - South Moor Covert and Fishpond Plantation LWS;
  - Warping Drain Corridor LWS;
  - Retford Gate Green Lane LWS;
  - Hatfield Waste Drain LWS; and
  - Dolegate Road, East Drayton Candidate LWS.
- E46: For construction works associated with existing pylon 4AF39, a reduced pylon working area will be used to reduce impacts on the wooded boundary

and pond PO15A. If necessary, any felling, coppicing and removal of trees will be undertaken under the supervision of the ArbCoW for the Project.

- E47: To protect ground flora that supports the presence of yellow bird's-nest *(Monotropa hypopitys)*, exclusion zones will be identified by the ECoW and demarcated for all construction works within Brantingham Dale Wood between proposed pylons 4ZQ78 and 4ZQ76. No works will be undertaken within these exclusion zones unless an ECoW is present.
- E50: No works will take place inside the Root Protection Areas associated with the trees along the eastern boundary of Caddow Wood (Southern Assarts) Local Wildlife Site.
- E51: Stringing activities and construction access route will maintain the 15 m buffer to Tongs and Dogholes Woods Local Wildlife Site and Tongs Wood designated ancient woodland.
- E52: Where bluebells and other notable plants are located within woodlands, the measure to protect the ground flora will also protect these species (except for yellow bird's-nest) with the exception of where woodland is permanently lost and grubbed out. Pre-construction checks including by the ECoW will identify any locations where transplanting of each plant or removal of turfs to an unaffected and suitable part of the remaining woodland within the Order Limits is possible. This will also be undertaken in non woodland habitats where avoidance is not possible. Where appropriate (May to June), bluebell seeds may also be collected to aid re-establishment in suitable locations.
- E53: No works are to be undertaken within Treswell Wood Site of Special Scientific Interest.
- E54 The proposed construction and maintenance access routes through the lowland dry acid grassland and open mosaic habitat (to the west of Keadby Power Station) will follow existing visible vehicular tracks. The potential for loss or damage to the acid grassland and open mosaic habitat during construction will be further reduced through the use of suitable temporary trackway/matting, where determined to be required by the Ecological Clerk of Works. Matting/trackway to be removed upon completion of the construction works.
- W02: For open cut watercourse crossings and installation of vehicle crossing points, good practice measures will include, but not be limited to, the following where practicable:
  - Reducing the working width for open cut crossings of a main river or ordinary watercourse whilst still providing safe working and reinstating the riparian and natural bed of the watercourse (where practical), using the material removed when appropriate on completion of the work and compacting as necessary;
  - Installation of a pollution boom downstream of open cut works;
  - The use and maintenance of temporary lagoons, tanks, bunds, silt fences or silt screens as required;
  - Having spill kits and straw bales readily available at all crossing points for downstream emergency use in the event of a pollution incident;
  - The use of all static plant such as pumps in appropriately sized spill trays;
  - Preventing refuelling of any plant or vehicle within 15 m of a watercourse;

- Preventing storing of soil stockpiles within 15 m of a main river;
- Inspecting all plant prior to work adjacent to watercourses for leaks of fuel or hydraulic fluids; and
- Reinstating the riparian vegetation and natural bed of the watercourse, using appropriately sized material of similar composition to that removed. As far as practicable, gravel will be retained in-channel. Reinstated material will aim to closely match what is removed, particularly gravel, at between 15 and 40 mm in size to ensure suitability for fish spawning.

- W03: Riverbank and in-channel vegetation will be retained where not directly affected by installation works. Culverts in waterbodies will either preserve the natural bed or be box culverts with inverts sunk a minimum of 300 mm below the hard bed of the watercourse with natural/existing bed material placed across the inside of the culvert to existing bed level. New culverts will be as short as practicable and sized to avoid narrowing of natural channel widths. Culverts will be sized to convey flows generated by upstream catchments to maintain the current land drainage regime. Downstream flows would be maintained during culvert installation.
- W21: Where existing culverts are to be modified, riverbank and in-channel vegetation will be retained where not directly affected by the works. Culverts in waterbodies will either preserve the natural bed or be box culverts with inverts sunk a minimum of 300 mm below the hard bed of the watercourse with natural/existing bed material placed across the inside of the culvert to existing bed level.
- GH03: A protocol for dealing with any unexpected contamination will be developed and complied with by the Main Works Contractor(s). The protocol will include, as a minimum:
  - Details of a watching brief and toolbox talks to be implemented throughout the construction phase;
  - Details regarding how any affected area will be delineated, protected, investigated and assessed;
  - The qualifications and competencies of the person appointed to oversee the works;
  - The preparation of a method statement for how the contamination will be dealt with or remediated (as appropriate);
  - An escalation policy describing when and how any notifications and approvals will be agreed with the local planning authority; and
  - Details of verification procedures for any mitigation or remediation works demonstrating compliance with the method statement.
- GH08: All use and storage of chemicals and fuels are to be undertaken in accordance with Environment Agency guidance and The Control of Pollution (Oil Storage) (England) Regulations 2001 (HM Government, 2001). The use and storage of chemicals and fuels will also be controlled and monitored under the CoCP which will include, for example, procedures for good general construction site practices, environmental and waste management procedures, regular vehicle checks, use of spill kits, correct waste storage and disposal, use of oil-water

separators as necessary (for example, for drainage from refuelling areas), collection of process water from the washout/cleaning of ready-mix concrete vehicles and equipment for treatment/disposal.

- AQ02: The Main Works Contractor(s) will develop and comply with a Dust Management Plan (DMP), which may include measures to control other air emissions, and will be implemented prior to construction.
- AQ04: Daily on-site and off-site inspections will be undertaken, where receptors (including roads) are nearby, to monitor dust, record inspection results. The information collected from these inspections will be compiled within a log, which will be made available to the local authority on request. This will include regular dust soiling checks of surfaces such as street furniture, cars, and windowsills within 100 m of the site boundary, with cleaning to be provided if necessary. The inspection log will be made available to the local authority on request. There will be an increase in frequency of site inspections by the person accountable for air quality and dust issues on-site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. Dust deposition, dust flux, or real-time PM10 continuous monitoring locations will be discussed with the local authority, if required. Where possible, baseline monitoring will commence at least three months before work commences on-site or, if it is a large site, before work on a phase commences.
- AQ05: Solid screens or barriers will be erected around dusty activities, where required, that are at least as high as any stockpiles on-site. Specific activities will be fully enclosed where there is a high potential for dust production and the activity is ongoing for an extensive period. Runoff of water or mud will be avoided where possible. Site fencing, barriers and scaffolding will be kept clean using wet methods. Materials that have the potential to produce dust from site will be removed as soon as possible, unless being re-used on-site. If they are being re-used on-site, they will be covered as described below. Stockpiles will be covered, seeded or fenced to prevent wind whipping (where needed and depending on duration).
- AQ07: Suitable dust suppression techniques, such as water sprays or local extraction, will be fitted to or used in conjunction with, cutting, grinding or sawing equipment. There will be an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. Enclosed chutes and conveyors and covered skips will be used, where reasonably practicable. Drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment will be minimised and fine water sprays will be used on such equipment wherever appropriate. It will be ensured that equipment will be readily available on-site to clean any dry spillages, and spillages will be cleaned up as soon as reasonably practicable after the event using wet cleaning methods.
- AQ08: Earthworks and exposed areas/soil stockpiles will be re-vegetated to stabilise surfaces as soon as practicable, where appropriate and using appropriate seed mix for what habitat the top soil was from. Hessian, mulches or trackifiers will be used where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. The cover will be removed in small areas during work and not all at once.

- AQ11: Throughout the construction phase, Stage IV Non-Road Mobile Machinery (NRMM) will be used as a minimum and Stage V where possible. Additionally, use electric or other low carbon plant and equipment where practicable.
- 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.
- N02: 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).
- N09: Continuous noisy plant should be housed in acoustic enclosures, where practicable and efficacious.
- NV10: Exhaust silencing and plant muffling equipment will be fitted on all construction vehicles and maintained in good working order.
- NV11: Static plant known to generate significant levels of vibration will be fitted with vibration dampening features.
- NV13: Equipment will be well maintained and where practicable will be used in the mode of operation that minimises noise.
- NV14: Plant and equipment will be shut-down when not in use.
- NV16: Materials will be handled in a manner that minimises noise.
- NV17: All appropriate personnel will be instructed on best practical means measures to reduce noise and vibration as part of their induction training and followed up by toolbox talks.
- NV18: For the construction of pylon foundations, non-percussive piling methods would be used where practicable.
- 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.

- LV02: The Main Works Contractor(s) will apply the relevant protective principles as set out in British Standard (BS) 5837:2012: Trees in relation to design, demolition and construction (British Standards Institution, 2012). All works to trees will follow guidance in BS 3998:2010: Tree work – Recommendations (British Standards Institution, 2010). Tree work to veteran trees and those under Tree Preservation Orders will be undertaken by a suitably qualified arboriculturist and supervised by the Arboricultural Clerk of Works (ArbCoW).
- LV03: A five-year aftercare period will be established for all reinstatement and mitigation planting.

Additional Measures

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

- E39: All reinstated hedgerows and woodlands in the hazel dormouse licence area will include hazel *(Corylus avellana)* and Midland hawthorn *(Crataegus laevigata)* in the species mix.
- E48: General mitigation measures to protect the plant species yellow bird's-nest focuses on keeping soils undisturbed for at least 100 m from populations to protect fungal mycorrhiza. However, this will be unavoidable where works are required in and close to areas where this plant has been recorded (see **Figure 8.4.2 Yellow Bird's-Nest Survey Results in Application Document 6.8.A4 Botanical Report Figure** for location). Where destruction or disturbance of this plant is unavoidable, individual plants will be transplanted elsewhere within the area of Brantingham Dale woodland that lies within the Order Limits (although only if absolutely necessary, as the success rate is considered low due to it being an epiparasitic plant with very specific requirements). If there is no alternative and transplanting is the only remaining option, the following will be adhered to.
  - Move a whole soil block: If unavoidable (e.g. emergency works), take a large intact block of soil (including leaf litter and fungal network) around the plant of at least 30–50 cm radius and the full depth of root zone. First, water to dampen the soil.
  - Keep orientation and shade: Maintain original orientation and canopy conditions.
  - Immediate replanting: Minimise time out of soil. Dig a hole in the new location that is twice as wide and the same depth as the yellow bird's-nest's root ball. This will provide ample space for roots to spread and establish.
  - Watering: Thoroughly water immediately after planting to settle the soil around the roots. Continue to water until the ground is saturated.
  - Expert oversight: Engage a mycorrhizal specialist and Ecological Clerk of Works.

- ARB07: Any bespoke mitigation measures in relation to trees will be specified following detailed design by the Main Works Contractor(s). These may include one or a combination of the following:
  - Design refinements to avoid or reduce encroachment, micro-siting, working from track side, hand digging;
  - 'No dig' solutions such as cellular confinement systems (CCS), ground protection, and protective fencing; and
  - Use of plant or equipment with low ground pressure such as wide-tracked vehicles.

  During construction, where works within a Root Protection Area are required, these will be captured within an Arboricultural Method Statement (AMS) (including a Tree Protection Plan) with supervision of the works to be conducted by an ArbCoW and any additional mitigation measures followed.
- ARB15: To assess and ensure the effectiveness of remediation works to veteran trees, a monitoring programme will be agreed with Natural England and relevant Local Planning Authorities and adopted by National Grid. Due to the ecological significance of veteran trees, the monitoring programme will cover a 30-year period.
- ARB16: To construct a safe and reliable power grid, it may become necessary, following the detailed design of the Project, for the following veteran tree to be removed (by use of the Limits of Deviation): T4 Common Oak – *Quercus robur.* All brash, timber and material from the tree removed will be retained on-site in brash/wood piles as close to the original location of the felled tree as possible.
- ARB17: A replanting ratio of 30:1 for the loss of T4 has been agreed with Natural England and East Riding of Yorkshire Council. Planting at this ratio will be undertaken adjacent to Socken Wood in the location identified on **Application Document 6.4.F1 Environmental Statement Figure 4.1 Proposed Project Design**. The location of the planting and further information is presented within the **Application Document 7.8 Outline Landscape and Ecology Management Plan** and **Application Document 7.14 Arboricultural Impact Assessment**.
- 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.
- LV04 Planting and seeding operations will be undertaken during an appropriate planting/seeding season, and where planting is in locations not affected by other construction activities, planting will be undertaken at the earliest opportunity.

8.8.7 As described in the Embedded Mitigation section, there are no confirmed active otter holts which would be impacted by the Project, therefore no additional mitigation is currently required with respect of this species. However, a potential otter holt has

been identified, and an otter mitigation area has been incorporated into the Project design. The location of the existing potential holt and proposed mitigation area are confidential, and details are provided in the confidential/unredacted version of in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**. Should pre-construction surveys prove this potential holt to be an active holt, the following additional mitigation measures would be applied. Prior to closure of the active holt (under licence), an artificial holt would be created to provide a suitable alternative resting/breeding site. The artificial holt would be sited within the otter mitigation area, and can be partially buried, secured with integral stakes, and covered in brash. The artificial holt would be away from main construction activity and habitat links to the existing otter holt would be maintained (e.g. hedgerows). Planting would be included as part of the licenced works and a suitable area fenced off to limit further disturbance and allow scrub to develop, further concealing the holt. Further discussion is provided in **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report** and **Application Document 7.8 Outline Landscape and Ecology Management Plan** outlines and secures how the otter mitigation area will be managed, should these measure be required.

8.8.8 Should further/pre-construction surveys show badger sett 154 to be a main sett and/or that its tunnels are directed towards the working area, additional mitigation will be required. Firstly, evolution of the detailed design of the Project to move working areas away from sett 154 will be investigated and actioned. If this is not practicable, the badger sett cannot be retained and must be closed under a granted Natural England badger licence. An artificial badger sett would be created (within the mitigation area incorporated into the Project design as part of embedded mitigation, see paragraph 8.8.3). Further discussion is provided in **Application Document 6.8.A5 Environmental Statement Appendix 8.5 Badger Report (Confidential)** and **Application Document 7.8 Outline Landscape and Ecology Management Plan.**

8.8.9 No notable aquatic macrophyte species have been identified within the Order Limits through either desk-study or field survey, and therefore no additional mitigation is required. However, should notable aquatic macrophyte species be recorded during pre-constriction surveys or during construction, in a location where it could potentially be impacted by the works (for example through direct disturbance, or shading due to a bridge), appropriate mitigation would be agreed with the ECoW. This may include measures such as avoidance, translocation, or reseeding.

8.9 Residual Effects Assessment

8.9.1 Table 8.19, Table 8.20 and Table 8.21 present the assessment of effects on designated sites, habitats, and species respectively. The assessment of residual effects takes embedded mitigation, control and management measures and additional mitigation measures (where relevant) into account, which are set out in section 8.8 of this chapter and are summarised in Table 8.19, Table 8.20 and Table 8.21.

8.9.2 Assessments presented in Table 8.19, Table 8.20 and Table 8.21 are based upon the flexibility assumptions set out in Table 8.11.

Table 8.19 – Assessment of residual effects on designated sites

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
Humber Estuary SAC/SPA/Ramsar/SSSI	International (SAC, SPA, Ramsar) National (SSSI)	Potential for three trees on the boundary and one tree inside the designated site boundaries to be affected but not removed.	Trees do not form part of any of the qualifying habitats for these designated sites. If required, the trees would be managed above ground level only and suitable measures would be taken to protect the ground and habitat inside the SAC/SPA/Ramsar/SSSI. The following measures would be applied: DE17, LV02, ARB02, ARB04, ARB06, and ARB08.	Negligible	Negligible (**not significant**)
Humber Estuary SAC/Ramsar/SSSI	International (SAC, Ramsar) National (SSSI)	Potential for temporary disturbance to grey seal, should they travel as far inland along the River Ouse as the Order Limits.	No mitigation required. No works will take place in the channel or along the banks of the River Ouse. The temporary use of a safety boat to monitor the river will be required during installation of the proposed overhead line. This will be a relatively small boat, and the River Ouse is a navigable waterway used by larger vessels. Therefore, any seals using this area are likely to be habituated to passing boats.	Negligible	Negligible (**not significant**)
Brantingham Dale SSSI	National	Temporary and permanent direct habitat loss, management and disturbance.	Habitat removal will be kept to a minimum inside the SSSI. No trees inside the SSSI boundary will be removed below ground level.	Small	Minor adverse (**not significant**)

[15] All codes correspond to those presented in **Application Document 7.3 Register of Environmental Actions and Commitments** and also listed in section 8.8.

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
			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 (Natural England, n.d.). The SSSI is 15.8 ha in size, therefore 1.5 per cent or maximum of 4.5 per cent would be affected. The following measures would be applied: E17, E26, E52, GG01, GG02, GG04, GG05, GG07, ARB01, ARB02, ARB03, ARB04, ARB06, ARB08, ARB09, ARB10, and LV02.		
Chesterfield Canal SSSI	National	Potential temporary shading of aquatic macrophytes, if present in that location due to the construction of a clear span bridge (or other suitably assessed alternative) over the	No notable aquatic macrophyte species were recorded at the proposed bridge location. This shading may slightly reduce the channel macrophyte cover, but should not be detrimental to the number of species present within the area.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
		canal. The bridge would be removed upon completion of the construction works.	Pre-construction survey to be carried out to check for the presence of notable plants and appropriate mitigation such as avoidance, translocation, or reseeding applied should they be present. The following measures would be applied: E17, E22, GG01, GG02, GG05, DE9, and LV04.		
		Permanent habitat management and temporary disturbance required for overhead line clearance and installation of pilot wires.	The Chesterfield SSSI will be crossed using a clear span bridge or other suitably assessed alternative (near Pylon 4AF184). The scaffolding either side of the SSSI will be set back from the boundary of the SSSI to retain bankside vegetation. Based on the Project design set out in **Application Document 6.4 Chapter 4 Description of the Project**, within the SSSI, approximately 40.5 m of hedgerow will be managed to reduced height, and the eastern side of the canopy of a tree (T170, Crack willow) will be reduced (tree not removed). Up to a further 22 m of hedgerow would require the same management should the LoD be used to the east, and the tree may require further management or potential removal. Should the LoD be used to the west then a smaller length of hedgerow would be affected, and the tree may be avoided. These habitats	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
			are not part of the reason for the designation of the canal. The following measures would be applied: ARB01, ARB02, ARB03, ARB04, ARB08, GG01, GG02, GG04, GG05, GG07, E12, E17, E22, E49.		
Designated sites located within and up to 250 m from the Order Limits, or 50 m from the route(s) used by construction vehicles on the public highway up to 250 m from the proposed bellmouths: Humber Estuary SAC/SPA/Ramsar Humber Estuary SSSI Brantingham Dale SSSI Chesterfield Canal SSSI Treswell Wood SSSI Brantingham Dale Historic LWS Jillywood Lane LWS Blacktoft Sands RSPB Reserve Broomfleet Pits LWS	Up to National	Degradation of habitat in specific locations of these designated sites due to dust, other pollution impacts, and spread of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	As set out in **Application Document 6.15 Chapter 15 Air Quality**, the construction dust risk assessment determined that the overall worst-case risk of dust effects would be high for ecological receptors. With the implementation of mitigation measures, the temporary effects of construction dust have	Negligible to Minor adverse (**Not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
Woodale Historic LWS Cliffs Plantation Candidate LWS Risby Park with Fishpond Wood LWS Birkhill Wood LWS Drove Road LWS Sedge Hole Close Wildlife Trust Reserve/LWS Folly Drain North LWS Hatfield Waste Drain LWS North Engine Drain, Belton LWS Paupers' Drain LWS River Torne LWS South Engine Drain, Belton LWS Stainforth and Keadby Canal Corridor LWS Warping Drain Corridor LWS South Moor Covert and Fishpond Plantation LWS Three Rivers LWS				been determined to be **not significant**. Negligible to Small for other pollution impacts (e.g. spills) and spread of INNS.	

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
Dolegate Road, East Drayton Candidate LWS					
Chesterfield Canal (Welham to Misterton) LWS					
Caddow Wood (Southern Assarts) LWS					
Retford Gate Green Lane LWS					
Treswell Wood Wildlife Trust Reserve/LWS					
Saundby Park Wood LWS					
Marnham Railway Yard Candidate LWS					
Fledborough to Harby Dismantled Railway LWS					
Tongs and Dogholes Woods LWS					
Mother Drain, Misterton LWS					
High House Road Verges, Sturton le Steeple LWS					
Beckingham Wood LWS					

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
West Burton Meadow Wildlife Trust Reserve/LWS Wheatley Wood LWS Shaw Ponds LWS Wooden Beck Hill Verges LWS Misterton Pasture LWS Caddow Wood (Northern Assart) LWS					
Designated sites with potential hydrological links to the Order Limits, see Table 8.12, Table 8.13 and Table 8.15	Up to International	Potential for degradation of habitat due to changes to water quality.	The following measures would be applied: GG01, GG02, GG04, GG15, GG16, GG19, W02, GH03, and GH08.	Negligible	Negligible to minor adverse (**not significant**)
Jillywood Lane LWS	County for LWS Up to National for Woodland with Characteristics of Ancient Woodland	Temporary and permanent direct habitat loss, fragmentation and disturbance, should the horizontal LoD be used in this area to the north.	Based on the Project design set out in **Application Document 6.4 Chapter 4 Description of the Project**, there would be no impacts to Jillywood Lane LWS. However, should the LoD be used to the north, habitats would be impacted in two locations (affecting approximately 130 m of the 2.5 km length of the of LWS). The LWS would be reinstated post-construction, excluding trees which would be permanently lost. This area has been recorded by the Project as Woodland with Characteristics of Ancient Woodland and	None, based on Project design set out in **Application Document 6.4 Chapter 4 Description of the Project**. Up to Medium (depending on amount of habitat	No effect for Project design set out in **Application Document 6.4 Chapter 4 Description of the Project**.

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
			being of **National** importance. Any trees removed will not be removed to below ground level and not grubbed out to reduce the impact to soil and ground flora. New trees will be planted in proposed mitigation planting areas, outside the LWS, which are described in **Application Document 7.8 Outline Landscape and Ecology Management Plan** and shown in **Application Document 6.4.F1 Figure 4.1 Proposed Project Design**. The following measures would be applied: GG01, GG02, GG04, GG05, GG07, ARB01, ARB02, ARB03, ARB04, ARB06, ARB07, ARB08, ARB09, ARB10, E17, E18, E20, E22, E25, E45, E52, LV02, LV03, and LV04.	impacted) should the LoD be used	Up to Moderate adverse (**significant**) if LoD used to the north only, depending on the extent of the LoD used.
Brantingham Dale Historic LWS	County	Permanent loss, management and fragmentation of the woodland would occur where reinstatement is not possible due to the operational requirements of the proposed overhead line. Potential for temporary disturbance of other vegetation inside the woodland.	An area of approximately 2.4 ha inside the Historic LWS would require tree removal (worst-case), which is approximately 8 per cent of the total area of the Historic LWS (with approximately 0.77 ha of the woodland identified as affected managed). Some of the habitat identified for removal is present under the existing overhead line and still functions as woodland, despite likely ongoing management. This may be, in part, due to the topography of the land, allowing taller trees to remain in situ. Temporary disturbance would likely occur	Medium	Minor adverse (**not significant**). The effect has been determined to be **not significant** due to the woodland being an area of

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
			to other vegetation inside the woodland during habitat removal and ongoing management. Approximately 8 per cent of the woodland would be lost, however, this may be left for scrub to establish. Parts of the woodland edge are also likely to be subjected to ongoing management due to the existing overhead line. New trees will be planted in proposed mitigation planting areas, outside the Historic LWS, which are discussed in **Application Document 7.8 Outline Landscape and Ecology Management Plan** and shown in **Application Document 6.4.F1 Figure 4.1 Proposed Project Design**. These areas have been chosen with a view to extend existing woodland areas and/or provide links between existing areas of woodland. However, the woodland inside the boundary of the Historic LWS would be permanently fragmented. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, ARB01, ARB02, ARB03, ARB04, ARB06, ARB10, E17, E18, E20, E22, E45, E52, LV02, LV03, and LV04.		young mixed plantation woodland, which will be mitigated for as part of the mitigation planting areas.
Dolegate Road, East Drayton Candidate LWS	County	Temporary direct habitat loss, fragmentation and disturbance associated	Although the working area of the third-party asset (NGED 13) overlaps the Candidate LWS, the current design shows the	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
		with construction access and undergrounding of a third-party asset.	undergrounding of the third-party asset will be located outside of the Candidate LWS boundary, except at the west end where it will need to cross it. Suitable measures would be taken to ensure that the unaffected areas of habitat inside the LWS are protected during construction. Soil would be suitably removed, stored and reinstated post-construction. Supplementary seeding would be carried out if necessary, with suitable aftercare and monitoring undertaken. These measures are outlined in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, E10, E18, E20, E22, E42, E43, E45, E52, ARB01, ARB10, LV02, LV03 and LV04.		
Stainforth and Keadby Canal Corridor LWS	County	Permanent direct habitat management and temporary disturbance required for overhead line clearance and installation of pilot wires.	Stainforth and Keadby Canal will be crossed using existing bridges. Vegetation would be managed above ground level only within 5 m of the watercourse to protect the banks. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, ARB01, ARB03, ARB04, ARB06, ARB10, ARB18, E12, E17, E20, E22, E45	Small	Minor adverse (**not significant**)
Hatfield Waste Drain LWS	County	Temporary direct habitat loss and disturbance	No works will be carried out within the watercourse channel; however, the	Small	Minor adverse

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
		associated with scaffolding. Two existing crossings will be used but unmodified.	scaffolding will be installed close to the watercourse's southern bank, maintaining the 5 m watercourse buffer where practicable and the integrity of the bank. Should water vole be present, no works will be undertaken within a 5 m buffer from the top of the watercourse bank. Works would encroach only slightly into the LWS boundary. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, ARB01, E12, E20, E22, E45, and E21		(**not significant**)
North Engine Drain, Belton LWS	County	Potential temporary habitat loss required for indicative visibility splay for the A18.	Works would encroach only slightly into the LWS boundary. The visibility splay is along the A18 and therefore habitats along the verges are already likely to be subject to ongoing highways management. Vegetation would be managed to above ground level only within 5 m of the watercourse to protect the banks. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, ARB01, E12, E20, E22, E24, andE45	Negligible	Negligible (**not significant**)
		Permanent habitat management and temporary disturbance required for overhead	Vegetation would be managed to above ground level only within 5 m of the watercourse to protect the banks.	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
		line clearance and installation of pilot wires.	Should water vole be present, no works will be undertaken within a 5 m buffer from the top of the watercourse bank. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, ARB01, ARB03, ARB04, ARB06, ARB10, ARB18, LV02, E12, E17, E20, E21, E22, and E45.		
River Torne LWS	County	Temporary vegetation removal and tree loss likely required for temporary construction access and associated potential bellmouth (BM-015) upgrade and visibility splay.	The section of construction access road inside the LWS boundary follows an existing track used for vehicular access, with minimal temporary vegetation and tree removal likely required for the duration of the construction works. Vegetation clearance including removal, management and potentially affected would be to above ground level only where within 5 m of the watercourse to protect the banks. Only approximately 40 m^2 of the existing bellmouth that is to be upgraded lies inside the boundary of the LWS, which is temporarily required for the duration of the construction works. Very minor vegetation removal may be required for the associated visibility splay. Should water vole be present, no works will be undertaken within the channel or within a 5 m buffer from the top of the watercourse bank to reduce impacts to riparian habitat.	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
			The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, LV02, ARB01, ARB03, ARB04, ARB06, ARB10, ARB18, E12, E17, E20, E21, E24, E22, E45.		
		Permanent habitat management and temporary disturbance required for overhead line clearance, installation of pilot wires and scaffolding.	The minimal tree and vegetation management would be to above ground level where within 5 m of the watercourse to protect the banks. Should water vole be present, no works will be undertaken within a 5 m buffer from the top of the watercourse bank. Works would encroach only slightly into the LWS boundary. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, LV02, ARB01, ARB03, ARB04, ARB06, ARB10, ARB18, E12, E17, E20, E21, E22, E45.	Small	Minor adverse (**not significant**)
South Engine Drain, Belton LWS	County	Temporary direct habitat loss and disturbance potentially required for temporary construction access, associated bellmouth (BM-068) and visibility splay, and for visibility splay associated with BM-015.	The section of the construction access track inside the LWS boundary is approximately 86 m. This is a relatively small section of the LWS, which has a total length of approximately 3.35 km. The habitat that would be temporarily impacted appears to be subject to some disturbance, as vehicle access tracks are visible through the vegetation. The habitat would be reinstated to its original condition (or better) post-construction. Very minor	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
			vegetation removal may be required for the bellmouth and visibility splays. The following measures would be applied: The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, LV02, ARB01, ARB03, ARB04, ARB06, ARB10, ARB18, E12, E17, E20, E24, E22, E45.		
Folly Drain North LWS	County	Temporary vegetation loss potentially required for temporary construction access and working areas for undergrounding a third-party asset (NPG-23).	Although the horizontal LoD associated with undergrounding the third-party asset (NPG-23) does encroach slightly into the boundary of the LWS, the currently proposed siting of the underground asset is outside of the LWS boundary, to the south. Additionally, the third-party asset access route utilises an existing access track, which is mostly outside the LWS boundary. The temporary stone construction access track also utilises the existing track and therefore minimal temporary vegetation loss would be associated with this access. Habitats would be reinstated to their original condition (or better) post-construction. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, LV02, ARB01, ARB03, ARB04, ARB06, ARB10, ARB18, E12, E17, E20, E24, E22, E45.	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
South Moor Covert and Fishpond Plantation LWS	County	Undergrounding a third-party asset (NPG-25) may impact the LWS through temporary habitat loss and disturbance.	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 measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, LV02, ARB01, ARB02, ARB03, ARB04, ARB06, ARB10, ARB18, E12, E17, E18, E20, E22, E45, E52	Small	Minor adverse (**not significant**)
Warping Drain Corridor LWS	County	Permanent habitat management and temporary disturbance required for overhead line clearance and installation of pilot wires and installation of scaffolding. Temporary vegetation loss and disturbance will also occur due to a	The construction access route and scaffolding will be positioned at least 5 m from the watercourse banks inside the LWS, to reduce impacts to riparian habitat. Vegetation would be managed to above ground level where within 5 m of the watercourse to protect the banks. Habitats impacted inside the LWS would be reinstated to their original condition (or better) post-construction. There are two indicative mitigation planting areas inside	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
		construction access road that runs within the LWS boundary for approximately 185 m.	the boundary of the LWS, as outlined in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. The following measures would be applied: The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, ARB01, E12, E17, E18, E20, E22, E45, LV02, LV03, and LV04		
		Permanent loss of trees may occur where reinstatement is not possible.	Tree clearance would be to above ground level only within 5 m of the watercourse to protect the banks. New trees will be planted in proposed mitigation planting areas, outside the LWS, which are shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. The following measures would be applied: ARB01, ARB03, ARB04, ARB06, ARB10, ARB18, E12, E17, E20, E22, E45, LV02, LV03, and LV04	Small	Minor adverse (**not significant**)
Retford Gate Green Lane LWS	County	Temporary direct habitat loss (excluding any tree loss) and disturbance to facilitate site access.	Temporary habitat loss associated with the construction access road will be kept to a minimum and will be reinstated to its original condition (or better) post-construction. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, ARB01, ARB10, E10, E18, E22, E42, E43, E45, E52, and LV02	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[15]	Magnitude of impact	Residual effect and significance
		Permanent loss and management of trees may occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	The permanent loss and management of trees inside the LWS boundary may be required due to the operational requirements of the proposed overhead line. New trees will be planted in proposed mitigation planting areas, outside the LWS, which are shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. The following measures would be applied: GG01, GG02, GG04, ARB01, ARB02, ARB03, ARB04, ARB06, ARB18, E17, E45, LV02, LV03, and LV04.	Small	Minor adverse (**not significant**)

Table 8.20 – Assessment of residual effects on habitats

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
Ancient woodland (included on the Ancient Woodland Inventory)	National	Works inside root protection areas could cause damage to tree roots and impact the health of the trees.	Minimum 15 m buffers will be retained around all areas of ancient woodland. Although there is one area of ancient woodland located within 15 m of the Order Limits (part of Tongs and Dogsholes Wood), the construction works will maintain a 15 m buffer from the woodland edge.	Negligible	Negligible (**not significant**)

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

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
			The following measures would be applied: GG01, GG02, GG04, GG07 ARB06, ARB11, and E51		
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ11, AQ04, AQ05, AQ07, and AQ08.	Negligible	Negligible to Minor adverse (**not significant**)
Woodland recorded by the Project as Woodland with Characteristics of Ancient Woodland (not included on Ancient Woodland Inventory) For Jillywood Lane – see entry for Jillywood Lane LWS in Table 8.18.	National	Tree and vegetation loss associated with overhead line clearance and installation of pilot wires. Permanent loss of trees or permanent management of limbs may occur where reinstatement and /or avoidance is not possible due to the operational requirements of the proposed overhead line. This applies to: • Socken Wood (oversailed in two places); • Part of Brantingham woodland adjacent to Ellerker Road (only if the LoD is used)	Where practicable, and direct works are not required, minimum 15 m buffers will be retained around areas of woodland identified by the Project as Woodland with Characteristics of Ancient Woodland. Any future detailed design will take into consideration the extent of these woodland areas and associated buffers to reduce potential impacts as far as practicable. All affected trees will be soft felled. Any trees removed within these areas of woodland will not be removed to below ground level and not grubbed out to reduce the impact to soil and ground flora. Any wood chipping will be done outside of the woodlands and removed, to protect the ground flora. Mitigation planting areas are located close to Socken Wood, Jillywood Lane and Wood Farm, as well as other areas	Large for Socken Wood and Wood Farm. Small for the remaining areas.	Moderate adverse (**significant**) for Socken Wood and part of Wood Farm. Minor adverse (**Not significant**) for Brantingham, Dixon Wood, and Pigeon Field. For Jillywood Lane – see entry for Jillywood Lane LWS in Table 8.18.

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
		• Part of Dixon Wood (only if the LoD is used, edge effect only); • Part of Wood Farm (oversailed) (construction access road also impacts edge of this woodland); and • Pigeon Field (only if the LoD is used, edge effect only). The undergrounding of a third-party asset could potentially impact a very small area of woodland south of Dog Horse Plantation, likely minor limb management in one corner if full working width of third-party asset (NPG-24) is needed. Saundby Park may require minor limb management where overhanging for a short section of existing adjacent track for access of third-party asset works (NGED-06) if needed). This would result in the loss of approximately 0.51 ha and	proposed across the Project Order Limits; these are 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, 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 7.8 Outline Landscape and Ecology Management Plan** for further details. The following measures would be applied: 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, and LV04.		

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
		management of approximately 0.18 ha of woodland identified by the Project to have characteristics of ancient woodland. This could also potentially increase if the LoD is used in one or multiple places. For Wood Farm this could increase from 0.1 ha (removed and managed) to 0.19 ha (including potentially affected) should the LoD be used to the west, but would decrease if used to the east. For Socken Wood, this could increase from 0.43 ha (removed), plus 0.15 ha (managed), to include a further 0.075 ha (currently potentially affected) if LoD used to the north, therefore going from 0.58 ha to approximately 0.66 ha affected (removed and managed). It would reduce if LoD is used to the south. For Jillywood Lane please see Jillywood Lane LWS in Table 8.18.			

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Small	Negligible to Minor adverse (**not significant**)
Broadleaved woodland – semi-natural, including Priority Habitat Broadleaved woodland – plantation	Broadleaved woodland – semi-natural, including Priority Habitat (not including areas identified by the Project as Woodland with Characteristics of Ancient Woodland): up to County importance Broadleaved woodland – plantation: up to County importance (areas containing	Temporary habitat loss and disturbance would be required to facilitate construction access, pylon working areas and for overhead line clearance and installation of pilot wires (excluding permanent tree loss). Temporary loss and disturbance of woodland may also occur due to the undergrounding of third-party assets.	Appropriate stand-off distances have been applied to woodland areas to avoid direct effects where practicable. Vegetation temporarily impacted will be reinstated to original condition post-construction. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, E17, E18, E20, E22, E52. ARB01, ARB02, ARB03, ARB04, ARB06, ARB07, ARB08, ARB09, ARB10	Small	Minor adverse (**not significant**)
		Permanent loss of trees would occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	New trees will be planted in proposed mitigation planting areas, which are shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. However, there will permanent fragmentation of existing woodland areas. The following measures would be applied: GG01, GG02, ARB01, ARB02,	Up to Medium	Minor adverse (**not significant**), subject to the maturation of the woodland mitigation planting areas.

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
	Priority Habitat and yellow bird's-nest plant)		ARB03, ARB04, ARB06, , E17, E20, LV02, LV03, and LV04.		
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible to Minor adverse (**not significant**)
Veteran trees	National	Impacts are avoided by the Project design described in **Application Document 6.4 Chapter 4 Description of the Project** and **Application Document 7.14 Arboricultural Impact Assessment** Permanent loss of one veteran tree to facilitate construction works (T4, common oak in Route Section A), would occur only if the LoD is used to the south in its location	The following measures would be applied: DE3, GG01, ARB02, ARB16, ARB17, LV04, and E09.	Large (if LoD used and a veteran tree is lost)	No effect for Project design set out in **Application Document 6.4 Chapter 4 Description of the Project.** Major adverse (significant) only if LoD is used and veteran tree T4 is lost.
		There are 11 veteran trees and one veteran tree group that have been identified for management/pruning as per the design described in **Application Document 6.4**	Management measure are set out in **Application Document 7.14 Arboricultural Impact Assessment**. The following measures would be applied: DE3, DE14, GG01, GG02, GG07, ARB01, ARB02, ARB03, ARB06, ARB08,	Small (as no veteran trees lost, management only)	Negligible to Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
		Chapter 4 Description of the Project and **Application Document 7.14 Arboricultural Impact Assessment**, and a further ten veteran trees that may require management should the LoD be used in their locations.	ARB09, ARB10, ARB12, ARB13, ARB14, ARB15, LV02, and E09.		
Black poplar and veteran trees	Black poplar: County Veteran trees: National	Degradation of habitat due to dust, other pollution impacts, and introduction of INNS.	The following measures would be applied: DE1, DE15, GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible to Minor adverse (**not significant**)
Neutral grassland – semi-improved	Local (does not include Priority Habitat within LWS as discussed as part of LWS)	Temporary direct loss and disturbance of habitat may occur to facilitate construction works, e.g. construction access routes and visibility splays, road widening, scaffolding and undergrounding third-party assets.	Habitats temporarily impacted will be reinstated to their original condition (or better) post-construction. The following measures would be applied: GG01, GG02, GG04, GG05, GG06 GG07, GG30, DE10, E18, E20, E24,	Small	Minor adverse (**not significant**) until reinstatement is established, then negligible.
		Permanent loss of habitat under feet of pylon 4ZQ68	The permanent loss would be very minor and limited to underneath the feet of pylon 4ZQ68. The following measure will be applied to protect the remaining unaffected grassland: GG07.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible to Minor adverse (**not significant**)
Hedgerows – Native species-rich hedge/hedgerow with trees Native species-poor hedge/hedgerow with trees	County	Temporary direct loss and disturbance of habitat may occur to facilitate construction works, e.g. construction access routes and visibility splays, road widening, stringing positions, scaffolding, and undergrounding third-party assets.	Existing gaps in hedgerows will be used where practicable. Sections of hedgerow that require temporary removal to facilitate construction of the Project will be reinstated post-construction to the same (or improved) condition. For example, species-poor gappy hedgerows would be replaced with intact species-rich hedgerows where practicable. The following measures would be applied: GG01, GG02, GG05, GG06, ARB01, ARB04, ARB10, E10, E18, E20, E22, E42, E43, LV03 and LV04.	Medium	Moderate adverse (Significant) in the short term, due to the large number of hedgerows impacted. However, this should change to a negligible/ minor positive (hedgerows without trees) effect in the long term, once the reinstated hedgerow has had time to mature. This is based on no net loss of hedgerow.

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Open water – standing water (Ponds)	Local	Potential damage or loss of one small pond inside working area of existing pylon 4AF39	The working area for the existing pylon 4AF39 will be adjusted as far as practicable during detailed with an aim to retain the pond and to avoid damaging it. However, protection of the pond cannot be guaranteed. Measure E46 would be applied at this location.	Small, as only one small pond potentially impacted.	Negligible (**Not significant**)
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Running water, including river Priority Habitat	Up to International	Temporary loss/fragmentation and disturbance of habitat associated with the installation of culverts for construction access and the undergrounding of third-party assets (if open cut techniques are used).	The Project will use existing watercourse crossing points as far as practicable. Where required, sensitive watercourses, for example those designated as main rivers, those with WFD status, or those that are inhabited by protected species, would be crossed using clear span bridges or suitably assessed and approved alternatives. The	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
			undergrounding of third-party assets would be carried out trenchless techniques when crossing sensitive watercourses. The following measures would be applied: GG01, GG02, GG04, GG05, DE6, DE7, E12, E18, E20, W02, W03, W21		
		Upgrading existing culverts could result in permanent habitat loss, if existing culverts are made bigger.	Measures W21 and E20 would be applied.	Small	Minor adverse (**not significant**)
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, AQ1, and W02.	Negligible	Negligible to minor adverse (**not significant**)
Cultivated/disturbed land – ephemeral/short perennial	Local	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Lowland calcareous grassland	Local – for calcareous grassland within the SSSI refer to	Temporary loss of/damage to habitat crossed by construction access	The potential temporary loss of/damage to calcareous grassland would be limited to a narrow strip of this habitat that would be crossed by a construction access road. Suitable measures would be taken to ensure that the unaffected areas of	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
	Brantingham Dale SSSI		calcareous grassland are protected during construction. Soil would be suitably removed, stored and reinstated post-construction as appropriate. Supplementary seeding would be carried out if necessary, with suitable aftercare and monitoring undertaken. These measures are outlined in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. The following measures would be applied: GG01, GG02, GG04, GG05, GG06 GG07, GG30, DE10, E18, E20, E35, LV03 and LV04.		
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied:GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, and AQ08 and AQ11.	Negligible	Negligible (**not significant**)
Coastal saltmarsh and mudflat Priority Habitat located inside the Order Limits	County	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, and AQ08 and AQ11.	Negligible	Negligible to Minor adverse (**not significant**)
Lowland dry acid grassland Priority Habitat and open	Local	Temporary loss of/damage to habitat crossed by construction access and	The proposed construction access routes through the lowland dry acid grassland and open mosaic habitat (to the west of	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
mosaic Priority Habitat		small areas within pylon working areas and stringing area.	Keadby Power Station) will follow existing visible vehicular tracks, noting that not all routes shown will be used as options for alternative routeing are provided should any not be possible to use. Therefore, disturbance to this habitat will be limited to areas that already appear to be subject to some level of vehicle disturbance. The potential for loss or damage to the acid grassland and open mosaic habitat will be further reduced through using suitable temporary trackway and matting that will be removed upon completion of the works. Maintenance access will be limited to irregular vehicular access through these habitats, again, following the existing visible tracks. The pre-construction condition of the habitat impacted will be recorded, and post-construction monitoring will be carried out, with remedial works carried out if necessary. The following measures would be applied: GG01, GG02, GG04, GG05, GG06 GG07, DE10, E18, E54, and E20		
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03,	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
			GH08, AQ02, AQ04, AQ05, AQ07, and AQ08, and AQ11.		
Lowland meadows Priority Habitat	County	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, and AQ08, and AQ11.	Negligible	Negligible to Minor adverse (**not significant**)
Reedbeds Priority Habitat	County	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, and AQ08, and AQ11.	Negligible	Negligible to Minor adverse (**not significant**)
Priority Habitat – '*No main habitat but additional habitats present*'	County	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, and AQ08, and AQ11.	Negligible	Negligible to Minor adverse (**not significant**)
Good quality semi-improved grassland (non-priority)	Local	Temporary vegetation loss likely required for construction access and associated potential bellmouth upgrade (BM-015 in Route Section C).	The section of construction access road along the area mapped as good quality semi-improved grassland follows an existing track used for vehicular access, with minimal temporary vegetation removal likely required for the duration of the construction works.	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
			Only a very small proportion of the existing bellmouth (BM-015 in Route Section C) that is to be upgraded overlaps with the good quality semi-improved grassland, which is temporarily required for the duration of the construction works. The following measures would be applied: GG01, GG02, GG04, GG05, GG06, GG07, GG30, DE10, E18, and E20		
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, and AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Traditional orchard Priority Habitat	County	Potential loss and disturbance of a small area mapped as traditional orchard Priority Habitat, should the LoD be used for the proposed overhead line. Only approximately 0.007 ha of this habitat lies inside the Order Limits. The Phase 1 habitat survey recorded the area of this woodland which lies within the Order Limits to be dominated by ash trees. This indicates that the	The following measures would be applied if the LoD was used: GG01, GG02, GG04, GG05, GG07, E20, E22, E52, ARB01, ARB02, ARB03, ARB04, ARB06, ARB10, ARB18, LV02, LV03, and LV04.	Small, only if LoD is used.	No effect for Project design set out in **Application Document 6.4 Chapter 4 Description of the Project.** Minor adverse (**not significant**) if LoD used.

Ecological feature	Importance	Description of impact	Mitigation[16]	Magnitude of impact	Residual effect and significance
		orchard may no longer be present, or managed as an orchard, or that trees forming part of the orchard are not found around the woodland's edge.			
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible to Minor adverse (**not significant**)
Priority Habitat located outside the Order Limits, in the wider study area: • Coastal and floodplain grazing marsh; • Lowland fens; and • Purple moor grass and rush pastures.	County	Degradation of habitat due to dust and other pollution impacts including changes to water quality.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible (**not significant**)

Table 8.21 – Assessment of residual effects on species

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
Yellow bird's-nest	County	Permanent loss of plants due to pylon working areas (pylons 4ZQ78 and 4ZQ77), access, stringing works, and overhead line clearance (between 4ZQ78 and 4ZQ76) requiring felling and management of trees within woodland at or in the vicinity of the top of Bilks Hill, and therefore the associated fungal network that the plant is dependent on.	Where possible, maintain a 100 m buffer from populations within the woodland with no direct effects. Demarcate non-working areas to prevent encroachment. Transplantation of the plant from the directly affected areas of the woodland to remaining areas of this block of woodland within the Order Limits with the correct conditions for this species will be undertaken. This will attempt to preserve as many spikes of this species as possible however cannot be relied on to be successful. In addition, woodland planting within this area cannot be relied on for mitigation for this species as it is an epiparasitic plant, indirectly parasitic on trees via the *Tricholoma* fungi. Its habitat requirements are therefore highly specific and dependent on this symbiotic network, and not possible to reliably recreate. Retention of the tree roots by clearing to above ground level only, may preserve the fungal network, but these shade loving plants would still lose the shading provided by the canopy of the trees.	Medium	Moderate adverse (**significant**)

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

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			The following measures would be applied: E26, E47, E48, GG01, GG02, GG04, GG07, and LV04		
Other protected and notable plant species: bluebell, burnet-saxifrage, common restharrow, giant bellflower, harebell, salad burnet, wild strawberry, wild thyme.	Up to County	Direct loss and damage of plants situated in construction working areas.	Protected and notable plant species were recorded within the survey area, primarily associated with semi-natural woodland, calcareous and neutral grassland, and plantation habitats. Mitigation associated with these habitats (as presented in this table and **Application Document 7.3 Register of Environmental Actions and Commitments**) will help to preserve ground flora as far as practicable. Such measures include not removing trees to below ground level (not grubbing out) in areas of woodland identified by the Project as Woodland with Characteristics of Ancient Woodland, to reduce the impact to soil and ground flora. The careful handling and reinstatement of soil associated with the strip of calcareous grassland that will be crossed by a construction access road (see Table 8.20) will also help to conserve existing notable flora. Bluebells were recorded in several woodlands and may be affected by the Project. Pre-commencement checks of woodland (including woodland edges) will be carried out by an appointed Ecological	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			Clerk of Works (ECoW), to identify and map bluebell locations during their visible season (late April to early June). Where avoidance is not possible, the ECoW will determine the most appropriate methods to be taken in order to conserve as many plants as practicable. This may include temporarily removing, suitably storing (and watering) and reinstating turves when works are complete in that area (i.e. for short-term works). For longer-term works, translocation to unaffected woodland areas may be undertaken. Where appropriate (May to June), bluebell seeds may also be collected to aid re-establishment in suitable locations. The following measures would be applied: E52, LV03 and LV04.		
Terrestrial invertebrates	Up to National (for Keadby Power Station) and possibly Melwood Upper Quarry. Remaining areas likely to support	Temporary and permanent direct loss, disturbance and fragmentation of habitat used by invertebrates may occur to facilitate construction works, e.g. construction access routes and visibility splays, pylon working areas, stringing positions, scaffolding and undergrounding third-party assets.	Habitats temporarily impacted will be reinstated to their original condition (or better) post-construction. Impacts to habitats around Keadby Power Station and Melwood Upper Quarry, identified as being potentially suitable for notable invertebrate species, will be minimised by the use of existing access routes. Within Keadby Power Station these will follow existing visible vehicular tracks, noting that not all routes shown will be used options for alternative	Small	Minor adverse (**not significant**), due to the minimal impacts to habitats in Keadby and Melwood Upper Quarry.

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
	species assemblages of Local importance.	This could also result in incidental mortality and harm.	routeing are provided should any not be possible to use. Therefore, disturbance to this habitat will be limited to areas that already appear to be subject to some level of vehicle disturbance. Melwood Upper Quarry is oversailed between pylons 4AF148 and 4AF149, therefore ground and low-level vegetation will be retained under the proposed overhead line inside the restored quarry. c. Proposed mitigation planting areas will offer potential habitat for invertebrates, which are shown in **Application Document 7.8 Outline Landscape and Ecology Management Plan**. New areas of suitable habitat may be created under the pylons where the land can no longer be used for crop growing. The following measures would be applied: E02, E18, E22, E42, E43, GG04, GG05, GG06, LV03 and LV04.		
GCN (Nottinghamshire populations)	Local	Temporary and permanent (for tree groups removed due to the operational requirements of the overhead line) direct loss and fragmentation of habitats used by GCN for foraging or shelter.	Where required, works within 250 m of the three confirmed GCN ponds in Nottinghamshire will be carried out under a Mitigation licence from Natural England. The number of confirmed GCN ponds may change following pre-construction surveys as seven ponds were not accessible for surveys prior to submission	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			of this ES, however not all of these ponds are located in areas where works would occur within 250 m. There will be very minimal permanent loss of habitat (tree loss) within 250 m of the Nottinghamshire waterbodies where GCN presence has been confirmed. The majority of habitat loss will be temporary and the habitats will be reinstated to their original condition (or better) post-construction. No ponds will be directly affected within Nottinghamshire. Temporary culverts or clear span bridges will be installed on drains where the construction access route crosses them. These will be included in the licence where appropriate. The following measures would be applied: E01, E11, E12, E19		
		Direct injury or killing of GCN could occur particularly during initial stages of vegetation clearance and ground works.	Where required, works within 250 m of confirmed GCN ponds in Nottinghamshire will be carried out under a Natural England Mitigation licence. Mitigation will be carried out as stipulated under the licence to reduce risk of harm to this species. The following measures would be applied: E01, E03, E11, E12, E19, GG04	Small	Negligible to minor adverse (**not significant**)
Reptiles	Local	Temporary and permanent direct loss/fragmentation of terrestrial and aquatic habitats	Areas of habitat most suitable for reptiles have been avoided through design as far as practicable.	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		used by reptiles for foraging, breeding, or shelter.	Habitats temporarily impacted will be reinstated to their original condition (or better) post-construction. Impacts to habitats around Keadby Power Station and Melwood Upper Quarry, identified as being potentially suitable for notable reptiles, will be minimised by the use of existing access routes. Melwood Upper Quarry is oversailed between pylons 4AF148 and 4AF149, therefore ground and low-level vegetation will be retained under the proposed overhead line inside the restored quarry. Removal and management of trees and dense scrub is required in the southwest corner of the quarry for overhead line clearances. Habitats suitable for reptiles will be subject to two-stage habitat manipulation that will take place between mid-March and mid-October, care will taken during any scrub removal as well. The following measures would be applied: E02, E03, E07, E18, E22, E42, GG05, GG06		
		Temporary disturbance of habitats and displacement of reptile species associated with the habitats could occur due to noise, visual disturbance, vibration,	The land inside the Order Limits is dominated by agricultural fields which are of low suitability for reptiles and therefore the works are unlikely to displace large numbers of reptiles.	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		obstructions and habitat alteration. This also includes effects as a result of dust generation and deposition.	The following measures will be applied: E02, AQ02, AQ05, AQ07, NV01, NV09 to NV11, NV13, NV14, NV16 to NV18 and NV20.		
		Direct injury or killing of certain reptile species could occur, particularly during initial stages of vegetation clearance and ground works.	Works impacting habitats suitable for reptiles will be overseen by a suitably experienced and trained ECoW and precautionary working methods, including two-stage habitat manipulation that will take place between mid-March and mid-October, will be adhered to. The following measures would be applied: E02, E03, E07, E22, GG04	Negligible	Negligible (**not significant**)
Bats – roosting	County	Potential for the direct loss of roosts through removal of, reduction of or damage to trees that are used by primarily common and widespread bat species for shelter, protection and/or breeding during construction. This could result in the incidental mortality or temporary disturbance of roosting bats present in roosts.	The Project has been designed so that no buildings or structures will be lost. Suitable standoffs from buildings forms part of the routeing and embedded design of the Project, on this basis the Project would not impact bat roosts in buildings and structures. To date, no bat roosts have been identified in trees that will be impacted by the Project, however surveys are continuing in 2026. Tree removal will be avoided where possible. All trees removed, trimmed or pruned would be subject to pre-construction surveys, carried out by a suitably licenced ecologist to check for the presence or likely absence of roosting	Small	Minor adverse (**not significant**).

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			bats. A licence from Natural England would be obtained prior to any works impacting a bat roost (should one be identified), with suitable alternative roost sites provided in line with the requirements of the licence. However, the removal of trees with potential roost features will reduce the availability of roosting habitat for bats. Mitigation planting areas include several areas of woodland planting that will eventually provide replacement habitat for bats, once established. Alternative roost structures (bat boxes) will be provided (with landowner consent) on suitable retained trees within the Order Limits or areas outside of the Order Limits as agreed with landowners. The following measures will be applied: E01, E08, E09, GG04		
		Construction noise/vibration and lighting could result in the temporary disturbance/displacement of roosting bats.	To date, no bat roosts have been recorded, however surveys are ongoing to determine if bat roosts are present (or likely present) in any of the trees that may be impacted by the Project, or where there is the potential for disturbance to roosting bats, should they be present. Mitigation will be tailored once the surveys are complete and could	Small	Minor adverse (**not significant**) should surveys show a bat roost to be present.

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			potentially involve the micro-siting of certain works to minimise disturbance. The following measures will be applied to reduce potential sources of disturbance to roosting bats: E01, GG23, NV01, NV09 to NV11, NV13, NV14, NV16 to NV18 and NV20		
Bats – foraging and commuting	County	There could be both temporary loss of foraging and commuting habitat, where habitats would be reinstated after construction, and permanent habitat loss and fragmentation, where habitats cannot be reinstated. For habitats like trees and woodland, reinstatement may not be feasible, given the operational requirements of the proposed overhead line. Habitat fragmentation may affect bat species that depend on continuous vegetation for foraging, commuting and shelter.	Areas of woodland and hedgerows will be retained and suitably buffered as far as practicable. Habitats temporarily impacted will be reinstated to their original (or improved) condition post-construction. Existing gaps in hedgerows will be utilised where practicable during construction and sections of hedgerow that will be temporarily removed will be reinstated post-construction. For areas of woodland, reinstatement of trees may not be feasible, given the operational requirements of the proposed overhead line, however ground level vegetation could be reinstated. This could provide increase in areas of woodland edge habitats where the clearance has been undertaken, which is also valuable foraging habitat. Proposed mitigation planting areas will offer potential habitat for foraging bats, which are shown in **Application Document 7.8 Outline**	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			Landscape and Ecology Management Plan. The following measures would be applied: GG05, GG06, ARB01, E01, E10, E18, E22, E24, E42, and E43.		
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the resources available to foraging bats.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Hazel dormouse	Regional	Temporary and permanent direct loss/fragmentation of habitats used by hazel dormouse for foraging, breeding, or shelter. Temporary loss and disturbance would occur to facilitate construction works, e.g. construction access routes and visibility splays, stringing positions, scaffolding and undergrounding third-party assets. Permanent loss of trees would occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	Works that could impact hazel dormouse will be carried out in accordance with measures specified in a granted Natural England licence. Existing gaps in hedgerows will be utilised where practicable during construction and sections of hedgerow that will be temporarily removed will be reinstated post-construction. Where hedge removals are necessary and cannot be restricted to small gaps, 'dead hedging' will be used, where practicable, in the interim periods to retain connectivity during construction. Any hedgerow clearance required to facilitate construction activities will be undertaken in the same calendar year as the planned construction activities where practicable. Where the undergrounding of third-party assets is required inside the	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			hazel dormouse licence area, the works will endeavour to use trenchless crossing methods for rerouted cables beneath the hedgerow instead of open cutting. The following measures will be applied: E01, E10, E36, E37, E38, and E39		
		Direct injury or killing of hazel dormouse could occur during construction, particularly during initial stages of vegetation clearance and ground works.	Works that could impact hazel dormouse will be carried out in accordance with measures specified in a granted Natural England licence. A two-stage clearance method of woody vegetation will be carried out to minimise disturbance and mortality during development works. This will entail sensitively reducing woody vegetation to just above ground level during the Winter (stage one), followed by the full removal of ground vegetation/roots/stools during the Spring (stage two). Working areas will retain a 5 m buffer where possible for retained vegetation. This work will be overseen by a suitably experienced and hazel dormouse-licenced ecologist to avoid harming hazel dormouse during facilitatory works. The following measures will be applied: E01, E03, E10, E22, E36, E37, E38, GG04	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		Construction noise/vibration and lighting may temporarily disturb/displace hazel dormouse.	The following measures will be applied to reduce potential sources of disturbance to hazel dormouse: E01, GG23, NV01, NV09 to NV11, NV13, NV14, NV16 to NV18 and NV20	Small	Minor adverse (**not significant**)
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging resource available to hazel dormouse.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Otter	County	Temporary habitat loss, disturbance and fragmentation may occur where the construction access tracks and working areas cross or lie near watercourses. Impacts would be temporary where new crossings are removed after construction	The Project will use existing watercourse crossing points as far as practicable. Where required, sensitive watercourses, for example those designated as main rivers, those with WFD status, or those that are inhabited by protected species, would be crossed using clear span bridges or suitably assessed and approved alternatives. Where a water crossing is not a bridge structure, watercourse crossings will include suitable measures to allow the passage of otter. The following measures would be applied: E01, E12, E13, E17, E18, E22, E41, DE6, E12, W02, and GG05	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		Direct injury or killing of otter could occur during construction, particularly during the initial stages of vegetation clearance and ground works. Otter could also become trapped in excavations.	Pre-construction surveys will be carried out to confirm the continued use (or likely abandonment) of potential holts and resting sites, in addition to the identification of any new features. Currently, one potential holt (but not currently active holt) cannot be suitably retained and buffered from the works and will require closure due to undergrounding works required for a third-party asset. If the feature is found to be an active holt during pre-construction surveys, and closure cannot be avoided, an artificial holt will be provided within a suitable identified mitigation area. The location of the existing potential holt and proposed mitigation area are confidential, and details are provided in the confidential/unredacted version of **Application Document 6.8.A6 Appendix 8.6 Otter and Water Vole Report**. The potential holt will be monitored to determine the status of usage prior to closure (if unavoidable). Works affecting otters and their habitat require a licence from Natural England. To grant a licence, Natural England must be assured that there is no satisfactory alternative and that the status of otter will be maintained at the site.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			The following measures will be applied: E01, E03, E41, DE6, E12, E13, E03, GG04		
		Construction noise/vibration and lighting could temporarily disturb/displace otter.	The following measures will be applied to reduce potential sources of disturbance to otter: E01, GG23, NV01, NV09 to NV11, NV13, NV14, NV16 to NV18 and NV20	Small	Minor adverse (**not significant**)
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging, commuting and resting resources available to otter.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Water vole	County	Temporary habitat loss, disturbance and fragmentation may occur where the construction access tracks and working areas cross or lie near to watercourses. Impacts would be temporary as new crossings are removed after construction.	The Project will use existing watercourse crossing points as far as practicable. Where required, sensitive watercourses, for example those designated as main rivers, those with WFD status, or those that are inhabited by water vole (including any found during pre-construction surveys), would be crossed using clear span bridges or suitably assessed and approved alternatives that maintain 5 m buffer from the bank. All works will maintain a 5 m buffer from watercourses with known populations of water voles confirmed during pre-construction surveys unless they can be mitigated fully under licence from Natural England.	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			Where a water crossing is not a bridge structure on non water vole watercourses, watercourse crossings will include suitable measures to allow the passage of water vole. The following measures would be applied: E01, E12, E13, E17, E18, DE6, E12, W02, W03, DE8, E21, GG05		
		Direct injury or killing of water vole could occur during construction, particularly during the initial stages of vegetation clearance and ground works. Water voles could also become trapped in excavations.	Pre-construction surveys will be required 200 m upstream and downstream of each crossing point within the Order Limits to determine presence or likely absence of water vole before works commence. If, during pre-construction surveys, it is found that water vole is now absent from sections of watercourses where clear-span bridges are currently proposed, the crossing method may be reverted to a culvert. Similarly, if water voles were previously recorded as likely absent but water voles are confirmed as present during the pre-construction surveys, these crossing points will be converted from a culvert to bridge where possible to avoid impacts. All works will maintain a 5 m buffer from watercourses with known populations of water voles confirmed during pre-construction surveys unless can be mitigation fully under licence from Natural England.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			The following measures will be applied: E01, E03, DE6, DE8, E12, E03, E13, and GG04		
		Construction noise/vibration and lighting could temporarily disturb/displace water vole.	The following measures will be applied to reduce potential sources of disturbance to water vole: E01, GG23, NV01, NV09 to NV11, NV13, NV14, NV16 to NV18 and NV20	Small	Minor adverse (**not significant**)
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging, commuting and resting resources available to water vole.	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06, GH03, GH08, AQ02, AQ04, AQ05, AQ07, AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Badger	Local	Direct impacts could occur to setts and badgers occupying setts, particularly during the initial stages of vegetation clearance and ground works. Badger could also become trapped in excavations or could come into contact with construction vehicles.	Based on current data and the Project design set out in **Application Document 6.4 Chapter 4 Description of the Project**, 35 closure and approximately 19 disturbance licences may be required. Should pre-construction surveys show sett 34 to still be a main set appropriate avoidance measures would be applied to avoid sett closure. However, if it is no longer a main sett, it may be closed as this would avoid creating a new access road. Main Sett 154 is unlikely to require closing providing adjustments to working areas can be made during detailed	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			design, but disturbance is possible. However, this may change depending on works type, method and location in relation to each sett. Pre-construction badger surveys will be carried out to confirm the presence or absence of active badger setts, which will cover accessible habitat within 30 m of all proposed working areas. Following pre-construction surveys, a Badger Mitigation Licence will be submitted to Natural England if the disturbance or damage to active badger setts is unavoidable. On receipt of a granted Natural England Badger Mitigation Licence, works would begin to exclude badgers from the relevant badger setts covered under the licence. Badger exclusion and sett closure works are only licensable between 1 July and 30 November. The following measures will be applied: GG04, GG14, E01, E03, E40		
		Construction noise/vibration and lighting may temporarily disturb and displace badgers.	Active setts up to 100 m from new pylon construction areas could be impacted depending on the construction methods (notably piling) implemented. Therefore, these setts are at risk of indirect impacts (vibration, noise and lighting). Closure of these setts is unlikely to be necessary but works may require mitigation measures	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
			and licensing to manage potential impacts. The following measures will be applied to reduce potential sources of disturbance to badger: E01, E40, GG23, NV01, NV09 to NV11, NV13, NV14, NV16 to NV18 and NV20		
		Permanent and temporary loss, disturbance and fragmentation of foraging and commuting habitat. There could be both temporary habitat loss, where habitats would be reinstated after construction, and permanent habitat loss, where habitats cannot be reinstated.	Areas of woodland and hedgerows will be retained and suitably buffered as far as practicable. Habitats temporarily impacted will be reinstated to their original (or improved) condition post-construction. Existing gaps in hedgerows will be utilised where practicable during construction and sections of hedgerow that will be temporarily removed will be reinstated post-construction. For areas of woodland, reinstatement of trees may not be feasible, given the operational requirements of the proposed overhead line, however ground level vegetation could be reinstated. The following measures will be applied: E01, GG05, GG06, E04, E10, E18, E22, E24, E42	Medium	Minor adverse (**not significant**)
Species of Principal Importance: Common toad; Hedgehog;	Common toad, hedgehog,	Permanent and temporary direct habitat loss, disturbance and fragmentation. Temporary loss and disturbance would	Areas of woodland, hedgerows, trees, ponds and watercourses will be retained and suitably buffered as far as practicable. Habitats temporarily impacted will be reinstated to their	Small	Minor adverse (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
Polecat; and Harvest mouse.	harvest mouse: Local Polecat: County	occur to facilitate construction works, e.g. construction access routes and visibility splays, stringing positions, scaffolding and undergrounding third-party assets. Permanent loss of trees would occur where reinstatement is not possible due to the operational requirements of the proposed overhead line.	original (or improved) condition post-construction. For areas of woodland, reinstatement of trees may not be feasible, given the operational requirements of the proposed overhead line, however ground level vegetation could be reinstated. Mitigation carried out for other species, such as staged strimming in areas of habitat suitable for reptiles, will also benefit other Species of Principal Importance. The following measures will be applied: E02, GG05, GG06, E10, E18, E22, E24, E42, E11		
		Direct injury or killing could occur, particularly during the initial stages of vegetation clearance and ground works. These species could also become trapped in excavations.	The following measures will be applied: E02, E03	Small	Minor adverse (**not significant**)
		Construction noise/vibration and lighting may temporarily disturb/displace these species.	The following measures will be applied to reduce potential sources of disturbance: GG23, NV01, NV09 to NV11, NV13, NV14, NV16 to NV18 and NV20	Small	Minor adverse (**not significant**)
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS, impacting the foraging,	The following measures would be applied: GG01, GG02, GG04, GG07, GG10, GG12, GG15, GG16, GG17, GG19, GG20, GG21, GG25, E05, E06,	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		commuting and resting resources available to these species.	GH03, GH08, AQ02, AQ04, AQ05, AQ07, and AQ08, and AQ11.		
Aquatic macrophytes	County	Potential temporary shading of aquatic macrophytes due to the construction of clear span bridges, or other suitably assessed alternatives.	No mitigation likely to be required. No notable macrophyte species were recorded at the surveyed locations. This shading may slightly reduce the channel macrophyte cover but should not be detrimental to the number of species present within the area. Pre-construction survey to be carried out to check for the presence of notable plants and appropriate mitigation such as avoidance, translocation, or reseeding applied should they be present. The following measures would be applied: E17, LV04, GG01, GG05, DE9 and W21.	Negligible	Negligible (**not significant**)
		Temporary habitat loss, disturbance and fragmentation may occur where the construction access tracks (including bridges and new culverts) and working areas cross or lie near to watercourses. Impacts would be temporary as new crossings are removed after construction. Permanent habitat loss due to modification/extension of	The Project will use existing watercourse crossing points as far as practicable. Where required, sensitive watercourses, for example those designated as main rivers, those with WFD status, or those that are inhabited by protected species, would be crossed using clear span bridges or suitably assessed and approved alternatives. Any permanent extension of culverts would be of the same nature as that of the existing culvert.	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		existing culverts which will be retained. Temporary habitat loss, disturbance and fragmentation due undergrounding of third-party assets (if open cut techniques are used).	The undergrounding of third-party assets would be carried out using trenchless techniques when crossing sensitive watercourses. The following measures would be applied: W02, W03, W04, DE9, DE19, W21, GG01, GG02, GG03, GG04, GG05 GG07, GG06, GG07, GG30, E12, E17, E18, E20 and E22.		
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG03, GG04, GG05, GG06, GG15, GG16, GG17, GG18, GG19, GG21, GG24, GG25, E05, E06, E17, E22, W02, W08, GH03, GH04, GH08, AQ04, AQ05, AQ07, AQ08 , and AQ11.	Negligible	Negligible (**not significant**)
Aquatic macroinvertebrates	County	Temporary habitat loss, disturbance and fragmentation may occur where the construction access tracks (including bridges and new culverts) and working areas cross or lie near to watercourses. Impacts would be temporary as new crossings are removed after construction. Permanent habitat loss due to modification/extension of	The Project will use existing watercourse crossing points as far as practicable. Where required, sensitive watercourses, for example those designated as main rivers, those with WFD status, or those that are inhabited by protected species, would be crossed using clear span bridges or suitably assessed and approved alternatives. The undergrounding of third-party assets would be carried out using HDD or similar when crossing sensitive watercourses. The following measures would be applied: W02, W03, W04, DE9, DE19, W21, GG01, GG02, GG03, GG04, GG05	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		existing culverts which will be retained. Temporary habitat loss, disturbance and fragmentation due undergrounding of third-party assets (if open cut techniques are used).	GG07, GG06, GG07, GG30, E12, E17, E18, E20 and E22.		
		Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG03, GG04, GG05, GG06, GG15, GG16, GG17, GG18, GG19, GG21, GG24, GG25, E05, E06, E17, E18, E22, W02, W08, GH03, GH04, GH08, AQ04, AQ05, AQ07 AQ08, and AQ11.	Negligible	Negligible (**not significant**)
Fish	Regional	Degradation of habitat due to dust, other pollution impacts and introduction of INNS.	The following measures would be applied: GG01, GG02, GG03, GG04, GG05, GG06, GG15, GG16, GG17, GG18, GG19, GG21, GG24, GG25, E05, E06, E12, E13, E14, E15, E17, E22, W02, W08, GH03, GH04, GH08, AQ04, AQ05, AQ07 AQ08, and AQ11.	Negligible	Negligible (**not significant**)
		Temporary habitat loss, disturbance and fragmentation due to the installation or modification/extension of culverts for construction access. Impacts would be	The Project will use existing watercourse crossing points as far as practicable. Where required, sensitive watercourses, for example those designated as main rivers, those with WFD status, or those that are inhabited by protected species, would be crossed using clear span	Negligible	Negligible (**not significant**)

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		temporary as new crossings are removed after construction and although modified/extended culverts remain in situ, they would be of the same nature as the existing culvert (preserving the natural bed or lined with natural/existing bed material). Temporary habitat loss, disturbance and fragmentation due undergrounding of third-party assets (if open cut techniques are used).	bridges or suitably assessed and approved alternatives. The undergrounding of third-party assets would be carried out using HDD at a minimum depth of 5 m or similar when crossing sensitive watercourses. The following measures would be applied: W02, W03, W04, DE9, DE19, W21, GG01, GG02, GG03, GG04, GG05 GG07, GG06, GG07, GG30, GH09, E12, E13, E14, E15, E16 E17, E18, E20 and E22. It is assumed European eel will be present throughout the Order Limits in permanently wet watercourses of suitable habitat that have no barriers to migration. Therefore, the downstream migration window of September to December should also be avoided for any instream works (new culvert installation or upgrading of existing crossings/culverts) where their presence has been identified. Where brown/sea trout have been identified within the Order Limits, the close season of 01 October to 24 March will need to be avoided for any instream works (new culvert installation or upgrading of existing crossings/culverts).		

Ecological feature	Importance	Description of impact	Mitigation[17]	Magnitude of impact	Residual effect and significance
		Temporary disturbance to fish species due to noise and vibration.	Any piling activities would use soft-start non-percussive piling techniques to limit disturbance, so that sounds increase gradually allowing fish in the immediate vicinity to swim away. It is assumed European eel will be present throughout the Order Limits in permanently wet watercourses of suitable habitat that have no barriers to migration. Therefore, the downstream migration window of September to December should also be avoided for any piling activities less than 10 m from the watercourse where their presence has been identified. Where brown/sea trout have been identified within the Order Limits, the close season of 1 October to 24 March will need to be avoided for any piling activities less than 10 m from the watercourse where their presence has been identified. The following measures would be applied: GG10, NV01, NV02, NV08, NV09, NV11, NV12, NV13, NV14, NV18, NV20.	Negligible	Negligible (**not significant**)
		Temporary disturbance to fish species due to lighting.	The following measures will be applied to reduce potential sources of disturbance to fish: GG10, GG23.	Negligible	Negligible (**not significant**)

References

Beaumont, W. R., Taylor, A. A., Lee, M. J., & Welston, J. S. (2002). *Guidelines for Electric Fishing Best Practice (R&D Technical Report W2-054/TR).* Bristol: Environment Agency.

Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Griffiths, R., Foster, J., . . . Dunn, F. (2014). *Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067.* Oxford: Freshwater Habitats Trust.

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

British Standards Institution. (2009). *BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Part 2: Vibration.* London: British Standards Institution.

British Standards Institution. (2010). *BS 3998:2010 Tree Work Recommendations.* London: British Standards Institution.

British Standards Institution. (2012). *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations.* London: British Standards Institution.

Buglife. (2026). *Five-banded Weevil-wasp*. Retrieved January 22, 2026, from buglife.org.uk: https://www.buglife.org.uk/bugs/bug-directory/five-banded-weevil-wasp/

Bullion, S., Wolton, R., & White, I. (2025). *Hazel Dormouse Conservation Handbook* (3rd ed.). (F. Mathews, Ed.) Gloucester: The Mammal Society.

Chanin, P. (2003). *Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10.* Peterborough: English Nature.

Chartered Institute of Ecology and Environmental Management. (2024). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.3.* Retrieved from cieem.net: https://cieem.net/wp-content/uploads/2018/08/EcIA-Guidelines-v1.3-Sept-2024.pdf

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

Collins, J. (2023). In *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition).* London: The Bat Conversation Trust. Retrieved from https://cdn.bats.org.uk/uploads/pdf/Resources/For-professionals/Bat-Survey-Guidelines-4th-edition-AMENDED-27.03.24.pdf?v=1711530492

Convention on the Conservation of Migratory Species of Wild Animals. (2021). *Appendix i and II of the Conservation of Migratory Species of Wild Animals 2021.* Retrieved from https://www.cms.int/species/appendix-i-ii-cms

Convention on Wetlands Secretariat. (2026). *The Convention on Wetlands*. Retrieved July 31, 2026, from www.ramsar.org: https://www.ramsar.org/

Council of Europe. (1979). *Convention on the Conservation of European Wildlife and Natural Habitats.* Retrieved May 2026, from coe.int: https://www.coe.int/en/web/bern-convention

Croose, E. (2016). *The Distribution and Status of the Polecat (Mustela putorius) in Britain 2014-2015.* Herefordshire: Vincent Wildlife Trust.

Crouch, N. (2018). *Nottinghamshire LWS Handbook – Guidelines for the selection of Local Wildlife Sites in Nottinghamshire. Part 2A – Local Wildlife Sites selection criteria: species. 2nd Edition.* Nottingham: Nottinghamshire Biological and Geological Records Centre.

Dean, M. (2021). *Water Vole Field Signs and Habitat Assessment. A Practical Guide to Water Vole Surveys.* Pelagic Publishing.

Dean, M., Strachan, R., Gow, D., & Andrews, R. (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).* (F. Mathews, & P. Chanin, Eds.) London: The Mammal Society.

Department for Energy Security & Net Zero. (2025). *National Policy Statement for Electricity Networks Infrastructure (EN-5).* Retrieved January 20, 2026, from GOV.UK: https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5-2025

Department for Energy Security & Net Zero. (2025). *Overarching National Policy Statement for Energy (EN-1).* Retrieved January 20, 2026, from GOV.UK: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1-2025

Department for Environment, Food & Rural Affairs . (2026). *Multi-Agency Geographic Information for the Countryside (MAGIC)*. Retrieved June 30, 2026, from magic.defra.gov.uk: https://magic.defra.gov.uk/

Department for Environment, Food & Rural Affairs. (2007). *Hedgerow Survey Handbook* (2nd ed.). London: Department for Environment, Food & Rural Affairs.

Department for Environment, Food & Rural Affairs. (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services.* Retrieved May 27, 2026, from GOV.UK: https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services

Department for Environment, Food & Rural Affairs. (2025). *Statutory biodiversity metric tools and guides.* Retrieved August 26, 2025, from GOV.UK: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides

East Riding of Yorkshire Council. (2010). *East Riding of Yorkshire Biodiversity Action Plan.* East Riding of Yorkshire: East Riding of Yorkshire Council. Retrieved August 5, 2024, from https://docslib.org/doc/9112871/east-riding-of-yorkshire-biodiversity-action-plan

East Riding of Yorkshire Council. (2025). *East Riding Local Plan Update 2020-2039, Strategy Document Update 2025.* Retrieved November 18, 2025, from https://www.eastriding.gov.uk/planning-permission-and-building-control/planning-policy-and-the-local-plan/east-riding-local-plan-update/local-plan-strategy/

Edgar, P. F. (2010). *Reptile Habitat Management Handbook.* Bournemouth: Amphibian and Reptile Conservation.

Environment Agency. (2010). *Fifth Otter Survey of England 2009-10.* Bristol: Environment Agency.

Environment Agency. (2014). *Freshwater macro-invertebrate analysis of riverine samples Operational Instruction 024_08.* Bristol: Environment Agency.

Environment Agency. (2017). *Freshwater macro-invertebrate sampling in rivers Operational Instruction 018_08.* Bristol: Environment Agency.

Environment Agency. (2025, September 8). *Catchment Data Explorer*. Retrieved from environment.data.gov.uk: https://environment.data.gov.uk/catchment-planning

Environment Agency. (2025, September 8). *Ecology and Fish Data Explorer*. Retrieved from environment.data.gov.uk: https://environment.data.gov.uk/ecology/explorer/

Findlay, M. &. (2026). *The Otter Field Survey & Monitoring Handbook.* London: Pelagic Publishing. Foster, G. N. (2010). A review of the scarce and threatened Coleoptera of Great Britain Part (3): Water beetles of Great Britain. *Species Status, 1*. Retrieved from http://www.jncc.gov.uk:
http://www.jncc.gov.uk

Glossop, A., & Morse, A. (2024). *National Water Vole Database Project, Part 1: Project Report for period 2013 - 2022.* Curdridge: Hampshire and Isle of Wight Wildlife Trust.

Greater Lincolnshire Nature Partnership. (2015). *Nature Strategy 2015-20: Lincolnshire Biodiversity Action Plan (3rd Edition) 2011-2020 - Revised in 2015.* Lincolnshire: Greater Lincolnshire Nature Partnership. Retrieved May 12, 2026, from https://www.n-kesteven.gov.uk/sites/default/files/2023-03/
NE002%20E039%20Lincolnshire%20Biodiversity%20Action%20Plan%202011%202020%20%283rd%20Edition%29.pdf

Harris, S., Cresswell, P., & Jefferies, D. (1989). *Surveying Badgers.* London: The Mammal Society.

HM Government. (1974). *Control of Pollution Act 1974.* Retrieved from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/1974/40/contents

HM Government. (1975). *Salmon and Freshwater Fisheries Act 1975.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/1975/51/contents

HM Government. (1981). *Wildlife and Countryside Act 1981.* Retrieved August 26, 2015, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/1981/69/contents

HM Government. (1990). *Environmental Protection Act 1990.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/1990/43/contents

HM Government. (1992). *Protection of Badgers Act 1992.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/1992/51/contents

HM Government. (1997). *The Hedgerows Regulations 1997.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/uksi/1997/1160/contents

HM Government. (2000). *Countryside and Rights of Way Act 2000.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/2000/37/contents

HM Government. (2001). *The Control of Pollution (Oil Storage) (England) Regulations 2001.* Retrieved from legislation.gov.uk: https://www.legislation.gov.uk/uksi/2001/2954/contents

HM Government. (2003). *The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 (revoked).* Retrieved February 11, 2026, from legislation.gov.uk: https://www.legislation.gov.uk/uksi/2003/3242/contents

HM Government. (2006). *Animal Welfare Act 2006.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/2006/45/contents

HM Government. (2006). *Natural Environment and Rural Communities Act.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/2006/16/contents

HM Government. (2009). *The Eels (England and Wales) Regulations 2009.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/uksi/2009/3344/contents

HM Government. (2015). *The Control of Noise (Code of Practice for Construction and Open Sites) (England) Order 2015.* Retrieved from legislation.gov.uk: https://www.legislation.gov.uk/uksi/2015/227/contents

HM Government. (2017). *The Conservation of Habitats and Species Regulations 2017.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/uksi/2017/1012/contents

HM Government. (2017). *The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.* Retrieved October 16, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/uksi/2017/407/contents

HM Government. (2019). *The Invasive Alien Species (Enforcement and Permitting) Order 2019.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/uksi/2019/527/contents

HM Government. (2021). *Environment Act 2021.* Retrieved August 26, 2025, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/2021/30/contents

HM Government. (2025, July 31). *Planning and Infrastructure Act 2025*. Retrieved 2026, from legislation.gov.uk: https://www.legislation.gov.uk/ukpga/2025/34/contents

Holford, L. W. (1959). *The Holford Rules.* Retrieved from www.nationalgrid.com: https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf

Hull and East Yorkshire Local Nature Partnership. (2026). *Hull and East Yorkshire Local Nature Recovery Strategy.* Hull and East Yorkshire Local Nature Partnership.

Institute of Air Quality Management . (2020). *A Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites.* Retrieved August 17, 2026, from iaqm.co.uk: https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf

Institute of Air Quality Management . (2024). *Guidance on the assessment of dust from demolition and construction (version 2.2).* Retrieved February 03, 2026, from iaqm.co.uk: https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf

International Union for Conservation of Nature . (2026). *The IUCN Red List of Threatened Species. Version 2025-2*. Retrieved July 08, 2026, from www.iucnredlist.org: https://www.iucnredlist.org/

JBA Consulting. (2010). *Ouse and Humber Strategic Sub-catchment Area Biodiversity Action Plan.* Doncaster: JBA Consulting. Retrieved May 7, 2026, from https://yorkshirehumberdrainage.gov.uk/yhdb-wp/wp-content/uploads/2020/06/Biodiversity-Action-Plan.pdf

Joint Nature Conservation Committee. (2007). *UK Biodiversity Action Plan: List of UK BAP Priority Vascular Plant Species.* Retrieved May 28, 2026, from data.jncc.gov.uk: https://data.jncc.gov.uk/data/98fb6dab-13ae-470d-884b-7816afce42d4/UKBAP-priority-vascular-plants.pdf

Joint Nature Conservation Committee. (2011). *UK Biodiversity Action Plan: Priority Habitat Descriptions.* (A. Maddock, Ed.) Retrieved December 05, 2025, from data.jncc.gov.uk: https://data.jncc.gov.uk/data/dec49c52-a86c-4483-90f2-f43957e560bb/UKBAP-BAPHabitats-42-Ponds.pdf

Joint Nature Conservation Committee. (2016). *Handbook for Phase 1 Habitat Survey - A technique for environmental audit.* Retrieved May 27, 2026, from jncc.gov.uk: https://jncc.gov.uk/resources/9578d07b-e018-4c66-9c1b-47110f14df2a

Joint Nature Conservation Committee. (2026). *Joint Nature Conservation Committee*. Retrieved August 27, 2025, from jncc.gov.uk: https://jncc.gov.uk/

Joint Nature Conservation Committee on behalf of the Four Countries' Biodiversity Group. (2024). *UK Biodiversity Framework.* Peterborough: JNCC. Retrieved August 26, 2025, from https://hub.jncc.gov.uk/assets/19a729f6-440e-4ac6-8894-cc72e84cc3bb

Judge, J., Wilson, G. J., Macarthur, R., McDonald, R. A., & Delahey, R. J. (2017). Abundance of badgers (Meles meles) in England and Wales. *Scientific Reports, 7*(1), 276. doi:10.1038/s41598-017-00378-3

Keadby Generation Limited. (2021). *The Keadby 3 Low Carbon Gas Power Station Project, Environmental Statement Volume II - Appendix 11C: Preliminary Ecological Appraisal Report, Annex 11G Terrestrial Invertebrate Survey Report.*

Leach, S. (2021). *Vascular plant Red Data List for Great Britain: a summary of amendments in years 14 and 15 (2019-20) of the annual amendments process. BSBI News147:27-35.*

Lincolnshire County Council. (2023). *Greater Lincolnshire Local Nature Recovery Strategy.*

Manning, C. J. (2016). *Atlas of the terrestrial and semi-aquatic mammals of Lincolnshire.*

Mathews, F., & Harrower, C. (2020). *IUCN – compliant Red List for Britain's Terrestrial Mammals. Assessment by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage.* Peterborough: Natural England.

Mathews, F., Kubasiewicz, L. M., Gurnell, J., Harrower, C. A., McDonald, R. A., & Shore, R. F. (2018). *A Review of the Population and Conservation Status of British Mammals. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage.* Peterborough: Natural England.

Ministry of Housing, Communities & Local Government. (2025). *Planning Practice Guidance - Natural Environment.* Retrieved August 26, 2025, from GOV.UK: https://www.gov.uk/guidance/natural-environment

Ministry of Housing, Communities & Local Government. (2026). *National Planning Policy Framework.* Retrieved September 03, 2026, from assets.publishing.service.gov.uk: https://assets.publishing.service.gov.uk/media/6a8334c03bd75b81e2329ac4/National_Planning_Policy_Framework.pdf

National Biodiversity Network Atlas Partnership. (2025). *NBN Atlas*. Retrieved from nbnatlas.org: https://nbnatlas.org/

National Highways. (2024). *Design Manual for Roads and Bridges. LA 105.* Retrieved from Standards for Highways: https://www.standardsforhighways.co.uk/search/af7f4cda-08f7-4f16-a89f-e30da703f3f4

Natural England. (1988). *Chesterfield SSSI.* Retrieved August 5, 2025, from Designated Sites View: https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1005589&SiteName=Chesterfield%20&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

Natural England. (1993). *Mother Drain, Misterton SSSI.* Retrieved August 25, 2025, from Designated Sites View:

https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1006392&SiteName=Mother%20Drain&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

Natural England. (2025, November 18). *Priority Habitats Inventory (England)*. Retrieved November 25, 2025, from data.gov.uk: https://www.data.gov.uk/dataset/4b6ddab7-6c0f-4407-946e-d6499f19fcde/priority-habitats-inventory-england

Natural England. (2026). *Ancient Woodland - Revised (England) - Completed Counties.* Retrieved from www.data.gov.uk: https://www.data.gov.uk/dataset/12b72196-1f20-44a9-8fe0-0e78db46a67c/ancient-woodland-revised-england-completed-counties

Natural England. (2026). *Ancient Woodland (England).* Retrieved May 8, 2026, from data.gov.uk: https://www.data.gov.uk/dataset/9461f463-c363-4309-ae77-fdcd7e9df7d3/ancient-woodland-england

Natural England. (2026). *Ancient Woodland (England)*. Retrieved May 8, 2026, from www.data.gov.uk: https://www.data.gov.uk/dataset/9461f463-c363-4309-ae77-fdcd7e9df7d3/ancient-woodland-england

Natural England. (2026). *Standard Advice for Air Quality Impacts in National Significant Infrastructure Projects.*

Natural England and Department for Environment, Food & Rural Affairs. (2025). *Protected species and development: advice for local planning authorities.* Retrieved August 27, 2025, from GOV.UK: https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications

Natural England and Forestry Commission. (2022). *Ancient woodland, ancient trees and veteran trees: advice for making planning decisions*. Retrieved November 11, 2025, from GOV.UK: https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions

Natural England. (n.d.). *Designated Sites View*. Retrieved September 18, 2026, from https://designatedsites.naturalengland.org.uk/

Nottinghamshire Biodiversity Action Group. (2020). *Nottinghamshire Local Biodiversity Action Plan*. Retrieved August 5, 2024, from https://nottsbag.org.uk/lbap/lbap-introduction-and-sections-1-to-6/

Nottinghamshire County Council. (2025). *Nottinghamshire and Nottingham Local Nature Recovery Strategy.* Nottinghamshire County Council.

Nottinghamshire Wildlife Trust. (2025). *Water Vole Recovery Project - Project Outcomes*. Retrieved February 23, 2026, from Nottinghamshire Wildlife Trust: https://www.nottinghamshirewildlife.org/water-vole-recovery-project/outcomes

Oldham, R. S., Keeble, J., Swan, M. J., & Jeffcote, M. (2000). Evaluating the suitability of habitat for the great crested newt (Triturus cristatus). *Herpetological Journal, 10*(4), 143-155.

People's Trust for Endangered Species. (2019). *Hazel Dormouse Reintroduction Sites Report 2019.* People's Trust for Endangered Species.

People's Trust for Endangered Species. (2023). *The State of Britain's Dormice 2023.* Retrieved February 03, 2026, from ptes.org: https://ptes.org/wp-content/uploads/2023/11/State-of-Britains-Dormice-2023.pdf

Reason, P., & Wray, S. (2025). *UK Bat Mitigation Guidelines: A Guide to Impact Assessment, Mitigation and Compensation for Developments Affecting Bats. Version 1.2.* Ampfield: Chartered Institute of Ecology and Environmental Management.

Rodwell, J. S. (2006). *National Vegetation Classification: Users' Handbook.* Peterborough: Joint Nature Conservation Committee.

Sansum, P., & Bannister, N. (2018). *Handbook for updating the Ancient Woodland Inventory for England. Natural England Commissioned Reports NECR248.* Retrieved November 17, 2025, from https://publications.naturalengland.org.uk/publication/4876500800634880

Secretariat of the Convention on Biological Diversity . (1992). *Convention on Biological Diversity.* Montreal. Retrieved from https://www.cbd.int/doc/legal/cbd-en.pdf

Sousa, B. (2025). *The Mammal Society's National Harvest Mouse Survey: Results from the Fourth Survey, 2024-2025.* The Mammal Society.

Stanbury, A. J., Eaton, M. A., Aebischer, N. J., Balmer, D., Brown, A. F., Douse, A., . . . Win, I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds, 114*, 747.

Strachan, R., Moorhouse, T., & Gelling, M. (2011). *The Water Vole Conservation Handbook* (3rd ed.). Oxford: Wild Cru.

Stroh, P., Pescott, O., Bateman, R., Cooke, E., Cousins, M., Fay, M., . . . Walker, K. (2025). A new vascular plant Red List for Great Britain. *British and Irish Botany 7(3), 147*, 148-216.

The Council of the European Communities. (1992). *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.* Retrieved August 26, 2025, from eur-lex.europa.eu: https://eur-lex.europa.eu/eli/dir/1992/43/oj/eng

The European Parliament and the Council of the European Union. (2009). *Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.* Retrieved August 26, 2025, from www.eur-lex.europa.eu/: https://eur-lex.europa.eu/eli/dir/2009/147/oj/eng

The European Parliament and the Council of the European Union. (2014). *Regulation (EU) No 1143/2014 of the European Parliament and of the Council.* Retrieved October 16, 2025, from legislation.gov.uk: https://eur-lex.europa.eu/eli/reg/2014/1143/oj/eng

Vincent Wildlife Trust. (2025). *Species - Polecat*. Retrieved November 20, 2025, from Vincent Wildlife Trust: https://www.vwt.org.uk/species/pole-cat

Wells, D., Chanin, P. R., & Gubert, L. (2025). *Hazel Dormouse Mitigation Handbook.* (F. Mathews, Ed.) Gloucester: The Mammal Society.

WFD-UKTAG. (2014). *UKTAG River Assessment Method Macrophytes and Phytobenthos: Macrophytes (River LEAFPACS2).* Stirling: Water Framework Directive-United Kingdom Technical Advisory Group (WFD-UKTAG). Retrieved from WFD-UKTAG: https://www.wfduk.org/resources/rivers-macrophytes

WFD-UKTAG. (2023). *UKTAG River Assessment Method Benthic Invertebrate Fauna: Invertebrates (General Degradation): Walley, Hawkes, Paisley & Trigg (WHPT) metric in River Invertebrate Classification Tool (RICT).* Stirling: Water Framework Directive – United Kingdom Technical Advisory Group (WFD-UKTAG).

Wood, D., & Woods, M. (2021). *The Rare and Scarce Vascular Plants of Nottinghamshire Vice County 56.* Nottingham: Botanical Society of Britain & Ireland and Nottingham City Council. Retrieved May 26, 2026, from https://bsbi.org/media/pages/learn/publications/rare-plant-registers/nottinghamshire-2021/a8453407a7-1751634542/nottinghamshire-2021.pdf

Woodland Trust. (n.d.). *Ancient Tree Inventory*. Retrieved August 27, 2025, from ati.woodlandtrust.org.uk: https://ati.woodlandtrust.org.uk/

Yorkshire Humber Drainage. (2010). *Ouse and Humber Strategic Subcatchment Area Biodiversity Action Plan 2010.* Retrieved August 5, 2024, from https://nottsbag.org.uk/lbap/lbap-introduction-and-sections-1-to-6/

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