



WHITESTONE
solar farm

WHITESTONE SOLAR FARM

Volume 6: Environmental Statement

6.6 Chapter 6: Biodiversity and Nature Conservation (Tracked)

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ENVIRONMENTAL STATEMENT

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6.13	Fisheries and White Clawed Crayfish eDNA Survey Report
6.14	Arboriculture Survey and Tree Constraints Plan

Glossary

Term	Meaning
<i>Cable Corridor</i>	Corridor within which the high voltage cables would be constructed.
<i>Area of Influence</i>	The area over which biodiversity features may be affected by biophysical changes as a result of the proposed project and associated activities.
<i>Draft Environmental Statement</i>	The Draft Environmental Statement which presented the preliminary environmental information relating to the Proposed Development. The Draft ES was prepared to present information for statutory consultation in accordance with current EIA regulation.
<i>Environmental Statement (ES)</i>	The Environmental Statement which presents the environmental information relating to the Proposed Development. The ES has been prepared to present information for formal consultation in accordance with current EIA regulation.
<i>Order Limits</i>	Maximum extent of the Proposed Development comprising the Site, Cable Corridors, and Highways works.
<i>The Applicant</i>	Whitestone Net Zero Ltd.
<i>The Application</i>	The Application submitted to the Secretary of State for Energy Security and Net Zero for a Development Consent Order.
<i>The Proposed Development</i>	The proposed Whitestone Solar Farm.
<i>The Site</i>	The land planned to be used for solar PV array and associated infrastructure, BESS, substation, landscaping and habitat enhancement. The Site is split into W1, W2, and W3
<i>Whitestone 1 (W1)</i>	The northern parcels of the Whitestone Solar Farm.
<i>Whitestone 2 (W2)</i>	The middle parcels of the Whitestone Solar Farm.

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Term	Meaning
<i>Whitestone 3 (W3)</i>	The southern parcels of the Whitestone Solar Farm.

Acronyms

Acronym	Meaning
<i>AoI</i>	Area of Influence
<i>ATI</i>	Ancient Tree Inventory
<i>BBS</i>	Breeding Bird Survey
<i>BCT</i>	Bat Conservation Trust
<i>BoCC</i>	Bird of Conservation Concern
<i>BNG</i>	Biodiversity Net Gain
<i>CEH</i>	Centre for Ecology and Hydrology
<i>CEMP</i>	Construction Environment Management Plan
<i>CIEEM</i>	Chartered Institute of Ecology and Environmental Management
<i>CP</i>	Country Park
<i>CSZ</i>	Core Sustenance Zone
<i>CTMP</i>	Construction Traffic Management Plan
<i>DBRC</i>	Derbyshire Biological Records Centre
<i>DEFRA</i>	Department for Environment, Food and Rural Affairs
<i>DEMP</i>	Decommissioning Environmental Management Plan
<i>DLL</i>	District Level Licensing
<i>DMRB</i>	Design Manual for Roads and Bridges
<i>DRDB</i>	Derbyshire Red Data Book
<i>EcIA</i>	Ecological Impact Assessment
<i>ECow</i>	Ecological Clerk of Works
<i>eDNA</i>	Environmental DNA
<i>EIA</i>	Environmental Impact Assessment
<i>ELM</i>	Environmental Land Management
<i>EMF</i>	Electromagnetic Field
<i>EPSM</i>	European Protected Species Mitigation
<i>ES</i>	Environmental Statement
<i>FAR</i>	Further Assessment is Required
<i>GCN</i>	Great crested newt
<i>GLTA</i>	Ground Level Tree Assessment
<i>HDD</i>	Horizontal Directional Drilling
<i>HMMP</i>	Habitat Management and Monitoring Plan
<i>HSI</i>	Habitat Suitability Index
<i>IEF</i>	Important Ecological Feature

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Acronym	Meaning
<i>ILP</i>	Institute of Lighting Professionals
<i>INNS</i>	Invasive Non-Native Species
<i>IUCN</i>	International Union for Conservation of Nature
<i>LBAP</i>	Local Biodiversity Action Plan
<i>LNRS</i>	Local Nature Recovery Strategy
<i>LSE</i>	Likely Significant Effect
<i>LWS</i>	Local Wildlife Site
<i>MAGIC</i>	Multi-Agency Geographic Information for the Countryside
<i>MoRph</i>	Modular River Physical (River Condition Assessment)
<i>NBW</i>	Nighttime Bat Walkover
<i>NEDDC</i>	North East Derbyshire District Council
<i>NERC</i>	Natural Environment and Rural Communities
<i>NGET</i>	National Grid Electricity Transmission
<i>NPPF</i>	National Planning Policy Framework
<i>NPS</i>	National Policy Statement
<i>oBSMP</i>	Outline Battery Safety Management Plan
<i>oCEMP</i>	outline Construction Environmental Management Plan
<i>oLEMP</i>	outline Landscape and Ecology Management Plan
<i>OMH</i>	Open Mosaic Habitat
<i>oOEMP</i>	Outline Operation Environment Management Plan
<i>OS</i>	Ordinance Survey
<i>pLWS</i>	Proposed Local Wildlife Site
<i>PNLMS</i>	Precautionary Non-Licensed Method Statement
<i>PRA</i>	Preliminary Roost Assessment
<i>PRF – I</i>	Potential Roost Feature (Individual)
<i>PRF – M</i>	Potential Roost Feature (Multiple)
<i>RAM</i>	Reasonable Avoidance Measure
<i>RBRC</i>	Rotherham Biological Records Centre
<i>RMBC</i>	Rotherham Metropolitan Borough Council
<i>RSPB</i>	Royal Society for the Protection of Birds
<i>UKHab</i>	UK Habitat Classification
<i>SAC</i>	Special Area of Conservation
<i>SPA</i>	Special Protection Area
<i>SPI</i>	Species of Principle Importance
<i>SSSI</i>	Site of Special Scientific Interest
<i>SYCMA</i>	South Yorkshire Combined Mayoral Authority
<i>WBS</i>	Wintering Bird Survey

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Acronym	Meaning
WCA	Wildlife and Countryside Act 1981 (as amended)
WCC	White-clawed crayfish

Units

Units	Meaning
<i>km</i>	Kilometres
<i>m</i>	Metres
<i>mm</i>	Millimetre
<i>Ha</i>	Hectare

6 BIODIVERSITY AND NATURE CONSERVATION

6.1 Introduction

- 6.1.1 This Chapter of the Environmental Statement (ES) has been prepared on behalf of Whitestone Net Zero Ltd ('the Applicant') to evaluate the potential effects of the construction, operation and maintenance, and decommissioning of the Whitestone Solar Farm (the Proposed Development) in relation to Biodiversity and Nature Conservation. The Proposed Development is described in **ES Volume 1, Chapter 1: Introduction [EN0110020/APP/6.1]**.

Order Limits

- 6.1.1 The extent of the Order Limits are described in **ES Volume 1, Chapter 3: The Site and Surrounding Area [EN0110020/APP/6.3]** and shown in **ES Volume 3, Figure 3.1: Order Limits [EN0110020/APP/6.19]**. The Proposed Development is described in **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]** and shown spatially on the **Works Plans [EN0110020/APP/2.3.1]**.

The Proposed Development

- 6.1.2 The Proposed Development involves the construction, operation and maintenance, and decommissioning of more than 100MW of solar photovoltaic (PV) array, Battery Energy Storage System (BESS), onsite substations and supporting infrastructure, and grid connection infrastructure. The grid connection infrastructure would connect the Proposed Development to the National Grid at the new National Grid substation Brinsworth (Long Lane 400kV Substation), located east of Long Lane, Rotherham. National Grid has applied to Rotherham Metropolitan Borough Council for the development of this new substation which is intended by National Grid to be operational in time for the Proposed Development to connect in 2029. This substation is therefore not included in the Proposed Development and is subject to a separate planning application taken forward by National Grid.
- 6.1.3 As the Proposed Development would have a generating capacity in excess of 100MW, it is considered to be a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008.
- 6.1.4 The Proposed Development would be located within the Order Limits. The Order Limits encompass the total area of the Proposed Development comprising the Site and Cable Corridors. The Site is specifically the land that is planned to be used for solar PV array and associated infrastructure, BESS, substation, landscaping and habitat enhancement. The Site is split into Whitestone 1 (W1), Whitestone 2 (W2), and Whitestone 3 (W3).
- 6.1.5 Highway Works are sections of the highway network that will contain localised improvements, such as improvements to road edge where it is deteriorated, or temporary highway and traffic works required to safely accommodate the

Abnormal Indivisible Load (AIL) deliveries. These areas will support the movement of construction vehicles on narrower sections of the local highway network within parts of the construction vehicle routes to the Site (as described in **ES Volume 2, Chapter 13: Traffic and Transport [EN0110020/APP/6.13.1]**). This Chapter of the ES includes the following sections:

- Legislation, Policy, and Guidance
- Consultation
- Assessment Methodology and Significance Criteria
- Baseline
- Embedded Mitigation
- Assessment of Effects
- Additional Mitigation and Residual Effects; and
- Cumulative Effects.

6.1.6 This Chapter is supported by the following figures, located in **ES Volume 3, Figures (EN0110020/APP/6.19)**:

- **Figure 3.1: Order Limits**
- **Figure 3.4: Environmental Designations**
- **Figure 6.1: Land Parcel Reference**
- **Figure 6.2.1: UK Habitat Classification: The Site**
- **Figure 6.2.2: UK Habitat Classification: The Cable Corridors**
- **Figure 6.2.3: Priority Habitats**
- **Figure 6.3.1: Confidential Badger Survey Results**
- **Figure 6.4.1: BNG Baseline Habitat**
- **Figure 6.4.2: BNG Retained Habitat**
- **Figure 6.4.3 BNG Post Development Habitat**
- **Figure 6.4.4: MoRPh Survey Locations**
- **Figure 6.4.5: River Conditions**
- **Figure 6.4.6: Surveyed Watercourses**
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- **Figure 6.6.2: Access Limitations within Breeding Bird Survey Area**
- **Figure 6.6.3: Skylark - W1**
- **Figure 6.6.4: Skylark - W2**
- **Figure 6.6.5: Skylark - W3**
- **Figure 6.6.6: Grey Partridge and Yellow Wagtail – W1**
- **Figure 6.6.7: Grey Partridge and Yellow Wagtail – W2**
- **Figure 6.6.8: Grey Partridge and Yellow Wagtail – W3**
- **Figure 6.7.1: Hobby and Barn Owl (Confidential)**
- **Figure 6.8.1: Great Crested Newt Survey – HIS and eDNA Assessment**

- – W1
- **Figure 6.8.2: Great Crested Newt Survey – HIS and eDNA Assessment – W2**
- **Figure 6.8.3: Great Crested Newt Survey – HIS and eDNA Assessment – W3**
- **Figure 6.8.4: Great Crested Newt Survey – HIS and eDNA Assessment – Cable Corridors**
- **Figure 6.9.1: Reptile Mat Locations**
- **Figure 6.9.2: Reptile Sighting Locations**
- **Figure 6.10.1: GLTA and Daytime Bat Walkover Results**
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- **Figure 6.11.5: Otter and Water Vole Suitability Assessment Points – Whitestone 3**
- **Figure 6.11.6: Otter and Water Vole Suitability Assessment Points – Cable Corridors**
- **Figure 6.12.1: Important Hedgerows; and**
- **Figure 6.13.1: Aquatic eDNA Sample Locations.**

6.1.7 This Chapter is supported by the following appendices and their associated figures, located in **ES Volume 3, Appendices [EN0110020/APP/6.20]**:

- **Appendix 6.1: Legislation, Policy and Guidance**
- **Appendix 6.2: UK Habitat Baseline Report**
- **Appendix 6.3: Confidential Badger Survey Report**
- **Appendix 6.4: Biodiversity Net Gain Report**
- **Appendix 6.4.1: River Condition Assessment Report**
- **Appendix 6.5: Wintering Bird Survey Report**
- **Appendix 6.6: Breeding Bird Survey Report**
- **Appendix 6.7: Confidential Ornithology Report**
- **Appendix 6.8: Great Crested Newt Report**
- **Appendix 6.9: Reptile Survey Report**
- **Appendix 6.10: Bat Survey Report**
- **Appendix 6.11: Otter and Water Vole Survey Report**

- **Appendix 6.12: Hedgerow Survey Report**
- **Appendix 6.13: Fisheries and White-Clawed Crayfish eDNA Survey Report; and**
- **Appendix 6.14: Arboriculture Survey and Tree Constraints Plan.**

6.1.8 This Chapter is supported by **Statutory and Non-Statutory Designated Ecological Sites [EN0110020/APP/2.6]** submitted as part of the Application.

6.2 Legislation, Policy and Guidance

6.2.1 The legislation, policy, and guidance related to Biodiversity and Nature Conservation is detailed in **ES Volume 3, Appendix 6.1: Legislation, Policy and Guidance [EN0110020/APP/6.20]**. A summary of the legislation relevant to the Proposed Development is listed below.

Legislation

6.2.2 Legislation that has been considered includes:

- The Conservation of Habitats and Species Regulations 2017 (as amended)^{1 2}
- Infrastructure Planning (Environmental Impact Assessment) Regulations 2017³
- Planning and Infrastructure Act 2025⁴
- Wildlife and Countryside Act 1981 (as amended)⁵
- Natural Environment and Rural Communities (NERC) Act 2006⁶
- The Countryside and Rights of Way Act 2000⁷
- Invasive Alien Species (Enforcement and Permitting) Order 2019⁸
- The Water Framework Directive) (England and Wales) Regulations 2017⁹
- Environment Act 2021¹⁰
- Biodiversity Gain Requirements (Irreplaceable Habitats) Regulations 2024¹¹
- Hedgerow Regulations 1997¹²
- The Management of Hedgerows (England) Regulations 2024¹³
- Protection of Badgers Act 1992¹⁴
- The Wild Mammals (Protection) Act 1996¹⁵
- Salmon and Freshwater Fisheries Act 1975¹⁶; and
- The Eels (England and Wales) Regulations 2009¹⁷.

Policy

National Policy

6.2.3 National policy that has been considered includes:

- UK Biodiversity Framework (2024)¹⁸
- National Planning Policy Framework (NPPF) (December 2024)¹⁹
- Environmental Improvement Plan (EIP) 2025²⁰

- Overarching National Policy Statement for Energy (EN-1), 2025²¹
- NPS for Renewable Energy Infrastructure (EN-3), 2025²²; and
- NPS for Electricity Networks Infrastructure (EN-5) 2025²³.

Local Policy

6.2.4 Local policy that has been considered includes:

- Rotherham Metropolitan Borough Council (RMBC) Local Plan, 2014²⁴
- Policy NE 1: Biodiversity. Dinnington St Johns Neighbourhood Plan, 2021²⁵
- Policy GS1: Biodiversity and Green Infrastructure. Wickersley Neighbourhood Plan, 2022²⁶
- Policy M9: Nature Conservation. Maltby Neighbourhood Plan, 2024²⁷
- Sheffield Local Biodiversity Action Plan (LBAP), (Updated 2025)²⁸
- Rotherham LBAP, (Updated 2012)²⁹
- South Yorkshire Local Nature Recovery Strategy (LNRS) (In preparation)³⁰
- Northeast Derbyshire District Council (NEDDC) Local Plan, 2021³¹; and
- Killamarsh Neighbourhood Plan (in preparation)³².

Guidance

6.2.5 Guidance that has been considered includes:

- Bird Survey & Assessment Steering Group. (2025). Bird Survey Guidelines for Assessing Ecological Impacts³³
- Chartered Institute of Ecology and Environmental Management (CIEEM) (2024). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine³⁴
- Yorkshire Wildlife Trust (2024). State of Yorkshire's Nature: What we know about nature and wildlife in Yorkshire.³⁵
- Bat Conservation Trust (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)³⁶
- BCT/ILP (2023). Bats and Artificial Lighting at Night: Guidance Note GN08/23³⁷
- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a Guide to Impact Assessment, Mitigation and Compensation for Developments Affecting Bats³⁸
- UKHab Ltd (2023). UK Habitat Classification Version 2.0³⁹
- Stanbury, *et al.* (2021). Birds of Conservation Concern (BoCC): the population Status of Birds in the United Kingdom⁴⁰
- Dean, *et al.* (2016). The Water Vole Mitigation Handbook: Mammal Society Mitigation Guidance Series⁴¹
- British Standards (2012). 'Trees in Relation to Design, Demolition and Construction – Recommendations' (BS 5837)⁴²

- Department for Environment, Food and Rural Affairs (DEFRA) (2007). Hedgerow Survey Handbook: A Standard Procedure for Local Surveys in the UK, 2nd Edition⁴³
- WildCRU (2011). The Water Vole Conservation Handbook (3rd Edition)⁴⁴
- Chanin P (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10⁴⁵
- Langton *et al.* (2001). GCN Conservation Handbook. Froglife⁴⁶
- English Nature (2001). GCN Mitigation Guidelines⁴⁷
- Oldham *et al.* (2000). Evaluating the Suitability of Habitat for the GCN (*Triturus cristatus*). Herpetological Journal 10(4), pp143-155.⁴⁸; and
- Froglife (1999). Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10⁴⁹.

6.2.6 More detailed information regarding the above legislation, policy and guidance can be found in **ES Volume 3, Appendix 6.1: Legislation, Policy and Guidance [EN0110020/APP/6.20]**.

6.3 Consultation

6.3.1 This Section provides a summary of the Consultation undertaken to date in relation to the Proposed Development.

EIA Scoping

- 6.3.2 A Scoping Opinion was sought from the Planning Inspectorate to determine the content of the assessment, as well as the approach and methods to be used. The outcomes of this exercise were documented in the Scoping Report (**ES Volume 3, Appendix 2.1: EIA Scoping Report [EN0110020/APP/6.20]**), which was submitted to the Planning Inspectorate on 23 April 2025. The Scoping Report captures the findings of the scoping exercise and outlines the technical guidance, standards, best practices, and criteria to be applied in the assessment to identify and evaluate the likely significant effects of the Proposed Development on Biodiversity and Nature Conservation.
- 6.3.3 A Scoping Opinion was received from the Planning Inspectorate on 03 June 2025 (**ES Volume 3, Appendix 2.2: EIA Scoping Opinion [EN0110020/APP/6.20]**).
- 6.3.4 **Table 6-1** summarises how this Chapter of the ES addresses key points from the Environmental Impact Assessment (EIA) Scoping Opinion comments related to Biodiversity and Nature Conservation.

Table 6-1: EIA Scoping Opinion Comments and How They Are Addressed in This ES

Consultee	Issue Raised	How is This Addressed	Where This is Addressed in the ES
The Planning Inspectorate	ID 3.1.1: Protected Species – White Clawed Crayfish, Hazel Dormouse (All Phases) <i>“The Scoping Report proposes to scope out assessment of these species on the basis that they are not identified in the Site or Area of Influence. The Inspectorate notes that Scoping Report paragraph 7.3.29 identifies a white clawed crayfish recorded in the study area from a desk-based review and justification for scoping this species out is the ‘likely’ absence due to presence of invasive crayfish species. The study area and baseline supporting the scope of Biodiversity and Nature Conservation relates to the solar array area only (Please see IDs 2.1.2 and 2.1.3 of this Scoping Opinion) and therefore it is unknown whether these species are present in the study areas of the cable corridors. In the absence of information such as evidence demonstrating clear agreement with relevant statutory bodies, the Inspectorate is not in a position to scope these matters from the assessment. Accordingly, the ES should include an assessment of these matters or the information referred to demonstrating agreement with the relevant consultation bodies and the absence of a LSE.”</i>	- Hazel dormouse is referenced within the Scoping Opinion response; however, this species is geographically absent from South Yorkshire, with no records found within a 2km data search. Hazel dormouse was scoped out of the assessment following agreement with Natural England. - Following consultation with the Environment Agency, it has been agreed to include white-clawed crayfish in the assessment and field surveys were undertaken within the Study Area. Based on The Planning Inspectorate’s comments here, this species remained scoped in, and an assessment of findings is provided within the ES. - Consultation with the Environment Agency continues, with reported evidence from surveys presented to inform consultation. - Data obtained from the desk study and field surveys include the Cable Corridor in the Study Area and are assessed in the ES.	Table 6-2 , Section 6.4 and Section 6.5 of this Chapter
The Planning Inspectorate	ID 3.1.2: International Statutory Designated Sites (All Phases) <i>“This is scoped out on the basis that there are no European sites present within the red line boundary or area of influence. Scoping Report paragraph 7.3.20 identifies the nearest designated sites as the South Pennine Moors Special Area of Conservation (SAC) and Special Protection Area (SPA) which is located 17.5km southwest from the nearest point of the Proposed Development. Given the location of the Proposed Development, the Inspectorate agrees to scope this matter out of further assessment.”</i>	As advised in the Planning Inspectorate ‘Advice on Habitat Regulations Assessments’⁵⁰ Natural England acknowledged in writing through the statutory consultation that there are no pathways that could lead to effects on a European site from the Proposed Development and that no HRA is required.	Section 6.3 of this Chapter
The Planning Inspectorate	ID 3.1.3: Protected Habitats – Ancient Woodland (All Phases): <i>“The Scoping Report proposes to scope out an assessment of ancient woodland on the basis none are present within the Site and an avoidance buffer would be implemented from the Proposed Development to the nearest ancient woodland. The baseline presented in the ES appears to relate only to the solar array area (Please see IDs 2.1.2 and 2.1.3 of this Scoping Opinion). The baseline and study area for the cable corridors has not been provided. Moreover, the Inspectorate notes that Scoping Report Figure 3.5 identifies ancient woodland adjacent to the Site Boundary. The ES should provide an assessment of the potential effects of the Proposed Development (incl. Cable Corridors) on ancient woodland, veteran trees and other irreplaceable habitats</i>	- The ES includes an assessment of the potential effects of the Proposed Development on ancient woodland, veteran trees and other irreplaceable habitats. - Avoidance measures have been included within the embedded mitigation.	Section 6.6 of this Chapter

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Consultee	Issue Raised	How is This Addressed	Where This is Addressed in the ES
	<i>located within an appropriate Zone of Influence (Zol) relating to the entire Site Boundary or provide evidence to demonstrate the absence of LSE including agreement with relevant consultation bodies."</i>		
The Planning Inspectorate	ID 3.1.4: National/Local Statutory Designated Sites: <i>"Scoping Report Table 7.1 identifies designated sites located within the Area of Influence (Aol) of the Proposed Development, however, the Study Area does not include area of Cable Connection Corridor. The Applicant should make efforts to agree the designated sites which should be included in the assessment with relevant consultee bodies."</i>	- Designated sites (international, national and local) in the Study Area of the Proposed Development have been presented in this ES. This includes the Cable Corridor. - Details of the international and national designated sites for inclusion in the assessment have been discussed with Natural England (meeting 30 July 2025).	Section 6.4 of this Chapter
The Planning Inspectorate	ID 3.1.5: Assessment of Fish and Aquatic Ecology: <i>"The Inspectorate notes that habitat of rivers, watercourses and ponds are recorded within or adjacent to the Site but there is no reference to whether assessment of fish or aquatic ecology (beyond otters and water voles) would be scoped in or out of the ES. The ES should present an assessment of effects on fish or aquatic ecology where they are likely to be significant, for all phases, or evidence to demonstrate the absence of LSE including agreement with relevant consultation bodies."</i>	- Within the Site, where impacts to these features or sensitive adjacent habitats are not envisaged, works within the watercourse will be undertaken for watercourse crossings of cables and access tracks.. ,Where sensitive features within aquatic habitats may be affected, the watercourse and riparian zone will be avoided where practicable through installation techniques. - Impact to fish and aquatic ecology within the Cable Corridor will be avoided through the use of trenchless crossing methods to a depth able to demonstrate no likely significant effect (LSE) (at least 1.5m below minor watercourses) except for a small number of locations where conditions indicate trenched installation could be feasible subject to pre-construction checks (see ES Volume 2, Chapter 10: Water Resources and Flood Risk [EN0110020/APP/6.10.1]). Where minor watercourses within the Site are proposed for crossing and terrestrial and aquatic surveys in those locations do not identify biodiversity constraints, the option for trench installation is retained. - On Cable Corridor crossings at Watercourse (W8) and (W24), it is assumed that crossings are trenchless unless conditions allow for a trenched approach (e.g. if watercourse dry). - An assessment of effects on fish and aquatic ecology is provided in the ES. - Baseline information and aquatic surveys have been presented to the Environment Agency.	Section 6.4 and Section 6.7 of this Chapter
The Planning Inspectorate	ID 3.1.6: Confidential Annexes: <i>"Public bodies have a responsibility to avoid releasing environmental information that could bring about harm to sensitive or vulnerable ecological features. Specific survey and assessment data relating to the presence and locations of species such as badgers, rare birds and plants that could be subject to disturbance, damage, persecution, or commercial exploitation resulting from publication of the information, should be provided in the ES as a confidential annex. All other assessment information should be included in an ES chapter, as normal, with a placeholder explaining that a confidential annex has been submitted to the Inspectorate and may be made available subject to request."</i>	- The badger survey has been provided as a confidential Technical Appendix (see Volume 3, Appendix 6.3: Confidential Badger Survey Report [EN0110020/APP/6.20.1]) and location data has been anonymised throughout this Chapter. - The confidential ornithology survey report has been provided as a confidential Technical Appendix (see Volume 3, Appendix 6.7: Confidential Ornithology Survey Report [EN0110020/APP/6.20]) and location data has been anonymised throughout this Chapter.	ES Volume 3, Appendix 6.3: Confidential Badger Survey Report [EN0110020/APP/6.20.1] .
Environment Agency	<i>"There has been no assessment of fish and aquatic ecology at all within this Scoping Report and none is proposed."</i>	Within the Study Area including Cable Corridor, where impacts to these features are not envisaged, trenched installation techniques will be used, and where sensitive features within aquatic or terrestrial habitats may be affected,	Section 6.4 to 6.8 of this Chapter;

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Consultee	Issue Raised	How is This Addressed	Where This is Addressed in the ES
	<i>Table 7.3 does not include any reference to fish or aquatic ecology (beyond otters and watervoles) being scoped in or out, therefore we assume it is not within the proposed scope. The report acknowledges that there is suitable habitat in the form of watercourses on site and adjacent to the draft order limits.</i> <i>The proposal risks causing direct harm to fish and aquatic species, or harm to their habitat through sedimentation, electromagnetic fields, light pollution, construction noise and vibration, and from watercourse crossings. This may also lead to a deterioration in WFD status.</i> <i>Fish and aquatic ecology should be scoped into the EIA in the absence of any supporting evidence to demonstrate that they are either not present or will not be impacted. Baseline data should be obtained through a desk study (including EA fish population data) and field surveys. Impact-pathways should be identified and assessed in the EIA, which should include (but not limited to):</i> • impacts on fish from Electromagnetic fields where high voltage cables pass underwater watercourses • impacts from noise and vibration associated with construction • impacts from pollution and increased sedimentation • impacts from open cut crossing of watercourses and potential loss or damage to habitat • Impacts from light pollution on watercourses and aquatic ecology”	these will be avoided through the use of trenchless crossing methods to a depth able to demonstrate no LSE (at least 1.5m beneath below minor/ordinary watercourses). • An Assessment of effects on fish and aquatic ecology is provided in the ES, with measures to address impacts from pollution, lighting and noise detailed within the outline Construction Environmental Management Plan (oCEMP) [EN0110020/APP/5.9]. • Baseline information and aquatic surveys have been presented to the Environment Agency and engagement with them is ongoing. Results from baseline aquatic surveys completed of the Study Area have been used to inform the ES.	Outline Construction Environmental Management Plan [EN0110020/APP/5.9]
Environment Agency	<i>“The Salmon and Freshwater Fisheries Act 1975 and The Eels (England and Wales) Regulations 2009 have not been included in the list of legislation that is relevant to biodiversity.</i> <i>The legal responsibility on the developer pertaining to this fish specific legislation has not been acknowledged or addressed. This infers that the impacts on fish from the construction, operation and decommissioning have not been fully considered.</i> <i>Both pieces of legislation should be listed as relevant in the biodiversity chapter of the ES and their impacts addressed within the assessment.”</i>	• Reference to this legislation has been added within the ES	Section 6.2
Environment Agency	<i>“Environmental legislation does not list some recent (2024) legislation pertaining to BNG.</i> <i>Risk of not complying with current legislation, by not considering new environmental definitions such as ‘irreplaceable habitat’, along with related offences to said habitats.</i> <i>Please include the following legislation, policy and guidance: Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024, for completeness.”</i>	• Reference to this legislation has been added within the ES	Section 6.2

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Consultee	Issue Raised	How is This Addressed	Where This is Addressed in the ES
Natural England	<i>“The development site is within or may impact on the following Site of Special Scientific Interest:</i> - Crabtree Wood SSSI - Lindrick Golf Course SSSI - Anston Stones Wood SSSI - Sprotbrough Gorge SSSI <i>The ES should include a full assessment of the direct and indirect effects of the development on the features of special interest within each SSSI and identify appropriate mitigation measures to avoid, minimise or reduce any adverse significant effects”</i>	- Designated sites (international, national and local) in the Study Area of the Proposed Development have been presented in this ES. - Details of the national designated sites for inclusion in the assessment have been discussed with Natural England (meeting 30 July 2025), with an additional two SSSIs, Roche Abbey Woodland SSSI, and Edlington Wood SSSI also assessed in Section 6.7.2. - The direct and indirect effects of the Proposed Development on these sites have been assessed in the ES.	Section 6.7, Section 6.8 and Table 6-13
Natural England	<i>“Regionally and Locally Important Sites</i> <i>The Applicant should be minded towards the development of the South Yorkshire Local Nature Recovery Strategy (LNRS) when designing enhancement proposals.</i> <i>The ES should consider any impacts upon local wildlife and geological sites, including local nature reserves. Local sites are identified by the local Wildlife Trust, geoconservation group or other local group. The ES should set out proposals for mitigation of any impacts and if appropriate, compensation measures and opportunities for enhancement and improving connectivity with wider ecological networks. They may also provide opportunities for delivering beneficial environmental outcomes”</i>	- Designated sites solely designated for their geological interest have been scoped out from this ES. - Designated sites (international, national and local) in the Study Area of the Proposed Development have been assessed in this ES. - Reference to the emerging LNRS, mitigation, compensation, and enhancements for local sites is provided within the ES. - Meeting held with RMBC, YWT, S&RWT, South Yorkshire Mayoral Combined Authority to discuss effects and opportunities for the LWSs and the emerging LNRS priorities (see Table 6-4).	Section 6.6 and Section 6.7
Natural England	Protected Species <i>“The ES should assess the impact of all phases of the proposal on protected species (including, for example, great crested newts, reptiles, birds, water voles, badgers and bats). Natural England does not hold comprehensive information regarding the locations of species protected by law. Records of protected species should be obtained from appropriate local biological record centres, nature conservation organisations and local groups. Consideration should be given to the wider context of the Site, for example in terms of habitat linkages and protected species populations in the wider area.</i> <i>The area likely to be affected by the development should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES. Surveys should always be carried out in optimal survey time periods and to current guidance by suitably qualified and, where necessary, licensed, consultants. 6 Natural England has adopted standing advice for protected species, which includes guidance on survey and mitigation measures. A</i>	- Information on protected species surveys, adherence to survey guidance, professional judgement on surveys and constraints, and licence requirements is provided within the ES. - Maintaining and enhancing habitat connectivity in relation to supporting protected and priority species in the landscape, both within the Order Limits and beyond is captured within the outline Landscape and Ecology Management Plan (oLEMP) [EN0110020/APP/5.13].	Section 6.5, Section 6.6, and Section 6.7. outline Landscape and Ecology Management Plan [EN0110020/APP/5.13].

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Consultee	Issue Raised	How is This Addressed	Where This is Addressed in the ES
	<i>separate protected species licence from Natural England or Defra may also be required</i>		
Natural England	<i>District Level Licensing for great crested newts</i> <i>“The DLL approach is underpinned by a strategic area assessment which includes the identification of risk zones, strategic opportunity area maps and a mechanism to ensure adequate compensation is provided regardless of the level of impact. In addition, Natural England (or an alternative DLL provider) will undertake an impact assessment, the outcome of which will be documented in the IACPC (or equivalent). If no GCN surveys have been undertaken, Natural England’s risk zone modelling may be relied upon. During the impact assessment, Natural England will inform the Applicant whether their scheme is within one of the amber risk zones and therefore whether the Proposed Development is likely to have a significant effect on GCN. The IACPC will also provide additional detail including information on the Proposed Development’s impact on GCN and the appropriate compensation required. By demonstrating that the DLL scheme for GCN will be used, consideration of GCN in the ES can be restricted to cross-referring to the Natural England (or alternative provider) IACPC as a justification as to why significant effects on GCN populations as a result of the Proposed Development would be avoided.”</i>	• No ponds are being lost to the development. Great crested newt was not recorded on the Site and no ponds are located within the Cable Corridor therefore GCN is not likely to be an IEF within the Site. • No mitigation measures specific to GCN are required for ponds within Order Limits or 250m buffer where they have been confirmed as absent of this species. The pond avoidance distance of 10m will be applied as specified within the Outline Design Parameters [EN0110020/APP/7.3]. • For those ponds where status has not been confirmed outside Order Limits and the ponds are within 100m of connected suitable habitat, there is a low risk of finding GCN, but as a precautionary measure, works will be undertaken under a Non-Licensed Method Statement (NLMS) where deemed necessary by a suitably licensed ECoW. • Should any ponds or terrestrial habitat within Order Limits and a 250m buffer from works be found to support GCN, appropriate mitigation measures will be applied to prevent/minimise the risk of disturbance. • Where disturbance is unavoidable then a licence would be applied for from Natural England with an accompanying method statement which will set out the appropriate mitigation and compensation measures which will be conditioned through the licence.	Section 6.6, Section 6.7 and Section 6.8
Natural England	<i>Priority Habitats and Species</i> <i>“Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land. Sites can be checked against the (draft) national Open Mosaic Habitat (OMH) inventory published by Natural England and freely available to download.</i> <i>An appropriate level habitat survey should be carried out on the Site, to identify any important habitats present. In addition, ornithological, botanical, and invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present. The ES should include details of:</i> • <i>Any historical data for the Site affected by the proposal (e.g. from previous surveys)</i> • <i>Additional surveys carried out as part of this proposal</i> • <i>The habitats and species present</i> • <i>The status of these habitats and species (e.g. whether priority species or habitat)</i> • <i>The direct and indirect effects of the development upon those habitats and species</i> • <i>Full details of any mitigation or compensation measures</i>	• Due to design and Order Limit refinements, OMH is no longer present within the Order Limits or Area of Influence (Aol) and is not discussed further within this ES.	N/A

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Consultee	Issue Raised	How is This Addressed	Where This is Addressed in the ES
	• <i>Opportunities for biodiversity net gain or other environmental enhancement</i>		
Natural England	<i>Ancient Woodland, ancient and veteran trees</i> <i>“The ES should assess the impacts of the proposal on the ancient woodland and any ancient and veteran trees, and the scope to avoid and mitigate for adverse impacts. It should also consider opportunities for enhancement.”</i>	• The ES includes an assessment of the potential effects of the Proposed Development on ancient woodland, veteran trees and other irreplaceable habitats. • Avoidance measures have been included within the embedded mitigation.	Section 6.6, Section 6.7 and Table 6-13

Issues Scoped out of Assessment

6.3.5 Following the scoping exercise, some elements were scoped out of assessment in this ES. **Table 6-2** presents the topics scoped out of assessment.

Table 6-2: Topics Scoped Out of Assessment

Potential Effect / Topic	Development Phase	Rationale
European Designated Sites/Habitat Regulations Assessment	All phases	The nearest designated sites of international importance (15.7km southwest of the Order Limits) are the South Pennine Moors Special Area of Conservation (SAC) designated for European dry heath, blanket bog and old sessile oak woodland; and Peak District Moors (South Pennine Moors Phase I) Special Protection Area (SPA) designated for breeding merlin, golden plover and short-eared owl. At over 15km from the Site, there are no pathways of effect on the qualifying interest features and therefore LSE can be ruled out, <u>including contribution of the Proposed Development to in-combination effects with other projects</u>. No SPA or Ramsar sites that contained geese as part of the qualifying interest are present within 20km of the Proposed Development and no SACs with bats as a qualifying feature are present within 30km. The need for a Habitat Regulations Assessment (HRA) and assessment in the ES of European Protected Sites has been scoped out. In the Scoping Opinion the Planning Inspectorate agrees to scope this matter out of further assessment (see Table 6-1) and this was confirmed by Natural England in a meeting (30th July 2025, see Table 6-4) and also in writing during the statutory consultation response period on the 27th October 2025. These sites are therefore not considered further within the assessment.
National Designated Sites: • Ashfield Brickpits; • New Edlington Brickpits; and • Wood Lee Common	All phases	Designated for their geological interest features only and therefore not relevant to the biodiversity assessment.
Protected Species -	All phases	Scoped out as no records of hazel dormouse returned during the desk study (see Section 6.5) and this species is geographically absent from South Yorkshire, with only

Potential Effect / Topic	Development Phase	Rationale
Hazel dormouse		limited records existing within Yorkshire where they have been reintroduced ⁵¹ .

Statutory Consultation

- 6.3.6 A statutory consultation period was held between 16 September and 28 October 2025 in line with Section 47 of the Planning Act 2008. Feedback was sought from the local community and a range of consultee bodies based on the preliminary information and assessments presented in the Draft Environmental Statement (Draft ES).
- 6.3.7 **Table 6-3** presents feedback from statutory consultees given at statutory consultation, and how this is addressed in this ES.

Table 6-3 Statutory Consultation Feedback from the Statutory Consultation Period

Consultee	Consultee Feedback	How This is Addressed in This ES	Where This is Addressed in This ES
Environment Agency	Baseline Surveys <i>"Only partial information has been provided within the ES on the ecology baseline. We understand further work is currently underway and full reports will be provided as part of the ES. We recommend we have sight of this as early as possible to help advise on any implications for your design and mitigation options which appear to be largely implemented through the proposed outline Landscape and Ecology Management Plan (oLEMP) and outline Construction Management Plan (oCEMP). We note it is intended the proposal to be submitted to PINS prior to the implementation of statutory requirement for Biodiversity Net Gain, however you are intending to achieve 10% enhancement. Consideration should be given as to your resiliency to this policy requirement should your anticipated submission be delayed."</i>	- Updated baseline survey information is included in this ES. - Sections of the Study Area were not accessible due to land access restrictions and therefore have not been surveyed. - Access was obtained for baseline surveys of the Site and part of the Cable Corridor in the Order Limits; however, some sections of the Cable Corridor Study Area were not subject to field survey due to access constraints. Field surveys were therefore focused on key sections of the Cable Corridor where more sensitive habitats were considered most likely to occur, with the remaining sections assessed through desk-based methods. For those sections of the Cable Corridor where field surveys were not undertaken, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and landcover datasets. This has enabled sufficient information to be available to determine an assessment based on worst case parameters. - A commitment to complete surveys is provided in embedded mitigation/oCEMP [EN0110020/APP/5.9] with the results informing post consent activities and details to be included in the CEMP secured in Schedule 2 of the Draft DCO [EN0110020/APP/3.1.1/3.4].	Section 6.5; outline Construction Environmental Management Plan (oCEMP) [EN0110020/APP/5.9].
Natural England	Designated Sites <i>"We note in table 6.10 Scoping of Important Ecological Features in Chapter 6 'Biodiversity and Nature Conservation' that Crabtree Wood SSSI, Anston Stones Wood SSSI and Sprotbrough Gorge SSSI will be scoped in for further assessment. However, we note that Lindrick Golf Course SSSI has not been scoped in and it is stated that "All other national designated sites are separated by distance from the Site, and not within 250m of main roads for the dust pollution effects described above from the Proposed Development to impact them, so are not considered further within the assessment." However, this appears inconsistent with the Air Quality Chapter, which states that "There are a number of designated ecological sites that are within 200m of likely construction or operational traffic routes that feed into the Proposed Development". This includes Lindrick Golf Course SSSI, which had previously been identified for consideration. Given that Lindrick Golf Course SSSI was initially scoped in for assessment in Chapter 12</i>	- A review of traffic routes and air quality affects has been made to inform the ES. - Water quality effects and hydrological connectivity are addressed within the ES for all SSSIs with connectivity, with clarification on which SSSIs are included within the assessment added within the ES. - The SSSIs highlighted by NE, including Lindrick Golf Course, are subject to assessment within the ES and scoped in, with the assessment consistent with the ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12].	Section 6.6 and Section 6.7. oCEMP [EN0110020/APP/5.9]

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	<i>‘Air Quality’ based on its proximity to relevant traffic routes, and no clear justification has been provided for its subsequent exclusion, we would welcome clarification on the rationale for scoping this site out of further assessment in Chapter 6.</i> <i>In addition, we advise that Chapter 6 provides clearer clarification on which SSSIs are being assessed further for potential water quality impacts. It is currently unclear whether only Sprotbrough Gorge SSSI is being taken forward for further assessment in this regard. We recommend that the assessment clearly identifies all SSSIs with a hydrological connectivity to the stu and provides justification where any sites will be scoped out.”</i>		
Natural England	Biodiversity Net Gain <i>“Although BNG is not yet a mandatory requirement for NSIPs, we strongly recommend that BNG provision is secured through this development. This will reflect the important role NSIPs must play in delivering the government’s environmental targets.”</i> <i>“The biodiversity baseline should include all land contained within the Site’s Red Line Boundary and proposals can be iteratively refined over time and throughout detailed design. Biodiversity gains should ideally be secured for a minimum of 30 years and be subject to adaptive management and monitoring. BNG plans should be secured by a suitably worded requirement in the DCO.”</i>	A BNG assessment including enhancement proposals are presented in ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20], which includes a commitment to at least a 30-year period for the BNG to be applicable (detailed in the oLEMP [EN0110020/APP/5.13]).	Section 6.6, and ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20]
Natural England	Recommendations for Environmental Gains <i>“Grassland enhancement beneath the solar panels and hedgerow connectivity (the South Yorkshire Local Planning Authorities have good datasets on hedgerows in their region). In addition, habitat creation and restoration such as wetland development in and around the Rother catchment and potential improvements to the Chesterfield Canal, where an uplift in watercourse units may be achievable. Aligning BNG delivery with the emergent Local Nature Recovery Strategy (LNRS) could allow for more targeted habitat creation. Natural England also advises that Green Infrastructure (GI) can contribute to BNG by offering additional benefits through environmental stacking, with the potential to encourage access to nature for nearby urban communities. This could include linking into the Rother Valley Country Park and supporting their community projects. Additionally, work could be done to help alleviate recreational pressure on sensitive sites such as Sprotbrough Gorge SSSI, which has been subject to mountain bike disturbance. This scheme could offer alternative locations for recreational access through GI, therefore offering wider SSSI benefits. The Green Infrastructure (GI) Framework can be used for design of GI for infrastructure projects as well as housing.”</i>	- A BNG assessment including enhancement proposals are presented ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20], which includes a commitment to at least a 30-year period for the BNG to be applicable (as detailed in the oLEMP [EN0110020/APP/5.13]). - The oLEMP [EN0110020/APP/5.13] details habitat enhancements, management, and creation to provide landscape level connectivity enhancements.	Section 6.6.66 and ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20] . Habitat and biodiversity enhancements are detailed in the outline Landscape and Ecology Management Plan [EN0110020/APP/5.13] .
Doncaster City Council	Biodiversity Net Gain <i>“CDC considers that expressing an intention to achieve a 10% minimum gain does not go far enough and would expect to understand the detailed gains that would be secured, rather than simply stating a minimum to be achieved. It is understood that this more detailed approach is what the Secretary of State is increasingly</i>	It is expected that after compensation, the creation of new habitats and enhancements to existing habitats within the Site will ensure that the minimum statutory BNG of 10% will be exceeded. Recent planning changes now recognise this percentage threshold at policy	Section 6.6 and ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20] . Habitat management and biodiversity enhancements are detailed in the oLEMP [EN0110020/APP/5.13] .

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	expecting from these projects, and as such it should be addressed at this stage rather than further along in the Examination process. Furthermore, given the specific nature of the Project overall, with the Order limits comprising three very separate and distinct land parcels, CDC' expectation would be for each of the parcels to be appraised individually for their biodiversity net gain opportunities, and for those to be clearly set out and quantified separately within the ES, and the DCO itself. It is also understood that an Outline Biodiversity Gain Plan will be submitted as part of the DCO application. CDC would expect to be given the opportunity to comment on this outline plan at the very earliest opportunity."	level. The expected BNG is detailed within the statutory BNG report and submission. The strengthening of existing habitat features and habitat connectivity through enhancements and management, along with new habitat creation prescriptions are detailed in the oLEMP [EN0110020/APP/5.13].	
Doncaster City Council	Habitat Management and Monitoring Plan "CDC would expect the Habitat Management and Monitoring Plan (HMMP) and/or DCO itself to include provision for a monitoring fee to be paid to the Council. CDC actively reviews monitoring reports when they are submitted and would expect to do so in this case in the same way"	Details on agreed monitoring, frequency of monitoring, reporting and report review periods is detailed within the oLEMP [EN0110020/APP/5.13].	Details on monitoring, and auditing to be included within the oLEMP [EN0110020/APP/5.13]. Further reference to the oLEMP [EN0110020/APP/5.13] and embedded mitigation is made in Section 6.6 of this ES where reference is made to statutory BNG and legal agreements.
Doncaster City Council	Cable Route Selection "The selection process for the Cable Corridor is fundamentally flawed in that habitat type does not appear to be a factor in the consideration process, but rather consideration of impacts will follow once a route has been agreed. Habitats such as woodlands should be avoided as cable trenching in woodlands can be extremely disruptive and may result in much wider and extensive impacts than anticipated. This should be taken into account before a final route option is decided upon, rather than an approach which seeks to mitigate impacts arising once a route has been selected. A question is raised as to whether the impact on habitats would only be felt in the short-term as suggested, and whether therefore those impacts could reasonably be concluded to be of low impact for the operational life of the project. This matter should be revisited in the assessments taking place."	- Environmental constraints (including ecological) were considered in the Cable Corridor optioneering process, which included seeking to avoid Cable Corridors with OMH, woodland blocks, and ponds potentially supporting protected species such as GCN or bats. - Trees and woodlands will be retained and avoided wherever possible within the Cable Corridor. Tree loss locations are identified in the Vegetation Removal Plan [EN0110020/APP/2.9.1]. An arboriculture survey, and Tree Constraints Plan (TCP) has been provided in ES Volume 3, Appendix 6.14: Arboriculture Survey and Tree Constraints Plan [EN0110020/APP/6.20] the scope of which covered access points to the Proposed Development. Further arboriculture surveys will be undertaken prior to construction and appropriate mitigation measures included within the CEMP (secured through a requirement in Schedule 2 of the Draft DCO [EN0110020/APP/3.1.1/3-4]) to ensure trees and woodland are protected during construction, operation and decommissioning in compliance with BS5837:2012. - All retained woodland and trees (including all veteran trees and ancient woodland) will be avoided in line with government guidance and in line with the Outline Design Parameters [EN0110020/APP/7.3].	Tree and woodland protection to be addressed in the oCEMP [EN0110020/APP/5.9]. Buffer distances as detailed in the Outline Design Parameters [EN0110020/APP/7.3] and in line with government guidance.

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		- Protective measures to protect woodlands, trees, and hedgerows will be provided within the CEMP secured through a requirement in Schedule 2 of the Draft DCO [EN0110020/APP/3.1.1/3.4]. - Most woodlands are being retained entirely, with individual trees being lost from the Proposed Development within non-TPO woodlands where avoidance measures cannot be applied and there is no satisfactory alternative. Reference is made to the Vegetation Removal Plan [EN0110020/APP/2.9.1] for location of tree losses.	
Doncaster City Council	Grasslands <i>“CDC would expect for long-term management plans to be provided in detail, with clear contingencies in place should condition expectations not be realised throughout the lifetime of the project. This should be regularly and effectively monitored.”</i>	The protection, creation and management of grassland habitats is proposed for inclusion within the oLEMP [EN0110020/APP/5.13]. Measures for the protection of grassland habitat during construction are included within the oCEMP [EN0110020/APP/5.9]	Section 6.6, Section 6.7 and summarised in Table 6-13. oLEMP [EN0110020/APP/5.13].
Doncaster City Council	Protected Species <i>“It is understood that bat surveys have only been partially complete, with some sound analysis identifying up to seven species in the initial stages. Given that the proposals will cover extensive areas, transect results should be converted to ‘heat maps’ which can be rapidly interpreted and mitigation measures accurately targeted.”</i> <i>“The overall approach to Great Crested Newts (GCN) at both construction and operational phases is inconclusive and CDC wishes to see further detail and be able to comment accordingly. It would also be helpful to understand if the Applicant is considering entering into a District Level License to address the management of GCN.”</i> <i>“The documentation at this stage does not mention potential impacts on invertebrates. It is accepted that given the extensive agricultural nature of the Order limits there are unlikely to be any exceptional invertebrate assemblages that would be directly impacted. However, in creating improved conditions for bats and farmland birds there should be some consideration of invertebrates that will be necessary for healthy bird and bat populations.”</i>	- Interpretation of updated baseline bat survey information is included in this ES. - ES Volume 3, Figures 6.10.2 to 6.10.3 [EN0110020/APP/6.19] the bat report shows the extent of bat activity during the nighttime bat walkover surveys. - Great crested newt has not been identified within the Order Limits or 250m of it, therefore DLL has not been explored. Where access has not been possible, either data from other existing sources or avoidance measures have been applied to confirm that DLL is not required. - Habitats or botanical species or assemblages known to specifically support priority or rarer species of invertebrates are absent from the Order Limits, however, consideration to the planting of a wider range of botanical species within planting mixes is included in the oLEMP [EN0110020/APP/5.13]. The species mix includes those associated with night scented botanical species known to attract nocturnal invertebrates predated on by bats.	Updated baseline results are found in ES Volume 3, Appendix 6.10: Bat Survey Report [EN0110020/APP/6.20.1], with bat distribution and activity provided in ES Volume 3, Figures 6.10.2 and 6.10.3 [EN0110020/APP/6.19]. Embedded Mitigation Measures detailed in Section 6.6, assessment provided in Section 6.7 and summarised in Table 6-13. Botanical species mix is detailed within the oLEMP [EN0110020/APP/5.13].
Doncaster City Council	Arboricultural Concerns <i>“1. Vegetation Removal Without Supporting Arboricultural Documentation. The proposal includes the removal of hedgerows and tree belts, especially along the Cable Corridor and within the W1 and W2 parcels. However, no Tree Survey, Arboricultural Impact Assessment (AIA), or Tree Protection Plan (TPP) has been provided. These are essential to assess the impact on tree assets and ensure compliance with BS5837:2012.</i>	Trees and hedgerows will be retained and avoided wherever possible within the Cable Corridor. An arboriculture survey, and Tree Constraints Plan (TCP) has been provided in ES Volume 3, Appendix 6.14: Arboriculture Survey and Tree Constraints Plan [EN0110020/APP/6.20], the scope of which covered access points to the Proposed Development. Further arboricultural surveys will be undertaken prior to	Embedded Mitigation Measures detailed in Section 6.6, and assessment provided in Section 6.7 of the ES. Measures to protect trees during construction are included in the oCEMP [EN0110020/APP/5.9], with avoidance buffer distances detailed in the Outline Design Parameters [EN0110020/APP/7.3].

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	<i>2. Impact on Mature and Ancient Tree Features. The LVIA identifies tree belts and ancient woodland adjacent to the Site (e.g. Hooton Cliff and Spring Wood), yet there is no clear strategy for their protection. The absence of detailed root protection measures and offset distances raises concerns about potential indirect impacts during construction and cable trenching.</i> <i>3. Conflict with Policy 32 – Green Infrastructure Protection</i> Policy 32 requires developments to protect and enhance green infrastructure, including trees and hedgerows. The scale of proposed vegetation clearance, particularly without a clear mitigation hierarchy (avoid, reduce, compensate), is contrary to this policy. <i>4. BNG Risk from Tree Loss. While the Applicant commits to a 10% Biodiversity Net Gain, the removal of mature tree features—without quantifying their ecological value—risks undermining this target. Replacement planting (e.g. 0.3–0.6m transplants) will take years to establish and cannot immediately offset the loss of mature canopy cover or habitat connectivity.</i> <i>5. Lack of Tree-Led Design Integration</i> There is no evidence that tree constraints have informed the layout of infrastructure or cable corridors. Trees should be treated as design assets, not obstacles. The absence of early-stage arboricultural input is a missed opportunity to reduce conflict and improve outcomes.” <i>The consultee recommended the Applicant be required to submit:</i> - A full Tree Survey, AIA, and TPP - A revised layout that demonstrates tree-led design principles - A clear mitigation strategy for any unavoidable losses	construction and mitigation measures within the CEMP (secured through a requirement in Schedule 2 of the Draft DCO [EN0110020/APP/3.1.1/3.4] will be provided to ensure trees and woodland are protected during construction, operation and decommissioning in compliance with BS5837:2012 • All retained woodland and trees (including all veteran trees and ancient woodland) will be avoided in line with government guidance and in line with the Outline Design Principles [EN0110020/APP/7.3]. Protective measures to protect woodlands, trees, and hedgerows will be provided within the TCP and CEMP. • Conflicts with Policy 32 will be minimised. Protective measures to protect woodlands, trees, and hedgerows are provided within the oCEMP [EN0110020/APP/5.9]. Most woodlands are being retained entirely, with individual trees being lost from the Proposed Development within non-TPO woodlands where avoidance measures cannot be applied and there is no satisfactory alternative. Reference is made to the Vegetation Removal Plan [EN0110020/APP/2.9.1] for location of tree losses. Hedgerows will be avoided wherever possible, with existing gateways used to reduce hedgerow losses to a minimum. Measures are being proposed to compensate, create or enhance the Order Limits with tree planting to hedgerows and within connected perimeter habitats. • BNG losses from tree removal will be minimised, where the removal of mature trees will be avoided wherever possible. The planting of trees using standards will be encouraged over whips where compensation is required. Extensive tree planting within hedgerows across the Solar Array area is designed to achieve a significant biodiversity gain for trees and woodland habitats. • Avoidance of trees wherever possible has informed the overall design (see ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]. Trenchless crossing is proposed on the Cable Corridor to avoid trees and woodland where possible, and selection of the proposed Cable Corridor ruled out routes that would have impacted extensive woodland habitats. An arboriculture survey, and tree Constraints Plan (TCP) has been provided in ES Volume 3, Appendix 6.14: Arboriculture Survey and Tree Constraints Plan [EN0110020/APP/6.20] the scope of which covered access points to the Proposed	Enhancement measures are described in the ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20] and oLEMP [EN0110020/APP/5.13]. Schedule 2 of Draft DCO [EN0110020/APP/3.1.1/3.4].
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		Development. Further arboricultural surveys will be undertaken prior to construction and mitigation measures within the CEMP (secured through a requirement in Schedule 2 of the Draft DCO [EN0110020/APP/3.1.1/3.4]) will be provided to ensure trees and woodland are protected during construction, operation and decommissioning in compliance with BS5837:2012.	
Canal & River Trust	Harthill Reservoir Candidate Local Wildlife Site “Harthill Reservoir is a candidate Local Wildlife Site. This is not referenced within the Local Designated Sites in table 6.8, nor are the impacts of the Development upon this considered within the report. Harthill Reservoir is adjacent to the proposed Whitestone 3 Site. We therefore request that this designation should be double checked by the Applicant. If it is a designated site or likely to become a designated site, impacts up on it should be incorporated into this part of the Environment Report.”	The LWS baseline has been checked and assessment of all sites of relevance provided. Harthill reservoir has now been included within the assessment process on the basis of its LWS candidacy.	Embedded Mitigation Measures detailed in Section 6.6, and assessment provided in Section 6.7 of the ES.
Canal & River Trust	Other Local Wildlife Sites “Several LWS appear to have been missed on Figure 6.1 Local Designated Sites and from Table 6.8 - Local Designated Sites within 2km of the Order Limits. This includes part of the Chesterfield Canal LWS (which is directly crossed by the proposed cable route) and is approximately 0.26km north -east of W3 Site. Further the W3 site is hydrologically linked to the Chesterfield Canal and LWS via Broad Bridge Dyke which is situated within the W3 Site and feeds the Chesterfield Canal. Within the final Environmental Report, details should be updated to include these along with assessments of potential impacts of the Development from them. The proposal, hydrologically linked to the Chesterfield Canal (along with the potential cable crossing), has the potential to impact the Site through lighting, dust, pollution, noise, vibration and transmission of Invasive Species. We therefore advise that these impacts on the Chesterfield Canal LWS should be further assessed.”	- The LWS baseline has been updated and assessment of all sites of relevance provided in the ES. - A review of the hydrologically linked Chesterfield Canal LWS and Broad Bridge Dyke and the stated impacts are considered in the ES assessment. - Updates to Statutory and Non-Statutory Ecological Sites [EN0110020/APP/2.6] and Table 6-9 of the ES have been made.	Embedded Mitigation Measures detailed in Section 6.6, and assessment provided in Section 6.7 of the ES. Statutory and Non-Statutory Ecological Sites [EN0110020/APP/2.6] and Table 6-9 of the ES.
Canal & River Trust	Impact of Horizontal Directional Drilling on the Chesterfield Canal Paragraphs 6.5.22 to 6.5.24 discuss the impact of cable corridors on biodiversity and nature. No direct reference is given to the impact of vibrations (from Horizontal Directional Drilling below) on waterborne species in the watercourses that will be crossed within these paragraphs. We do note, however, that paragraph 6.7.14 refers to methodology to help ensure impacts of vibrations on the water habitat is avoided.”	Reference is made to the impact of vibrations on waterborne species and included in Section 6.5.	Section 6.5 baseline survey findings, Section 6.6 embedded mitigation, and Section 6.7 assessment sections of the ES.
Canal & River Trust	Species Surveys Table 6.5 includes proposals for otter and water vole surveys on watercourses. The Chesterfield Canal and Harthill Reservoir form	Otter and water vole surveys have been completed where access permits in the Site and Cable Corridor and have been reported in ES Volume 3, Appendix 6.11: Otter and Water Vole Survey Report	Interpretation of baseline survey findings detailed in Section 6.5.59 and 6.5.6 (reptiles), with survey results found in ES Volume 3, Appendix 6.1 to 6.14 [EN0110020/APP/6.20]

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	watercourses crossed or in close proximity to the project, and we request that these surveys should include these assets. With regards to reptiles, we ask that clarification be provided with regard to paragraph 6. 6.53, which states that only one species of reptile has been recorded. This appears to be contradicted by the reptile survey report, which states that surveyors believe they likely found an adder which is illustrated by 'Triangle 8' on Figure 6.9.2c.	[EN0110020/APP/6.20]. For those sections of the Cable Corridor where field surveys were not undertaken, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and landcover datasets. This has enabled sufficient information to be available to determine an assessment based on worst case parameters The baseline reptile survey report advised that this record was of an unidentified snake species and that the species could not be confirmed. Following further clarification, the report has been updated to remove contradictory information on adder presence.	
Forestry Commission	Woodland "We note the documents state Ancient Woodlands will be afforded the same buffer as for Ancient and Veteran trees, this is incorrect and not in line with current policy. The plans also appear to give different ancient woodlands different sized buffers. In our view there is reasonable doubt that that deterioration of the ancient woodlands could still occur as a result of the Proposed Development if they are only afforded the 15m minimum buffer, especially considering that the development will almost enclose one woodland on three sides. The minimum buffer would be more suited to a small-scale development. It is our opinion that a 30m buffer would provide a suitable mitigation for any potential effects to the ancient woodlands, assuming that all other protection measures including the use of construction exclusion zones, dust minimization, directional lighting to avoid illuminating the woodlands and pollution control measures are utilized."	- The Proposed Development will implement the buffer zones set out in the current government guidance for ancient woodlands and veteran trees⁵² - We note the typo re buffer zone for ancient woodland and has been corrected in this ES to 15m in line with government guidance. We note the opinion of the Forestry Commission for providing a 30m buffer to be incorporated into the Proposed Development, however, for the Proposed Development, a buffer distance of 25m for woodland is proposed within the Outline Design Parameters [EN0110020/APP/7.3] that already goes beyond stated government guidance.	Embedded Mitigation, Section 6.6.23 and 6.6.24. Outline Design Parameters [EN0110020/APP/7.3]
Forestry Commission	Recommendations "Robust adherence to the Standing Advice, especially regarding buffer zones, to rule out loss or deterioration to the ancient woodlands or ancient and veteran trees. - Detailed plans for protection measures for the woodlands during the construction. - Maintain and where possible improve woodland condition, especially ancient woodland. - Utilise biodiversity gains as part of avoiding woodland and tree impacts (especially ancient/veteran) which can also maximise biodiversity benefits by embracing irreplaceable and high priority habitats – for example focussing on ecological enhancements/creation of woodland edges. - Woodland creation and improvements to ecological connectivity. For example, there are potential opportunities to link fragmented woodland habitats across the Site, which will increase habitat connectivity, making woodlands more resilient and benefitting biodiversity across the project area.	- An arboriculture survey, and tree Constraints Plan (TCP) has been provided in ES Volume 3, Appendix 6.14: Arboriculture Survey and Tree Constraints Plan [EN0110020/APP/6.20] the scope of which covered access points to the Proposed Development. Further arboricultural surveys will be undertaken prior to construction and mitigation measures within the CEMP (secured through a requirement in Schedule 2 of the Draft DCO [EN0110020/APP/3.1.1/3.4]) will be provided to ensure trees and woodland are protected during construction, operation and decommissioning in compliance with BS5837:2012 - BNG assessment including enhancement proposals is presented in ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20] and referenced in this ES.	Section 6.5 baseline survey findings, Section 6.6 embedded mitigation, and Section 6.7 assessment sections of the ES. ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20]

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	- Overall increase in the tree canopy cover to contribute to the Government's target to increase tree and canopy cover to 16.5% of land area in England by 2050. - A UK Forestry Standard compliant woodland management plan, including deer and squirrel control, is created to ensure the long term maintenance of all new and existing woodland within the Site."	- Tree and woodland planting is proposed within the Site. - Management of the Site will be through deer fencing to protect newly created habitats, including woodland. Management of woodlands during construction and operation will be proportionate.	
Rotherham Metropolitan Borough Council (RMBC)	Local Wildlife Sites "It is noted that for Volume 1 Chapter 6 Biodiversity and Nature Conservation, that the designated local wildlife sites included on the adopted Policies Map and within the zone of influence, have not all been considered. No explanation is provided within the ES as to why this is the case. This issue will need to be rectified in the submission ES although at that stage there will be no opportunity for RMBC to consider the impacts arising for these Local Wildlife Sites."	The LWS baseline has been checked and assessment of all sites of relevance provided within the ES.	Section 6.5
RMBC	Brampton Common LWS "The building of solar arrays within designated local wildlife sites including Brampton Common, and abutting other LWS sites, is not supported. It appears that, at this ES public consultation stage, there has been insufficient consideration of the details of mitigation of the negative impacts, and the likely compensation required, arising from the loss of this LWS. It is noted that details are to be provided, in an outline Biodiversity and Environmental Management Plan, for submission to the Secretary of State, by the Applicant in due course. However, there is great concern, given the current lack of habitat management details and mitigation proposed, during this public consultation stage, that the Council and other stakeholders, has no opportunity to influence the Applicant's response to such losses. It is noted that local ornithologists are also concerned by the lack of details within the ES. The inclusion of Brampton Common LWS within the NSIP project is not supported as no evidence is provided regarding potential mitigation arising from the destruction of the current habitat within hedgerow boundaries. The solar arrays should be removed from this parcel, and this should be an area for mitigation for the wider scheme parcels within WS2." "The loss of the Brampton Common LWS is significant to the series of Local Wildlife Sites within this Borough, but this is stated as not significant in the Non-Technical Summary (NTS). Habitat Enhancement and Mitigation Plans have not been shared and therefore the Applicant cannot claim this is not significant at this stage as the actions to be undertaken at a future date, are unknown to the Council and other stakeholders."	- The enhancement and management of hedgerows and grassland prescriptions are included within the oLEMP [EN0110020/APP/5.13] which will be applicable across the Site, including Brampton Common LWS. - Protective mitigation measures are included within Section 6.6 and within the oCEMP [EN0110020/APP/5.9] which will also be applied to Brampton Common LWS. - A meeting was held with RMBC, [Yorkshire Wildlife Trust, Sheffield Wildlife Trust, and SYMCA] on 12.01.26 (see Table 6-4) to discuss The Proposed Development's interaction with Brampton Common LWS and to explore opportunities to enhance it. - Enhancements to Brampton Common LWS listed within Table 6-12 are proposed with agreement sought from RMBC and LWS steering group partners on a management approach that will support the features for which the LWS was designated.	Section 6.7 and Table 6-12 oLEMP [EN0110020/APP/5.13] , oCEMP [EN0110020/APP/5.9] .
RMBC	Tree Preservation Orders "There are also designated Tree Preservation Orders (not LWS) that have not been considered. This omission should also be rectified."	Tree Preservation Orders (TPOs) apply to woodland blocks adjacent to the Site and embedded mitigation measures, the oCEMP [EN0110020/APP/5.9] and buffers specified in the Outline Design Parameters [EN0110020/APP/7.3] that are applicable to	Embedded mitigation Section 6.6 oCEMP [EN0110020/APP/5.9] . Outline Design Parameters [EN0110020/APP/7.3]

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		woodland also apply in the same way to those woodlands that have TPO status. All TPO woodland and trees to be avoided, with none present within the Order Limits other than at Cuckoo Way/Chesterfield canal, where trenchless crossing of the canal will avoid this TPO woodland (cc1999/0110). See ES Volume 3, Figure 6.2: TPOs within 200m of Order Limits [EN0110020/APP/6.19] (data source: https://maps.rotherham.gov.uk/mapping/)	
RMBC	Water pollution <i>“There are concerns regarding the proposed substation and cabling at W2P1 and its impact on the SM Blue Mans Bower, the watercourse and the LWS36 Whiston Meadows, the River Rother, Ulley Brook and Whiston Brook. The potential for pollution of watercourses is greatest where proposals are in close proximity to such receptors.”</i>	W2P1 and connecting Cable Corridor Option are no longer in the Order Limits.	N/A
RMBC	Great Crested Newts <i>“There was a Great Crested Newt Translocation Licence at Maltby Brickworks that has not been noted, LWS58 and 59 and RIGS 32 where cabling CR1b is proposed. I am however uncertain of the current status of such a licence.”</i>	The selected Cable Corridors avoid ponds throughout its length, LWS58, LWS59, and registered translocation licences.	N/A
RMBC	Sheep Grazing <i>“Sheep grazing is noted in the ES. This is not supported in this Borough and may have even greater negative impacts in destroying or preventing the creation of habitat enhancements within solar arrays. The long-term management of the land within the solar arrays and the provision of wide field margins to hedgerows/ trees/ ditches and the creation of scrapes and the creation of ponded areas within the solar arrays all need to be considered. These details are currently not available for review and discussion with local stakeholders and local communities.”</i>	The oLEMP [EN0110020/APP/5.13] submitted with the Application describes the planting of grassland margins within the Proposed Development. Long term management of the green infrastructure and landscaping, including appropriate use of grazing, are also presented in the oLEMP [EN0110020/APP/5.13].	oLEMP [EN0110020/APP/5.13]
RMBC	Recommendations “The NTS is re-drafted to clarify all points raised regarding designated LWS.” “The solar arrays proposed for LWS027 Brampton Common are removed and this LWS site is used for habitat enhancements for WS2 given its current local wildlife designation status.” “The “confidential” badger report and all species/ bird surveys and GIS mapping is provided to the Biological Records Office for review.” “The oBEMP is shared with the two local authorities and discussions are entered into before submission to the Secretary of State for Energy.” “Long term management and maintenance of any habitat creation including, habitat and species surveys, are carried out over the lifetime of the project if there are to be positive enhancements to biodiversity and nature’s recovery. It is anticipated that the results of all survey work undertaken will be submitted to the local authority or	- Where LWS are now being avoided, these will be removed from the NTS. - The enhancement and management of hedgerows and grassland prescriptions are included within the oLEMP [EN0110020/APP/5.13] which will be applicable across the Site, including Brampton Common LWS. - Protective mitigation measures are included within Section 6.6 and within the oCEMP [EN0110020/APP/5.9] which will also be applied to Brampton Common LWS. - The confidential badger report will be provided to the Biological Records Office for information. - Management, maintenance, and monitoring activities of habitats and timeframes around activities will be documented in the oLEMP	Embedded mitigation, Section 6.6. oLEMP [EN0110020/APP/5.13], oCEMP [EN0110020/APP/5.9]

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	<i>agreed successor body for inclusion with the Enhanced Biodiversity Duty Reports and for the monitoring of the LNRS over time.”</i> “A Soil Assessment is carried out, and the Applicant commits to following best practice principles set out in the Council’s adopted Soils Supplementary Planning Document to minimise impacts from construction and the creation of hardstanding for roads and tracks and to remove/replace soils within field boundaries/ the wider local area where possible.”	[EN0110020/APP/5.13] to meet the requirements for statutory BNG. The soil assessment comments are noted.	
Sheffield Wildlife Trust	Fragmentation of habitats <i>“Although some land is reserved for “biodiversity enhancement,” much of the Site would be fenced and covered in solar arrays. Even with mammal gates, fencing will fragment wildlife corridors, restricting movement of deer, badgers, and smaller mammals. Habitat creation proposals (wildflowers, bug hotels, etc.) are not in proportion to the scale of habitat loss. No mention of LNRS or NRN mapping of Priority Habitats or Opportunities to create stepping stones and nature corridors to enhance existing priority habitats – this development should have this statutory requirement at its core.”</i>	- The ES refers to the buffer zones set out in the current guidance. For ancient woodland it refers to the current government guidance, which is also referred to in the Woodland Trust draft ES response⁵² - Management of the Site in relation to mammal fencing and movement is noted, however in addition to mammal gates, habitat corridors and rides are proposed between fenced areas within the Proposed Development to ensure wildlife corridors are maintained for mammals. Further information is found in the oLEMP [EN0110020/APP/5.13]. - The enhancement and management of habitat, with prescriptions are included within the oLEMP [EN0110020/APP/5.13] which will be applicable across the Site and in meeting wider landscape habitat connectivity requirements for protected and priority species, priority habitats, and designations.	oLEMP [EN0110020/APP/5.13]
Sheffield Wildlife Trust	Underground cables <i>“Significant borders with LWS, AW and cables running through. Suggesting 25m landscape mitigation next to woodland - can this be minimum 50m when the development is adjacent to or close to Ancient Woodland, and can each area of bordering woodland be assessed independently”</i>	- The ES refers to the buffer zones set out in the current guidance and is specified within the Outline Design Parameters [EN0110020/APP/7.3]. For ancient woodland it refers to the current government guidance, which is also referred to in the Woodland Trust draft ES response⁵² - Protective measures for woodland are included in embedded mitigation and the oCEMP [EN0110020/APP/5.9].	Embedded mitigation measures, Section 6.6 oCEMP [EN0110020/APP/5.9] Outline Design Parameters [EN0110020/APP/7.3]
Sheffield Wildlife Trust	Ecological Risks Not Fully Evidenced <i>“Ecological surveys are incomplete. Current assurances are premature. The masterplan still lacks detail on specific habitat management areas, buffer widths, or long-term monitoring. Site light and noise pollution, particularly close to LWS/priority habitats/AW.”</i>	Access was obtained for the majority of the Order Limits; however, some sections of the Cable Corridor Study Area were not subject to field survey due to access constraints. Field surveys were therefore focused on key sections of the Cable Corridor where more sensitive habitats were considered most likely to occur, with the remaining sections assessed through desk-based methods. For those sections of the Cable Corridor where field surveys were not undertaken, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and landcover datasets. This	Embedded mitigation measures, Section 6.6 oCEMP [EN0110020/APP/5.9] oLEMP [EN0110020/APP/5.13] Outline Design Parameters [EN0110020/APP/7.3]

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		has enabled sufficient information to be available to determine an assessment based on worst case parameters using professional judgement. - Precautionary avoidance measures are proposed where there is an absence of data, which is subject to review where further information on biodiversity becomes available. - A commitment to complete surveys is provided in embedded mitigation/oCEMP [EN0110020/APP/5.9] with the results informing post consent activities and details within CEMP secured through a requirement in Schedule 2 of the Draft DCO [EN0110020/APP/3.1.1P/3.1]. - Habitat management and monitoring are included in the oLEMP [EN0110020/APP/5.13], buffer distances of the Proposed Development from habitats are specified within the Outline Design Parameters [EN0110020/APP/7.3], with light and noise pollution addressed in the embedded mitigation Section 6.6 and the oCEMP [EN0110020/APP/5.9].	
Sheffield Wildlife Trust	Cumulative Development Impacts <i>“The Environmental Impact Assessment identifies other nearby infrastructure schemes, yet no detailed cumulative assessment has been presented publicly. The combined footprint of WS1–3, plus grid connection works, could overwhelm local ecosystems and flood resilience. Construction Impacts Construction compounds and heavy HGV traffic (over 800 daily trips at peak) risk soil compaction, dust pollution, and habitat disturbance. Although the developer proposes an “Outline Construction Environmental Management Plan,” these are not legally binding until after consent — leaving key protections uncertain.”</i>	- Comments on cumulative impacts noted. A cumulative assessment is included within the ES - Measures to address dust and habitat disturbance are addressed in the embedded mitigation Section 6.6 and the oCEMP [EN0110020/APP/5.9].	Cumulative Effects Section 6.9 Embedded mitigation Section 6.6 oCEMP [EN0110020/APP/5.9]
Sheffield Wildlife Trust	Green Infrastructure Standards and LNRS “Should be planned, designed and managed to provide accessible and inclusive routes that connect people and wildlife to nature and places. - Should be treated as ‘green corridors’ not simply retained access strips. Green buffers should be included alongside PROWs and permission paths. These should include native planting, hedgerows and pollinator friendly edges and avoid fencing or lighting that fragments habitat and discourages use. Where a PROW functions as both an access route and a wildlife corridor near to Priority or irreplaceable Habitats it may be necessary to give a wider buffer e.g. 25m either side to avoid edge effect or trampling”	- Comments on Green Infrastructure Standards and LNRS are noted. Green buffers are included alongside PROWs and permissive paths. - Further information is provided in ES Volume 2, Chapter 7: Landscape and Visual [EN0110020/APP/6.7].	ES Volume 2, Chapter 7: Landscape and Visual [EN0110020/APP/6.7]
Sheffield Wildlife Trust	Substations	Comments on substations noted. The proposed Long Lane Substation Canklow	Cumulative effects are considered in Section 6.9.

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	<i>“Substations located near priority or irreplaceable habitats, eg Brinsworth (Canklow Washlands LWS and Whiston Meadows Ancient Woodland) can have the following impacts: Electrocution and arching - direct danger to protected species of birds and bats flying overhead and small ground mammals such as badgers, foxes and deer could be killed or burned if fencing is not maintained correctly.”</i>	Washlands and Whiston Meadows is subject to a separate planning application by National Grid Electricity Transmission (NGET) and associated assessment.	
Sheffield Wildlife Trust	Priority and Irreplaceable Habitats <i>“We are extremely concerned regarding the indicated plans for cable routes which cut across or near to priority and irreplaceable habitats, in particular near Brinsworth (Canklow Washlands) and priority habitat around Todwick and South Anston where the cabling could destroy significant areas of priority habitat. It is encouraging that the developers have indicated that there could be some compromise at Canklow with the option to tunnel under the Local Wildlife Site. However it is not understood how repairs and maintenance of this would occur, so we would like further clarification on this were the project to go ahead or how destruction of priority habitats at Todwick and South Anston could be avoided or mitigated.”</i>	- Comments on priority habitats and irreplaceable habitats are noted. Following the mitigation hierarchy, these habitats are avoided wherever possible, with trenchless crossing of sensitive habitats predominantly proposed for Cable Corridors. - Other than Long Lane where vehicular access to Cable Corridor CRE is proposed, the sensitive habitats of Canklow washlands are outside of the Order Limits and will be avoided. A trenchless crossing is proposed from the south and under the A618 into Cable Corridor CRE avoiding Canklow Washlands. - Open trenching of non-priority habitats are proposed (e.g. arable fields), with all habitats temporarily impacted and reinstated on completion of cabling. Embedded mitigation measures are proposed in Section 6.6 with works completed following the details within the oCEMP [EN0110020/APP/5.9]. - LWSs associated with Todwick and South Anston are included within the ES assessment, as they are associated with the temporary works activity within the Cable Corridors.	Embedded mitigation, Section 6.6 Assessment of effects, Section 6.7 oCEMP [EN0110020/APP/5.9]
Sheffield Wildlife Trust	Biodiversity Net Gain <i>“This approach appears to be generic, does not include mapping of priority habitats or information on Local Wildlife Sites. No reference to LNRS No BNG baseline metric or management plan included Surveys required on each bordering habitat No site-specific mitigations. No real cumulative impact assessments With regard to BNG - we would expect the solar panels fields to be assessed as developed land, although there are opportunities for vegetation and wildlife within these fields, the installation of solar panels, fencing and tracks changes the land to more industrialised land use than previously and given the life span of the solar panels, ecologically speaking they are permanent structures and the expected habitat condition beneath the solar panels is likely to be unrealistic and difficult to achieve in practice. We would also expect the BNG to be achieved by the enhancement of local priority habitats, stepping stones and ecological corridors which are free from development and in very close proximity to the developed areas. We would be happy to work with the developers to help identify the most appropriate habitats to be enhanced.”</i>	- Information on local wildlife sites has been updated and included in Table 6-9 of Section 6.5. Priority habitats are referenced within the ES. - An oLEMP [EN0110020/APP/5.13] has been completed that addresses habitat management and monitoring and provides prescriptive information on proposed habitat types and their connectivity within the Site and wider landscape. - The Application is supported by ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20], which sets out the baseline habitats and associated biodiversity units and presents the Proposed Development's strategy for achieving a minimum of 10% biodiversity net gain on-site. - It should be noted that at the time of writing the submission, the Local Nature Recovery Strategy (LNRS) had not been published. However, strategic significance has been reviewed with reference to relevant local plans and evidence, including Local Biodiversity	ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20] oLEMP [EN0110020/APP/5.13] Table 6-9 and Section 6.5.

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		Action Plans, local planning policy, and the distribution of Local Wildlife Sites within the Site. With regard to habitats beneath the solar panels, the BNG assessment has been informed by relevant guidance, including the March 2026 CIEEM In Practice article and UK solar sector good practice⁵³⁵⁴. On this basis, it has been assumed that the habitat most commonly present beneath solar panels would be at a minimum modified grassland of poor condition, creating in most cases a biodiversity net gain by comparison with the previous land use. This assessment is borne out by surveys of already operational solar farms, which have shown significant biodiversity gains.	
Sheffield Wildlife Trust	Omissions and Areas for Improvement <u>Old Willow Carr</u> <i>"Still wet ground as seems to be avoided to this day field currently sectioned - possibly interesting wetland habitat at 447615.45,379970.89 in addition the field to the north has a set aside which includes a circular shadow - possibly a pond. There are another 2 sizable ponds Killamarsh and Woodhall."</i> <u>West of Ulley</u> <i>"A watercourse with no mitigation or setback can be seen in the google maps."</i> <u>Hedgerows</u> <i>"The area to the west of North Anston historically had hundreds of hedgerows which in modern time have been lost - possible for the reinstatement of some?"</i> <i>Triangle of trees (449676.59,385842.84)- more mitigation needed than the current outline."</i> <u>Grassland</u> <i>"Brampton common has a historic gorse area - should be investigated as this may be more appropriate land for mitigation than a couple of the other sizable sections nearby. Better land for mitigation: 450483.37,396064.85"</i>	- Enhancement proposals to aquatic, grassland, and hedgerow habitats within the Solar Array area have been presented in the oLEMP [EN0110020/APP/5.13] and Development Design, with BNG measures recorded in ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20] and referenced in this ES. Minimum buffer distances from retained sensitive habitat features within the Order Limits and adjacent are provided in the Outline Design Parameters [EN0110020/APP/7.3] to avoid impacts. - Old Willow Carr, land to the west of Ulley are beyond the Order Limits. Whilst habitats are going to be enhanced and specifically link to offsite habitats to contribute to benefiting the wider biodiversity network, general offsite biodiversity improvements are not proposed. - Hedgerows and grassland habitats are being created and extensively enhanced within the Site to provide a stronger network and connecting habitat features to benefit biodiversity onsite and beyond the Order Limits. This includes retaining, enhancing and creating new hedgerows in the area to the west of North Anston. - The triangle of trees is being avoided with a proposed buffer, whilst additional tree planting is proposed across the Site. - The historic gorse area within Brampton Common is not an extant habitat, with modified grassland currently present in this area. Proposals to enhance Brampton Common have been made but does not include this absent habitat type.	ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20] Outline Design Parameters [EN0110020/APP/7.3]
SK58 Birders	<u>Kiveton</u>	Breeding Bird Surveys have been carried out throughout the Order Limits, as summarised in	ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]

<i>"Fields to the South, east and west of the old Kiveton colliery site need more land scape mitigation and enhancement due to breeding Skylarks and Barn Owls and Long eared Owl (has bred) presence in the area. There seems to be more land scape mitigation and enhancement towards Harthill and Woodall which should be also used as a continuation at Kiveton. Have you carried out breeding bird or ecology surveys out for this area. I have carried out breeding bird surveys in this area for 27 years for the British Trust for Ornithology so I know what birds, butterflies and mammals are likely to be seen in the area, although this can change each year. We are also finding that the area you intend to use for solar panels is good for breeding Skylarks and close by good for breeding Lapwings and for the first time this year Oystercatcher which used the field you intend to put the substation in to feed. The inclusion of the water area on this part will be good for both Lapwings, Oystercatchers and amphibians but the area around to the south needs to be managed for these birds and Skylarks. A recent solar farm at Common Farm Dinnington allowed for large managed meadow areas for Skylark to breed 40 x 75m and 8.7 ha managed for Lapwings to breed and included several scrapes."</i> <u>Anston</u> <i>"The fields to the north side of the A57 need more land scape mitigation and enhancement due to breeding Skylarks and breeding Barn Owls close by (hedges need to be left to increase in height). We are also finding that the area you intend to use for solar panels is good for breeding Skylarks and from time to time for breeding Lapwings when bare areas have been left or flooded and the crops dying. The inclusion of wader scrapes and ponds on this part will be good for both Lapwings and amphibians. The area around this area needs to be managed for these birds and Skylarks. A recent solar farm at Common Farm Dinnington allowed for large managed meadow areas for Skylark to breed 40 x 75m and 8.7 ha managed for Lapwings to breed and included several scrapes."</i> <u>Hardwick</u> <i>"The area of land to the south could have its meadow area improved for breeding Lapwings, Snipe and Redshanks which used to breed here in good numbers and Skylarks still do. In the late eighties and early nineties Curlews bred on the site a very rare lowland breeder. In the past it did have breeding Long eared and Barn Owls (these probably still do). It's a marshy area and could be greatly improved to bring back the birds mentioned. Like the Common farm solar panel site wader scrapes and ponds would be a great asset to breeding waders and amphibians."</i> <u>Brampton en le Morthen and Hawk Hill Lane</u> <i>"The area of land could have its meadow area improved for breeding Lapwings, snipe and Redshank, which used to breed here in good numbers and Skylarks still do. Until recently it did have breeding Long eared and Barn Owls (these probably still do). It's a marshy area and could be greatly improved"</i>	ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1] <u>Kiveton</u> • Fields to the south of Kiveton include open areas, free from panels, with habitat for breeding skylark. • Lapwing were recorded [REDACTED] and it is anticipated an area of habitat will be created off-site to compensate for any lost breeding opportunities within the Order Limits. • Wider habitat enhancements in this area expected to offer benefits for the wider bird assemblage. • No substation in the Kiveton area is included within the Proposed Development <u>Anston</u> • Skylarks are present throughout the Order Limits, including west of Anston. Where possible, open habitats for breeding skylark are retained. Where this is not possible, off-site compensation will include skylark plots in the surrounding landscape, to help boost skylark productivity and support local populations. Although breeding opportunities are assumed to reduce in fields with solar, these are expected still provide foraging habitat and form part of foraging territories of birds in nearby fields. • Lapwing were recorded breeding in W3 and it is anticipated an area of habitat will be created off-site to compensate for any lost breeding opportunities within the Order Limits. • Barn owl is expected to benefit from the habitat created by the Proposed Development, and additional nesting boxes will be installed within the Order Limits. <u>Hardwick and Brampton en le Morthen and Hawk Hill Lane</u> • Restoration of wet grassland west of Long Road is proposed as an enhancement to benefit breeding waders, such as lapwing. Populations of other wader species have declined significantly for a range of reasons, and it is unlikely the area will ever support the assemblage it did 30 years ago, but the proposed habitats are expected to offer benefits for a range of species. • Wider habitat enhancements in this area will have benefits for a range of other bird species.	
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	to bring back the birds mentioned. Like the Common farm solar panel site wader scrapes and ponds would be a great asset to breeding waders and amphibians.”		
The Woodland Trust	Impact on Ancient Woodland “With regards to this particular proposal, we are concerned about the following impacts: - • Noise, light and dust pollution arising during both the construction and operational phases, including for example from construction work, vehicle use or security lighting • Fragmentation and loss of adjacent semi-natural habitats given the scale of development proposed adjacent to ancient woodland • Root encroachment of trees growing along the ancient woodland boundaries from the close proximity of infrastructure • Long-term future requirements for managing the woodland canopy where it overhangs the development for reasons of safety, access or shading” “A buffer zone should be in place to protect the ancient woodland from indirect impacts associated with the development. We note that the Environmental Statement Chapter 6 states that ancient woodland will be provided with: “a buffer zone of at least 15 times larger than the diameter of each tree in an ancient or broadleaved woodland edge boundary to avoid root damage (known as the root protection area)”. This is inconsistent with the standing advice and would likely result in the ancient woodlands being afforded insufficient buffer widths. Please note that the standing advice states the following with regards to buffer widths: “the proposal should have a buffer zone of at least 15 metres from the boundary of the woodland to avoid root damage (known as the root protection area). Where assessment shows other impacts are likely to extend beyond this distance, the proposal is likely to need a larger buffer zone.” “We are concerned that some aspects of the proposals have potential to impact ancient woodland through fragmentation and loss of adjacent semi-natural habitat. For example, Burnt Wood would be increasingly separated from adjacent open ground and the two narrow areas of ancient woodland near Conisbrough Lodge appear to be afforded only limited buffering. Without mitigation these changes have potential to impact habitat connectivity and integrity, affecting the dispersal, feeding and nesting of species relying on woodland edge habitats and species using adjacent open ground. The design needs to ensure that the ancient woodlands and their wildlife are not impacted by the proximity and extent of infrastructure adjacent to the habitat. We note that the current design avoids siting any BESS or substation infrastructure close to ancient woodland. Should future design iterations re-position such infrastructure, the proposals would need to ensure that buffer zones are sufficiently wide to mitigate potential noise pollution and fire risk. All buffer zones should be free from encroachment, including by	• We note the impact on ancient woodland comment. Ancient woodland will be avoided within the Order Limits (see ES Volume 3, Figure 6.2.3: Priority Habitats [EN0110020/APP/6.19]. Measures are in place within the oCEMP [EN0110020/APP/5.9] to avoid noise, light and dust pollution to ancient woodland during construction, with design measures to avoid disturbance in operation provided in ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5] • The ES refers to the buffer zones set out in the current government guidance for ancient woodlands and veteran trees⁵²: • We note the typo re buffer zone for ancient woodland (should be 15m) and that has been corrected in this ES. • We note the typo re buffer zone for ancient woodland and have corrected in this ES to 15m in line with government guidance. We note The Woodland Trusts observations on guidance advising in some cases to extend beyond this distance, and it should be noted that a buffer distance of 25m for woodland is proposed within the Outline Design Parameters [EN0110020/APP/7.3] that goes beyond stated government guidance. • Ancient woodland is presently fragmented within the landscape and between areas of the Order Limits. Woodland habitat connectivity will be strengthened where possible throughout the Site through the oLEMP [EN0110020/APP/5.13].	Embedded Mitigation, Section 6.6.23 and 6.6.24. Assessment of effects Section 6.7. oCEMP [EN0110020/APP/5.9] oLEMP [EN0110020/APP/5.13] ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]

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	solar array fields, access roads, fencing, cabling, BESS or other infrastructure.”		
The Woodland Trust	Impact on Ancient and Veteran Trees “The Environmental Statement Chapter 6 states: “No veteran oak trees have been identified within W2 or W3, however, there is one veteran oak tree in W1. There are 111,000 trees which have been identified as ancient or veteran within England. Based on the land size of England, this represents a density of circa 117 ha per ancient or veteran tree. The presence of just one veteran tree within the 1,371 ha of the Site represents a scarce ecological feature within the Site in comparison to the national density. The identification of ancient or veteran trees within the Cable Corridor will be confirmed through baseline field surveys are reported in the ES.” Please note that the reference above to 111,000 trees is a partial extract from Keepers of Time. The full text emphasises that the number of veteran trees will be much greater than 111,000 trees. It also refers to using the Woodland Trust’s Ancient Tree Inventory (ATI). It is not clear whether the ATI has been reviewed in this case, but a review shows that although there are some veteran and notable trees registered in the local area there are currently no trees within the Site which are recorded on the ATI. Please note, however, that the ATI is a live database and therefore tree records are regularly added and updated.” “An arboricultural impact assessment should be undertaken early within the design process. The arboricultural assessment should be prepared in accordance with BS 5837:2012. We recommend that the assessment is carried out by a veteran tree specialist, ideally accredited through VETcert - Arboricultural Association - VETcert (trees.org.uk).”	- The ES refers to the buffer zones set out in the current government guidance for ancient woodlands and veteran trees⁵² - We note the comment on the ATI and note that this dataset shows no ancient or veteran trees within the Order Limits. There is one veteran oak tree identified during surveys in the north of W1 (~1.3km east of Hooton Roberts). This is shown on ES Volume 3, Figure 6.2.1 UK Habitat Classification – The Site (EN0110020/APP/6.19): - We note the typo re buffer zone for ancient woodland (should be 15m) and this has been corrected in this ES. - An arboriculture survey, and Tree Constraints Plan (TCP) has been provided in ES Volume 3, Appendix 6.14: Arboriculture Survey and Tree Constraints Plan [EN0110020/APP/6.20] the scope of which covered access points to the Proposed Development. Further arboricultural surveys will be undertaken prior to construction and mitigation measures within the CEMP (secured through a requirement in Schedule 2 of the Draft DCO [EN0110020/APP/3.1.1/3-4]) will be provided to ensure trees and woodland are protected during construction, operation and decommissioning in compliance with BS5837:2012. - Embedded mitigation measures in Section 6.6 and protective measures in relation to construction and trees is addressed in the oCEMP [EN0110020/APP/5.9].	Embedded Mitigation, Sections 6.6.23 and 6.6.24 oCEMP [EN0110020/APP/5.9]
Yorkshire Wildlife Trust	Riparian Zones “In previous discussions with the Applicant, we commented on the presence of ancient woodland along the riparian zone at the Southern boundary of the Order Limits of Whitestone 1. The Applicant stated they would consider amending the boundary in order to mitigate potential impacts on the ancient woodland. In the updated project information, this has not been updated and after discussions with the Applicant they have stated this is still under discussion. We would recommend that this is revisited, and the Order Limits revised in this area in line with recommended buffer zones. We would draw the Applicant’s attention to the 50m buffers recommended by the Woodland Trust to avoid potential impacts on the ancient woodland. In the consultation brochures there is a lack of clear mapping of riparian boundaries despite presence of watercourses throughout	- The ES refers to the buffer zones set out in the current guidance and referenced in the Outline Design Parameters [EN0110020/APP/7.3]. For ancient woodland it refers to the current government guidance, which is also referred to in the Woodland Trust draft ES response⁵² - In terms of watercourses, wherever possible, a horizontal buffer of 10m from the top of each bank for rivers, streams and canals and 5m from the top of the bank for ditches is applied. This aligns with Natural England guidelines in the Statutory Metric to maintain the ecological function and habitat quality of priority watercourses⁵⁵. - Access was obtained for most of the Order Limits; however, some sections of the Cable	oCEMP [EN0110020/APP/5.9] Outline Design Parameters [EN0110020/APP/7.3]

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	<i>the Order Limits. We feel that riparian zones and watercourse presence should be given an appropriate weighting in these documents. We must draw the Applicants attention to Strategic Objective CS24, in the Rotherham Local Plan: Conserving and enhancing the water environment, which outlines the LPA's guidance on protecting and enhancing these valuable and sensitive ecological features. Given the extensive footprint of Whitestone Solar Farm 1, 2 & 3, the cable route and associated infrastructure, any impacts on watercourses and riparian areas should be clearly addressed. Guidance from Natural England states 5–8m vegetated buffers are recommended to riparian zones and this should be consistent throughout the Order Limits.</i> <i>In addition, there is little mention of wetland mitigation and enhancement measures included. We support the mention of improvements to green and blue infrastructure throughout the consultation documents, however at this stage, we feel the Applicant could go further to address potential impacts to wetland environments present within the Order Limits and use the opportunity to enhance them where possible.</i>	Corridor Study Area were not subject to field survey due to access constraints. Field surveys were therefore focused on key sections of the Cable Corridor where more sensitive habitats were considered most likely to occur, with the remaining sections assessed through desk-based methods. For those sections of the Cable Corridor where field surveys were not undertaken, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and landcover datasets. This has enabled sufficient information to be available to determine an assessment based on worst case parameters using professional judgement. A commitment to complete surveys is provided in embedded mitigation/oCEMP [EN0110020/APP/5.9] with the results informing post consent activities and updates to the CEMP.	
Yorkshire Wildlife Trust	Biodiversity and Planting <i>“In previous discussions with the Applicant, we were assured that at least 280Ha of land was to be allocated for mitigation. Given the reduced density of panels outlined within the updated masterplan, we must ask if this mitigation area has been increased in size, as it has not been mentioned within these consultation documents.”</i> <i>“On Pg. 8 of the consultation brochures, the Applicant includes the commitment to Biodiversity Net Gain (BNG) (>10%), with suggested use of native grasses/wildflowers. We would request that more area specific planting schemes are described, as the Order Limits are extensive and landscape conditions varied. To achieve the uplifts the Applicant has committed to, targeted planting schemes will be required due to the varying soil compositions present across the extents of the Order Limits to achieve the best possible conditions.”</i>	- The Applicant commits to achieving the statutory 10% BNG and over 280ha of green infrastructure area is included within the Order Limits. - Comments on soils and appropriate planting are noted. Soil preparation is recognised as integral prior to planting, as is the commitment to the selection of a seed mix appropriate to soil conditions. Further information on habitat creation and management is provided in the oLEMP [EN0110020/APP/5.13].	ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20] oLEMP [EN0110020/APP/5.13]
Yorkshire Wildlife Trust	Survey Data and Buffer Zones <i>“We welcome the Applicant's acknowledgement of consultation with YWT in the Environmental Assessment chapter of the consultation documents; however, we do not agree with the following statement: “Subject to the completion of the remaining surveys and the use of appropriate buffers in the masterplan, we do not expect any significant adverse effects and do expect significant benefits for biodiversity” (pg. 28). At this stage, until all conditions assessments and necessary ecological surveys have been completed, we do not see how the Applicant can state that no significant adverse effects on nature are expected.</i> <i>The offsets currently presented in the consultation documents indicate 15–25m planted buffers around areas of woodland, which we acknowledge is in accordance with government guidelines. Despite this, due to the presence of areas of ancient woodland, adjacent to the Order Limits, we would recommend the Applicant</i>	Access was obtained for most of the Order Limits; however, some sections of the Cable Corridor Study Area were not subject to field survey due to access constraints. Field surveys were therefore focused on key sections of the Cable Corridor where more sensitive habitats were considered most likely to occur, with the remaining sections assessed through desk-based methods. For those sections of the Cable Corridor where field surveys were not undertaken, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and landcover datasets. This has enabled sufficient information to be available to determine an assessment based	oCEMP [EN0110020/APP/5.9]

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	<i>considers 50m vegetated buffers for ancient woodland where necessary, as per the guidance from the Woodland Trust.”</i>	on worst case parameters using professional judgement. - Precautionary avoidance measures are proposed where there is an absence of data, which is subject to review where further information on biodiversity becomes available. - A commitment to complete surveys is provided in embedded mitigation / oCEMP [EN0110020/APP/5.9] with the results informing post consent activities and updates to the CEMP. - Where baseline information is currently unavailable, a precautionary avoidance approach in line with the mitigation hierarchy will be applied in those areas. Where additional information becomes available, the avoidance approach and applicability will be reviewed. This approach on this basis, will seek to ensure that no significant adverse effects on nature occur. - The ES refers to the buffer zones set out in the current guidance. For ancient woodland it refers to the current government guidance, which as stated is also referred to in the Woodland Trust draft ES response52.	
Yorkshire Wildlife Trust	Ongoing Survey and Ecological Data Collection <i>“We note the Applicant has indicated that although not ideal, the surveys for protected species will be conducted outside of guideline periods where necessary; stating that the importance of having the data is paramount to the timing of surveys. Whilst we appreciate the Applicant’s commitment to conducting critical surveys regardless of the timing constraints, we do not recommend this methodology as it does not comply with CIEEM Best Practice Principles, and without robust ecological survey data the proposals could also contravene the Wildlife and Countryside Act (WCA) 1981, therefore we would recommend this is rectified, with survey data collected in the appropriate survey seasons, prior to the DCO application submission.”</i> <i>“After recent communication with the Applicant, it was suggested that a ‘Bio-Blitz’ approach may need to be implemented in order to gather ecological data in advance of the DCO Application submission, due to access limitations to date. We recommend further clarification on the use of the ‘bio-blitz’ approach mentioned by the Applicant. This approach could provide a useful tool for more comprehensive biodiversity data collection, especially for assessing the full ecological value of the Site, however there are currently no details on the proposed methodology for this approach, and therefore we cannot comment on its adequacy at this stage.”</i>	- Where there is baseline data available, an assessment within the ES has taken place. Where baseline data is currently absent, the mitigation hierarchy will be applied where possible to avoid impacts to sensitive biodiversity features, and a worst-case assessment is presented. - Further data will be collected post-submission in the correct season, to provide additional information at examination. - Comments on a ‘Bio-blitz’ approach have been noted. Standard survey methodologies have been used in completing surveys, with surveys particularly focussed on areas where there is identifiable biodiversity interest. Multiple assessments have been completed and data collected during the same time period where it is an appropriate season for a range of protected species and habitats to be assessed.	ES Volume 3, Appendices 6.1 - 6.13: [EN0110020/APP/6.20].
Yorkshire Wildlife Trust	Cable Route Construction <i>“There are several instances throughout the Order Limits where the cable route intersects with sites of local importance for nature. Within</i>	Cable Corridor crossings have been selected with a design that seeks to avoid impacts to sensitive ecological features wherever possible. Risks to biodiversity are assessed	Embedded mitigation measures, Section 6.6 Assessment of effects, Section 6.7 oCEMP [EN0110020/APP/5.9]

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	<i>the Order Limits of Whitestone 3, the Axle Lane LWS looks to be affected, as an example. The Applicant has indicated that the risks to biodiversity will be assessed, and this will impact the decisions made regarding the construction methods proposed in specific areas, which we would expect to see detailed further as the cable routes are defined. The Applicant has indicated that open trench construction will be proposed in lower risk areas such as arable farmland and horizontal drilling in higher risk areas such as LWSs and at river crossings. It is crucial that detailed mitigation strategies are provided once the cable routes are finalised to minimize adverse impacts, particularly in areas with higher ecological sensitivity. The Applicant has stated that they will be following the mitigation hierarchy whilst the design of the cable route corridor is further designed, which we are supportive of. This would include avoiding known sensitive features where possible and reducing impacts through carefully planned solutions. These strategies should be refined and incorporated into the ES.”</i>	within the ES to include proportionate mitigation approaches across the Order Limits. Embedded mitigation measures are included in Section 6.6, with measures to protect retained habitats and species included within the oCEMP [EN0110020/APP/5.9]. Habitats within Axle Lane LWS will be temporarily affected while cable laying in the Cable Corridor takes place. As this LWS is in the Order Limits and is a local designation, an assessment of affects to this designation is included in Section 6.7. Mitigation measures to protect the features for which the LWS has been designated are also included within the oCEMP [EN0110020/APP/5.9].	
Yorkshire Wildlife Trust	Botanical Impacts and BNG <i>“The Applicant has acknowledged the need for targeted botanical surveys throughout the Order Limits, especially considering the varying geological conditions. In areas with acidic soils, seed mixes should favour acid-tolerant plants, while calciferous grasses should be chosen for magnesian limestone landscapes. We welcome this tailored approach, which is essential to ensure biodiversity net gain (BNG) is achieved. However, we must reiterate the importance of the timing of these botanical surveys in generating an accurate baseline for the BNG process. Carrying out these essential surveys outside of the ideal survey period or as part of the “bio-blitz” approach would not be acceptable towards achieving a robust net gain.”</i>	- Access was obtained for most of the Order Limits; however, some sections of the Cable Corridor Study Area were not subject to field survey due to access constraints. Field surveys were therefore focused on key sections of the Cable Corridor where more sensitive habitats were considered most likely to occur, with the remaining sections assessed through desk-based methods. For those sections of the Cable Corridor where field surveys were not undertaken, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and landcover datasets. This has enabled sufficient information to be available to determine an assessment based on worst case parameters using professional judgement. - Precautionary avoidance measures are proposed where there is an absence of data, which is subject to review where further information on biodiversity becomes available. - Based on the extensive survey work undertaken, it is considered that sufficient baseline has been recorded to base the assessment on and inform the design. Nonetheless, further survey work is ongoing in 2026, where access permits. The Applicant will provide the Examining Authority with any outputs as part of that workstream, but its approach in the ES has ensured that a reasonable worst-case scenario has been assessed through the use of public information, assumptions and embedded mitigation (including requirements relating to avoidance measures, and requirements for	oLEMP [EN0110020/APP/5.13] oCEMP [EN0110020/APP/5.9]

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		pre-construction surveys which will inform post-consent activities). Comments on soils and appropriate planting are noted. Soil preparation is recognised as integral prior to planting, as is the commitment to the selection of a seed mix appropriate to soil conditions. Further details on habitat creation and management are provided in the oLEMP [EN0110020/APP/5.13].	
Yorkshire Wildlife Trust	Brampton Common Local Wildlife Site (LWS) <i>“The Applicant’s current approach to the LWS does not appear to adequately reflect the site’s former ecological value, in which it cites: “Brampton Common LWS is within the Site and is designated for its ancient native species rich hedgerows and skylark features.” (Draft Environmental Statement, Page 46 Table 6.10: Scoping of Important Ecological Features). We would recommend the Applicant reconsiders the designating features of the LWS. YWT view there being a clear opportunity to restore the wetland habitat for breeding waders, such as snipe, redshank, and lapwing. The re-wetting of the land, particularly where poorly managed drainage has occurred, could reverse the decline of wading birds and contribute significantly to BNG. We encourage the Applicant to consider the restoration of wetland habitats as part of their mitigation efforts and to incorporate this into the design and biodiversity strategy.</i> <i>In addition to the inconsistencies regarding the designating features of Brampton Common LWS, we are concerned about the encroachment of solar panels onto the LWS, as current plans show solar arrays within the LWS boundary. This should be amended, due to LWS designation and the potential to restore this area of local importance from its current degraded state; as the presence of solar infrastructure within such a sensitive habitat would mean that potential restoration would not be feasible. Additionally, we note the proposed substation location at the southern boundary of the LWS, which is not ideal. The Applicant has suggested alternative locations in Appendix 5 of the ES, we strongly recommend that these alternatives be considered to minimise potential biodiversity impacts.”</i>	- Comments on Brampton Common LWS are noted. The oLEMP [EN0110020/APP/5.13] includes enhancement of native species rich hedgerows (H1) and breeding skylark population (B3), the features for which it is designated, and also includes the provision of wet grassland and scrapes to support wading birds. - The solar panel infrastructure covers <i>circa</i> 25% of the LWS, giving an opportunity to restore or improve degraded hedgerows throughout the LWS, and management of grassland under and around solar panels and in undeveloped grassland habitats. - The proposed substation is 325m beyond the southern boundary of the LWS. - Continued consultation with RMBC, YWT and other relevant stakeholders to agree common ground and an approach to the management of the LWS is proposed leading up to examination. - A meeting on the 12th January 2026 with RMBC, YWT, and SYMCA representatives, discussed enhancement opportunities, protection of habitats, habitat creation approaches, strategic importance and current and future management of Brampton Common LWS. Protection of the designation features such as breeding skylark and hedgerows are included in the oCEMP [EN0110020/APP/5.9], with habitat creation, biodiversity prescriptions and management approaches detailed within the oLEMP [EN0110020/APP/5.13]. - Proposed enhancements and opportunities for Brampton Common LWS listed within Table 6-12 are being consulted on with the LPA and YWT on a management approach that will support the features for which the LWS was designated and in line with emerging aims of the LNRS.	Assessment of effects, Section 6.7, Table 6-9 oCEMP [EN0110020/APP/5.9] oLEMP [EN0110020/APP/5.13]

Targeted Consultation

- 6.3.10 A targeted consultation period was held between 23 February and 25 March 2026 on proposed changes to the Order Limits. This included notifying relevant prescribed consultees. Feedback from this targeted consultation and the Applicant's response is included in the **Consultation Report [EN0110020/APP/5.2]**. No comments were provided by statutory consultees through the targeted consultation period in relation to biodiversity.
- 6.3.11 A second Targeted Consultation was held for any individuals that had been identified as land interests after the Statutory Consultation. No comments were provided by statutory consultees through the Targeted Consultation period in relation to biodiversity.

Other Consultation

6.3.12 Details of consultation to date undertaken outside of the scoping exercise and statutory consultation are presented in **Table 6-4**.

Table 6-4: Summary of Other Consultation

Consultee	Date	Summary of Discussion	Where This is Addressed in This ES
<i>Environment Agency</i>	8 January 2025	Comments reported for individual teams within the Environment Agency on initial proposal information: - No known populations of WCC within 2km – signal crayfish in the area; recommended speaking to local biological records centres to get records - Mentioned ARK sites – led by Crayfish Action Sheffield Project and run by Sheffield University. Environment Agency is reaching out to internal crayfish group for further information - Environment Agency request that potential impacts on fish is assessed within the Application as high voltage cables under watercourses can create an electromagnetic field which can impact fish behaviour, eggs and larvae. The EA stated they would try to provide more details of what is required in this assessment and send across relevant guidance - The EA recommended consulting with the Yorkshire Wildlife Trust due to water-dependent habitats and ecosystems in the area; and - Recommended that otter, water vole and invasive non-native species are surveyed and assessed within the Application.	Section 6.4 and Section 6.5 of this Chapter
<i>Canal and Rivers Trust</i>	13 January 2025	Impact on Biodiversity, Ecology and Habitats. Requirement for biodiversity studies to inform assessment of impacts on protected species. - Request for suite of biodiversity studies to inform assessment of impacts on protected species - Ensure assessment of impacts focused on fish and invertebrates from sediment movement from HDD vibration is scoped in; and - Impacts from artificial lighting are considered in the assessment, with a focus on light sensitive species such as bats.	Section 6.4 and Section 6.5 of this Chapter
<i>Environment Agency</i>	23 January 2025	Initial comments from the Environment Agency provided based on the information provided for non-statutory consultation. Key considerations related to biodiversity include: - The EA anticipate that the implementation of statutory biodiversity net gain will be a requirement for the Proposed Development and they recommend that it is considered early in the design process - A River Condition Assessment survey should be undertaken to determine the baseline condition of watercourses - The Local Nature Recovery Strategy and Water Framework Directive mitigation measures within River Basin Management Plans should be used to identify opportunities. Consideration could also be given to supporting other ongoing projects being delivered in the catchment for watercourse improvements - The Applicant should ensure there is a sufficient buffer between the development, any fences and any watercourse or ditch, which will allow the free movement of riparian mammals up and down the natural river corridor. The EA would expect this to be a minimum of 10m from the bank-top - Consideration should be given the sowing bare buffer strips with a species-rich grass and wildflower mix within these buffers - There are several records of protected species present on watercourses within or near the Order Limits, and the potential impacts on these species should be assessed - During construction, open trenches should be covered over during the night, night-time working should be avoided as this will disturb nocturnal species, an Ecological Clerk of Works should be present whilst works are undertaken - Records of otter and water vole are present on watercourses within or near the Order Limits, and therefore riparian mammal surveys should be undertaken and potential enhancement opportunities for these species should be considered - The EA are not aware of any populations of white-clawed crayfish within 2km of the Order Limits due to the presence of signal crayfish, although they recommend a data search is completed to confirm this	Table 6-2 , Section 6.4 and Section 6.5 of this Chapter

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Consultee	Date	Summary of Discussion	Where This is Addressed in This ES
		- Impacts on watercourses and fish during construction, operation, and decommissioning should be assessed in the EIA, including potential impacts from pollution, increased surface water runoff, construction noise, increased lighting and electromagnetic fields - Invasive non-native species (INNS) are recorded within or near to the Order Limits, including Japanese knotweed, Indian balsam, Canadian waterweed, New Zealand Pigmyweed, Nuttail's Water-Weed, least duckweed, and American Mink. INNS surveys should be undertaken and a robust Biosecurity Plan and INNS management plan must be included within the Environmental Statement - Firsby Reservoir Local Nature Reserve should be included in the assessment, as well as multiple water-dependent non-statutory sites within or near to the Order Limits.	
<i>Yorkshire Wildlife Trust</i>	29 January 2025	Impact on Biodiversity, Ecology and Habitats. Requirement for biodiversity studies to inform assessment of impacts on protected species and habitats. - Impacts through direct loss of habitats - Seek to include habitat creation and enhancement opportunities for wildlife - Indirect impacts of drainage or runoff or fragmentation of habitats - Impacts to habitats through damage or disturbance during construction/decommissioning; - Disturbance or displacement of species - Impacts through loss of habitat to ground nesting birds - Impacts from perimeter fencing to wildlife movement - Cumulative affects with similar schemes; and - Impacts (positive) from reduction in the effects of climate change.	Section 6.4, Section 6.7 and Section 6.9 of this Chapter. Cumulative effects with similar schemes have been discussed in Section 6.9.
<i>Natural England</i>	24 April 2025	Introductory meeting held with Natural England to introduce them to the Proposed Development, the understanding at the time of the ecology baseline, and the proposed upcoming surveys.	Section 6.4 and Section 6.5 of this Chapter.
<i>Environment Agency</i>	3 June 2025	Freshwater Fisheries Act 1975, The Eels (England and Wales) Regulations 2009, and Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024 should be considered within the ES.	Section 6.2 of this Chapter and ES Volume 3, Appendix 6.1: Legislation Policy and Guidance [EN0110020/APP/6.20] .
<i>Environment Agency</i>	3 June 2025	Fish and aquatic ecology should be scoped into the EIA in the absence of any supporting evidence to demonstrate that they are either not present or will not be impacted through: - Direct harm to fish and aquatic species - Harm to their habitat through sedimentation - Impacts from pollution and increased sedimentation - Electromagnetic fields - Light pollution - Construction noise and vibration; and - Watercourse crossings.	Section 6.4 and Section 6.5 of this Chapter
<i>Environment Agency</i>	9 July 2025	Review of scoping comments provided by the Environment Agency, and how and where they will be addressed in the ES. - Scope and approach to aquatic surveys discussed further with the Environment Agency and completed within the Site and continuing in 2026 - Discussion regarding consideration of invasive, non-native species and oLEMP [EN0110020/APP/5.13]; - Biodiversity Net Gain briefly discussed; and - Update on design refinement and watercourse crossings.	Key scoping comments raised discussed in Table 6-3 , and aquatic surveys discussed in Sections 6.6 and Section 6.7 of this Chapter.
<i>Yorkshire Wildlife Trust</i>	15 July 2025	Introduction to the Proposed Development and current understanding of the ecological baseline of the Order Limits. - Discussion regarding Brampton Common LWS, and any information that could be provided regarding its management - Information on the LNRS; and - Potential enhancement opportunities for the LWS, and the wider Order Limits.	Key scoping comments raised discussed in Table 6-3 , and aquatic surveys discussed in Section 6.6 and Section 6.7 of this Chapter.

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Consultee	Date	Summary of Discussion	Where This is Addressed in This ES
<i>Natural England</i>	30 July 2025	Introduced our current understanding of, and survey findings to inform, the ecological baseline of the Order Limits. • Confirmation to scope out International Designated Sites due to distance and no potential effects or effects pathways from the Proposed Development • Description of nearby Nationally Designated Sites and Locally Designated Sites • Proposed ecology survey approach for the Cable Corridor; and • Intention of the Proposed Development in terms of Biodiversity Net Gain (BNG).	Section 6.4 and Section 6.5 of this Chapter
<i>Yorkshire Wildlife Trust</i>	21 October 2025	Discussion of statutory consultation comments: • Cable Route Corridor surveys and their completion outside guidance survey periods; • Suitable habitats to be located under solar panels • Biodiversity Net Gain • Brampton Common LWS and potential opportunities to enhance the LWS • Proposed substation locations • The Draft Local Nature Recovery Strategy; and • Avoidance buffers for trees and woodland.	Section 6.4 and Section 6.5 of this Chapter
<i>RMBC, YWT, S&RWT, South Yorkshire Mayoral Combined Authority</i>	12 January 2026	Introduction to the Proposed Development with discussions focussed on Brampton Common LWS, proposing mitigation and enhancement opportunities and fielding consultee questions and suggestions. • Discussion of Whitestone Brampton Common LWS and its ecological restoration within a broader biodiversity project • Discussion on what the Proposed Development can deliver on a large scale, to benefit biodiversity and align with nature recovery strategies • Discussions on seeking net gain of hedgerows within the LWS and wider scheme • Discussions on restoring Brampton Common LWS by reinstating habitat for breeding waders to the original designation status, noting that this may have affects for Skylark (an existing feature of the LWS) • Strategic aspirations of the South Yorkshire LNRS discussed, noting that this is still in development till May 2026. Opportunities identified in the South Yorkshire LNRS include managing wet woodland and riparian corridors at Brampton Common • LNRS mapping and public consultation are ongoing, with the potential for these areas to gain strategic importance. Restoration efforts will consider habitat compatibility, such as balancing wet woodland with species like skylarks • Discussions on soil analysis for nutrient levels and what habitat the soils could accommodate, and advising consultees on the presence of Important Hedgerows.	Section 6.4, Section 6.5, Section 6.7 and Section 6.8 of this Chapter
<i>Natural England</i>	19 January 2026	Meeting to discuss statutory consultation comments, environmental assessments, and mitigation measures related to construction impacts BNG. • Discussion on design and assessment timelines sharing publicly with Natural England; • Confirmation of no Habitat Regulations Assessment is required will be included in the ES and Statement of Common Ground • Surveys identified suitable habitats for water voles and otters, with some signs of otters but no resting places found. Presence of mink and brown rats was noted. Based on current protected species surveys, no licences are anticipated. Natural England offered a pre-submission screening service for licence applications • BNG will apply to solar array areas, with cable works avoiding or promptly reinstating habitats. Local initiatives for BNG were suggested but are not mandatory; and • Draft Site Management and Construction Environmental Management Plans will be shared prior to submission to agree on mitigation measures, including those preventing impacts to SSSIs.	Section 6.2, Section 6.3 and Section 6.5 of this Chapter
<i>City of Doncaster Council</i>	21 January 2026	Meeting with the CDC Ecologists to discuss their statutory consultation comments. Discussions focussed on: • Bat Survey Heat Maps • Great Crested Newt Surveys, including access arrangements and approach to assessing unsurveyed ponds; and • Invertebrates, and potential for improving habitats for them.	Section 6.4 and Section 6.5 of this Chapter

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Consultee	Date	Summary of Discussion	Where This is Addressed in This ES
		Focus was given to Biodiversity Net Gain, with CDC keen to receive further information regarding what was proposed for mitigation / enhancement, especially for habitat types under and around solar panels which need to be realistic. CDC stated that they would expect to see modified grassland proposed under solar panels due to shading, and consideration was given to having further conversations to discuss the BNG proposals and calculations. CDC also stated that compensatory habitat must be functional for any habitats or species that are lost due to the Proposed Development.	
<i>North-East Derbyshire District Council (NEDDC)</i>	10 February 2026	Introductory meeting to introduce NEDDC to the Proposed Development and detail what ecological surveys have been completed, ERM's understanding of the baseline conditions, and the proposed assessment approach. NEDDC's key sensitivity is the potential loss of hedgerow along Mansfield Road / Rotherham Road, and Killamarsh Pond Local Wildlife Site to the north of W3. Biodiversity Net Gain proposals were also discussed, and NEDDC stated that the Proposed Development had the opportunity to be beneficial for biodiversity and an increase of connectivity would increase biodiversity within NEDDC.	Section 6.4 and Section 6.5 of this Chapter

6.4 Assessment Methodology and Significance Criteria

- 6.4.1 This section sets out the scope and methodology for the assessment of the impacts of the Proposed Development on Biodiversity and Nature Conservation from the construction, operation & maintenance, and decommissioning phases.

Study Areas

- 6.4.2 The Study Area for Biodiversity and Nature Conservation is defined as the area within which potential effects on ecological receptors, as a result of the Proposed Development, are assessed. This area is used to determine the Area of Influence (Aoi) which is defined by CIEEM as *“the area over which biodiversity features may be affected by biophysical changes as a result of the proposed project and associated activities”*³⁴.
- 6.4.3 The Aoi is established based on several considerations including the known ecological features within the Order Limits and surrounding area, the nature of the Proposed Development during the construction, operation and maintenance, and decommissioning phases and potential cumulative effects³⁴.
- 6.4.4 Individual Study Areas for the desk-based assessment varied for different ecological features, depending on their sensitivity to environmental change. The Study Areas adopted for the desk-based assessment are defined in **Table 6-5** and included in the respective figures. Each Study Area was determined using best practice guidance (issued through CIEEM), professional judgement, and a high-level assessment of the types of ecological features that are present or potentially present.

Table 6-5: Extent of Study Areas (Desk Based) for Ecological Features

Ecological Feature	Study Area	Reasoning
International Designated Sites	Order Limits, plus 10km buffer on ecological features 20km buffer on geese; and 30km buffer on bats	The extent distances for the data search are proposed based on the typical range of each feature and likelihood of them using habitats or features within the Order Limits.
National Statutory Designated Sites	Order Limits, plus 5km buffer	Based on the conservation importance of designation features. The features for which national sites are designated are unlikely to be affected by the Proposed Development beyond this distance.
Local Designated Sites	Order Limits, plus 2km buffer	Based on the conservation importance of designation features. The features for which local sites are designated are unlikely to be affected by the Proposed Development beyond this distance.

Ecological Feature	Study Area	Reasoning
Protected and Priority Species	Order Limits, plus 2km buffer	Records of species beyond this distance are unlikely to be significantly associated with the habitats found within the Order Limits.
Priority Habitats (inc. ancient woodland and Veteran Trees)	Order Limits, plus 1km buffer	Priority Habitats are unlikely to be affected by the Proposed Development beyond this distance.
Ponds	Order Limits, plus 250m buffer	Ponds are unlikely to be affected beyond this distance by the Proposed Development, with consideration to distance associated with the GCN assessment.
Watercourses	Order Limits, plus 200m buffer	Excluding hydrological links, watercourses are unlikely to be affected by the Proposed Development beyond this distance with respect to otter holt disturbance.

Baseline Survey Methodology

- 6.4.5 Baseline surveys to inform the ES were completed between April 2024 and December 2025 within the Site boundary and corresponding Study Areas, at the time of undertaking surveys, and full results are presented in the **ES Volume 3, Technical Appendices 6.2 – 6.13 [EN0110020/APP/6.20]**. Within the Chapter, results have been presented only where relevant to the Order Limits in supporting the Application. In addition, Arboriculture surveys were undertaken at access point locations during March and April 2026, results of which are presented in **ES Volume 3, Appendix 6.14: Arboriculture Survey and Tree Constraints Plan [EN0110020/APP/6.20]**.
- 6.4.6 Furthermore, following the Scoping Opinion from the Planning Inspectorate, the Environment Agency and other consultees, further aquatic baseline assessments have also been completed within the relevant Study Areas. The assessment methodology and the results are included in **ES Volume 3, Appendix 6.13: Fisheries and White-Clawed Crayfish eDNA Report [EN0110020/APP/6.20]**.
- 6.4.7 The survey methodologies, along with extent of Study Areas for each ecological feature, based on species-specific guidance are set out in **Table 6-6**.
- 6.4.8 Survey methods on the Cable Corridor and the corresponding Study Areas are detailed further in paragraphs 6.4.8 to 6.4.21.

Table 6-6: Survey Scope and Surveys Completed to Date (Site)

Survey Type	Methodology	Survey Status
UK Habitat Classification (UKHab) Survey and Habitat Condition Assessments	Habitat walkover surveys of all Land Parcels (LPs), following UKHab classification methodology. Condition assessments completed as per the Statutory Biodiversity Metric. Study Area covering the Site.	Completed, within the Site, in spring and summer months between 2024 and 2025.
Badger Walkover Survey	Walkover survey to search for badger setts or other field signs in line with guidance. Study Area covering the Site and 30m outside of it.	All high suitability habitats were surveyed in August and December 2024 and between March and November 2025.
Winter Bird Survey	Surveys involved a roving observation point technique used to observe all birds within the Study Areas during the survey period. The aim of these surveys was to determine whether any of the target species, regularly feed, loaf, or roost within the Site, and if so, the locations and frequency of records. Target species are defined as: • All waders and wildfowl (excluding feral / domestic birds, mallard, Canada goose and greylag goose) • Species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) • Species listed on Annex I of the European Union Birds Directive • Birds of Conservation Concern red list species (Stanbury et al., 2021); and • Species of Principal Importance listed on the NERC) Act 2006. Study Areas specified for each bird species are highlighted in the ES Volume 3, Appendix 6.5: Wintering Bird Survey Report [EN0110020/APP/6.20].	Completed between October 2024 and March 2025 within the Site at the time of the surveys.
Breeding Bird Survey	Walkover survey following a reduced version of Bird Survey & Assessment Steering Group guidelines to identify the breeding bird assemblage. Data was analysed to identify the approximate breeding population and distribution of four key target species: lapwing, grey partridge, skylark and yellow wagtail. Study Areas specified for each bird species are highlighted in the ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1] .	Completed between April and June 2025 within the Site, at the time of the surveys, and adjacent fields (the Breeding Bird Survey Area), where accessible.
Targeted Bird Surveys	Targeted visits to identify the breeding status of potentially sensitive bird species, such as barn owl, that were outside the scope of standard survey methods. Surveys were based on available information, e.g. reviewing habitat information, Ground Level Tree Assessment (GLTA) data, and farmer/landowner responses to questions about presence. Study Areas specified for each bird species are highlighted in the ES Volume 3, Appendix 6.7: Confidential Ornithology Report [EN0110020/APP/6.20] .	Checks of features potentially suitable for nesting barn owl were completed between May and July 2025
GCN HSI and eDNA Assessment	A desk based review of potential ponds from aerial imagery followed by ground truthing of these locations through the UKHab and other assessments determined many of these ponds were scoped out of further survey, either because access was not forthcoming following request; where it was confirmed that running water was present; the ponds were dry or no longer present; or the size of the waterbody and presence of fisheries made the ponds unsuitable. This scoping process was repeated during the HSI and eDNA surveys. Assessment of accessible waterbodies both within the Site and within a 250m radius of the Site to determine suitability for breeding GCN. A Habitat Suitability Index (HSI) assessment of ponds to determine suitability for GCN was completed, and where ponds with an HSI suitability score for GCN above 'Poor' were identified an eDNA assessment was completed where access permitted, and suitability remained. Surveys followed guidance outlined in the <i>Herpetofauna Worker's Manual</i> (Gent & Gibson, 2003), the <i>Great Crested Newt Conservation Handbook</i> (Langton, Beckett & Foster, 2001), and Oldham et al (2000). Study Area covering the Site and 250m outside of it.	GCN HSI assessments were undertaken of 10 ponds within the Study Area, in March and June 2025. Great crested newt eDNA surveys of eight suitable ponds were undertaken within the eDNA season (June 2024 and 2025).
Reptile Surveys	Deployment of artificial refugia in suitable habitat (e.g. grassland banks, or field margins), in April to May 2025 and September to October 2025 (when temperatures and weather conditions are most likely to be suitable for reptile activity) allowing a bedding in period of a fortnight before a seven-visit survey of the artificial refugia and search of any nearby refugia such as log piles. Study Area covering the Site.	Reptile surveys were initially undertaken in April and May 2025, with further surveys completed in September and October 2025, such that when the surveys were completed, the refuges will have been checked on seven occasions during suitable weather conditions.

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Survey Type	Methodology	Survey Status
Otter and Water Vole Surveys	Spring and summer/autumn walkover surveys of all watercourses and ditches to search for evidence of otters and water voles, and to assess the suitability of these features to support these species. During the first survey visit habitats were assessed for suitability to assess both species. Some ditches have been scoped out of further survey for water vole based on the lack of suitable habitats - absence of forage, shelter (cover), or that the waterbody was dry. Second water vole surveys were completed for water vole based on suitable watercourse habitats being identified. The surveys follow the Water Vole Field Signs and Habitat Assessment guidance, and The Water Vole Mitigation Handbook by The Mammal Society. Study Area will cover the Site and 200m outside of it for otters and 10m outside of it for water vole. The Chesterfield Canal candidate LWS and Harthill Reservoir candidate LWS also form watercourses crossed, or are in close proximity to the Order Limits, and survey work consider these areas, with surveys in hydrologically connected habitat on Broad Bridge Dike (W14). Chesterfield Canal will be crossed using trenchless crossing techniques to avoid water vole and otter.	Surveys within the Site took place between April 2025 and November 2025. Where suitable habitats were identified during the first survey visit, second survey visits of watercourses were completed after a minimum of two months.
River Condition Assessments/ Modular River Physical (MoRPh) surveys	MoRPh surveys on all suitable watercourses. The survey scope was developed from information presented in A Guide to Assessing River Condition (Gurnell et al., 2024) ⁵⁶ and The MoRPh Survey Technical Reference Manual 2022 version (Gurnell et al., 2022) ⁵⁷ The results of the MoRPh surveys help inform, and be incorporated into, the statutory BNG assessment for the Proposed Development. The MoRPh assessment follows best practice guidance. Study Area covering the Site and minimum 10m outside of it.	Desk studies of the Site identified 26 watercourses that required assessment and targeted surveys of the watercourses were completed between May and December 2025.
Hedgerow Surveys	An assessment completed predominantly between June and July 2025, with a focus on species rich hedgerows to determine whether they comprise Important Hedgerows as defined in the regulations and associated guidance. Study Area covered the Site. To complete the overall assessment, a desk-based assessment of the cultural and historical significance of each hedgerow was completed.	Completed between June and December 2025, within the Site where accessible.
Bat Surveys – GLTA	An inspection of suitable trees to confirm presence and characterise potential roost features (e.g. Potential Roost Feature (Individual) (PRF – I), and Potential Roost Feature (Multiple) (PRF-M)), and where Further Assessment Required (FAR). These were completed within the winter to early spring period when foliage was absent or minimal to allow a full view of features, with remaining GLTA surveys completed during an optimal period. Follows Bat Conservation Trust Good Practice Guidelines. Study Area covering the Site.	Completed in Whitestone 1 (W1) and Whitestone 2 (W2) in Winter 2024 to early spring 2025. Whitestone 3 (W3) was completed in Autumn 2025.
Bat Surveys – Preliminary Roost Assessment	Daytime building inspections of buildings and bridge within the Site which may be impacted, to assess suitability and search for evidence of roosting bats and nesting birds. Follows Bat Conservation Trust Good Practice Survey Guidelines. Study Area covered the Site.	Completed in spring and summer 2024 and 2025, at same time as habitat walkover surveys.
Bat Surveys – Remote Monitoring	Deployment of static detectors for five nights per month between April and September 2025. Remote monitoring has included the deployment of up to 16 bat detectors, with at least 2 detectors deployed per transect route, and two further remote monitoring detectors deployed in LP155 W2, where an access crossing was proposed. Static detector monitoring follows Bat Conservation Trust Good Practice Survey Guidelines. Study Area covered the Site.	Completed between April and September 2025.
Bat Surveys – Night-time Walkover Surveys (Transects)	Nighttime walkover surveys of the Site following predetermined transects to record bat flight activity. Transects are undertaken in spring, summer and autumn to provide a representative sample of general bat activity over the course of a year. Six seasonal Nighttime Bat Walkover (NBW) transects have been completed or are in the process of completion and split across W1 (1 transect route), W2 (3 transect routes), and W3 (2 transect routes). The transect in W1 is split into two half transects, and a transect in W3 has been split into two half transects. Each half transect pair is surveyed within the same night. The summer and autumn transect starting point or direction of survey was varied to ensure surveyors arrived at the same habitats at different times to ensure a suitably representative sample of bat activity and species was recorded in each location. Surveys commenced with vantage point (VP) surveys at strategically chosen locations to best capture bat emergences at sunset. Study Area covered the Site.	Completed between May and September 2025.

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Survey Type	Methodology	Survey Status
Aquatic Ecology Assessments	Guided by the Scoping Opinion and other consultation responses, an aquatic desk study to include a search of the Environment Agency fisheries database and requests from other fisheries data sources was completed. In locations where aquatic habitats cannot be sufficiently avoided, a multi-species fisheries eDNA assessment of watercourses for migratory fish and other species of interest (barbel <i>Barbus barbus</i>; brown trout <i>Salmo trutta</i>; bullhead <i>Cottus gobio</i>; and European eel <i>Anguilla anguilla</i>) was completed in locations where results determined the requirement for a trenchless crossing (>1.5 m) or, where widening of existing crossings or culverting or a cut across wet ditches or watercourses could not be ruled out. Further information for each location is found in the Environment Agency's watercourse crossing schedule. Study Area covering the Site. The invasive WCA Schedule 9 listed species: signal crayfish <i>Pacifastacus leniusculus</i> is found in watercourses throughout the Study Area. The presence of this species would normally exclude the presence of white-clawed crayfish <i>Austropotamobius pallipes</i> within watercourses due to the presence of crayfish plague <i>Aphanomyces astaci</i>, through predation, or breeding and resource competition. However, to confirm the status of the White Clawed Crayfish within the Order Limits, an eDNA assessment of watercourses (Chesterfield Canal, and Broad Bridge Dike) that have hydrological connectivity to an off-site White Clawed Crayfish record was completed of accessible watercourse locations between the record and the Site (less than 2.5km).	Completed between September and December 2025, within the Site.

Cable Corridor

- 6.4.9 A desk based UKHab assessment of the Cable Corridors (**ES Volume 3, Appendix 6.2: UK Habitat Survey Report [EN0110020/APP/6.20]**) was undertaken to prioritise areas for assessment, and site-based Extended UK Habitat Classification (UKHab) Survey strategy. Data sources included recent aerial imagery, satellite data, and publicly accessible habitat and land cover datasets.
- 6.4.10 Based on the findings of the desk-based assessment, the following targeted survey scope for the Cable Corridor was completed:
- A UKHab and condition assessment of all accessible land of habitat value within the Cable Corridors and where relevant up to 30m beyond the approximate corridor width, to collect baseline habitat inventory and condition assessment information. In particular, any potential Habitats of Principal Importance or local priorities, including hedgerows and broadleaved woodland were identified. The UKHab standard and protocol was employed to provide a baseline for Biodiversity Net Gain assessments. Habitat field surveys were undertaken of various sections of the Cable Corridor in October to December 2025. Due to land access constraints, not all of the Cable Corridor was accessible for survey, and all non-accessible areas were assessed using the desk study data approach. The desk-based habitat assessment combined with surveys provided an overview of broad habitat types along the Cable Corridor.
 - RCA/MoRPh modular river (physical) surveys have been undertaken where access was permitted and are continuing in 2026 of all remaining watercourses crossed by the Cable Corridor, primarily to inform BNG requirements. The ecological sensitivities of each watercourse was considered when determining the appropriate cable installation method at each crossing point. Surveys focus on 10-40m sections of watercourse habitats of value, with the results informing the BNG assessment. Surveys were completed in May and December 2025 for accessible watercourses within the Cable Corridor. The condition of unsurveyed sections has been assigned on a precautionary basis using the characteristics recorded within the surveyed sub-reaches. Where variation in condition or levels of encroachment was identified along a watercourse, a precautionary worst-case assumption has been applied to unsurveyed stretches (for further details see **Appendix 6.4: BNG Report [EN0110020/APP/6.20]**).
 - For those watercourses that were not accessible due to land access constraints, it is assumed that these areas and the associated riparian zones will not be subject to impact from the Proposed Development and will be retained and subject to avoidance or appropriate mitigation measures as specified in the **oCEMP [EN0110020/APP/5.9]** with final methods to be determined using results from subsequent pre-construction surveys.
 - Hedgerow surveys were undertaken following established guidelines of the hedgerows crossed by the Cable Corridors to determine their habitat value and whether they are classified as 'Important' as per the Hedgerow Regulations 1997¹². This will identify where permission, prior to construction, will need to be sought from the LPA for impacts in locations where hedgerows are classified as Important, and avoidance measures are not possible. Hedgerows within the Cable Corridors were assessed through survey where access permitted, and

where survey access to the Cable Corridor was not possible, the desk-based elements of the Important Hedgerow assessment was completed only.

- A high-level qualitative assessment of habitat suitability for protected species/groups (e.g. bats, badgers, birds) was undertaken at the same time as the hedgerow assessment to identify locations where those species may be at risk from being impacted by the Cable Corridors.
- Targeted surveys were completed along the Cable Corridor where habitats of value to species are present, and intrusive works may cause protected species disturbance, or where their habitats cannot be reinstated in-situ. Where surveys are not required for this ES, this is noted below.

- 6.4.11 Access was obtained for the majority of the Order Limits; however, some sections of the Cable Corridor Study Area were not subject to field survey due to access constraints. Field surveys were therefore focused on key sections of the Cable Corridor where more sensitive habitats were considered most likely to occur, with the remaining sections assessed through desk-based methods. For those sections of the Cable Corridor where field surveys were not undertaken, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and landcover datasets. This has enabled sufficient information to be available to determine an assessment based on worst case parameters (with parameters specified in the **Outline Design Parameters (ODP) [EN0110020/APP/7.3]** and **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]**), and assuming presence of protected species or other sensitive biodiversity features where survey data could not be obtained.
- 6.4.12 Based on the extensive survey work undertaken, it is considered that sufficient baseline has been recorded to base the assessment on and inform the design. Nonetheless, and in order to ensure readiness for implementation should development consent be granted, further survey work is ongoing to validate the findings of this assessment. The Applicant will provide the Examining Authority with any outputs as part of that workstream (ensuring that sufficient time is provided for interested parties to comment on that material), but its approach in the ES has ensured that a reasonable worst-case scenario has been assessed through the use of public information, assumptions, and embedded mitigation (including requirements relating to avoidance measures, and requirements for pre-construction surveys which will inform post-consent activities). The Applicant is confident that the approach above meets the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 in providing information reasonably required to reach a reasoned conclusion based on a reasonable worst case scenario, is consistent with established precedent and practice of accepted DCO applications, and relevant case law (in particular, *R (Jones) v Mansfield District Council* [2003] EWCA Civ 1408 at [39], and *National Trusts' Application* [2013] NIQB 60 at [70]).
- 6.4.13 A commitment to complete surveys is provided in embedded mitigation through the **Outline Construction Environmental Management Plan [EN0110020/APP/5.9]**, with the results informing post consent activities (e.g. final selection of cable crossing construction methods, and micro siting the route of cable laying within the corridor) and details to be included in the CEMP secured through a requirement in Schedule 2 of the **Draft DCO [EN0110020/APP/3.1.1/3-4]**.

Bats

- 6.4.14 The Cable Corridors will result in predominantly temporary or minimal, but reversible impacts on foraging and commuting habitats for bats over the short term and in very restricted localities. As such, impacts on foraging and commuting bats are expected to be negligible.
- 6.4.15 The restricted and fragmented location of habitats of value to foraging and commuting bats makes the NBW/transects logistically impractical and undesirable in obtaining meaningful timely data. For these reasons this survey methodology has not been undertaken to inform this ES.
- 6.4.16 Remote monitoring using static detectors was not proposed along the Cable Corridors as it is assumed areas of woodland and hedgerow potentially used by foraging and commuting bats within the Cable Corridors will be retained via use of avoidance measures where practicable (e.g. micro siting cable, trenchless crossing). Preliminary Roost Assessments of buildings were not proposed as no structures have been identified within the Cable Corridors.
- 6.4.17 Individual trees may need to be felled, pruned or disturbed during cable laying that may impact legally protected bat roosts. A GLTA of trees to identify no further constraints with regards to bats, FAR, PRF-I, and PRF-M status were completed within the Cable Corridors, where accessible, between October and December 2025.
- 6.4.18 Unless specifically identified, habitats that have the potential to support roosting, foraging, or commuting bats will be avoided in the absence of survey information where there have been survey access limitations. Where further survey information becomes available, mitigation requirements will be updated based on those results.

Great Crested Newt

- 6.4.19 There were four ponds identified within 250m of the Cable Corridors (P4, P5, P6, and P11, see **ES Volume 3, Figure 6.8.4: Great Crested Newt Survey – HSI and eDNA Assessment – Cable Corridors [EN0110020/APP/6.19]**), but not within the Cable Corridors that would require an HSI assessment to be completed to confirm their suitability for supporting GCN. However, these ponds were not accessible, as they were located on private land with no access permitted at the time of survey. Through a review of existing baseline data from a separate Long Lane 400Kv substation planning application (RB2025/1468), it was possible to derive baseline survey information from this source for three ponds (P4, P5, and P6). In the absence of survey information, it is assumed suitability for and presence of GCN in Pond 11.

Otter and Water Vole

- 6.4.20 Resting places of otters and water vole burrows are legally protected. Surveys for signs of otter and water vole (including resting places) were proposed for suitable watercourse crossings up to 200m and 10m respectively from the Cable Corridor. Surveys were undertaken where access was available between October and December 2025. As this fell outside the recommended survey period for water vole, the assessment concentrated on evaluating habitat suitability for water vole rather than identifying definitive evidence of water vole presence. Survey visits have only been partially completed within the Cable Corridors, as they were located on private land with only partial access permitted at the time of survey.

Surveys of the remaining sections of watercourse are planned to be undertaken in 2026 to confirm the status of otter and water vole and inform appropriate measures to avoid or minimise disturbance.

Badger

- 6.4.21 Destruction, damage or disturbance to setts is a legal offence, and suitable avoidance measures can be taken with knowledge of any sett locations that may be identified. A badger walkover survey was therefore proposed of suitable habitats to identify setts and signs of badgers within and up to 30m of the Cable Corridors. The walkover survey supports the identification of mitigation measures and any potential licensing requirements. Survey visits have only been partially completed within the Cable Corridor Study Area, as some locations on private land had no access permitted at the time of survey. Survey of accessible areas was completed in November 2025.

Reptiles

- 6.4.22 Given the temporary nature of works associated with the Cable Corridors and their predominantly temporary impacts on habitats with potential to support this species (based on the consistently very low population results of the reptile surveys within the Site to date), no further reptile surveys within the Cable Corridors were proposed to inform this ES.

Aquatic Assessments

- 6.4.23 A search of the Environment Agency's fisheries database and other sources was completed in September 2025 to identify the presence of fisheries species and white clawed crayfish (*Austropotamobius pallipes*). Watercourses subject to Cable Corridor crossings, defined within the Water Framework Directive (WFD), within 10m of the Order Limits or with connectivity to known species records (identified via the desk study) were identified. A multi-species fisheries eDNA sample was taken and analysed for the presence or absence of these ecological features. These assessments were carried out between September and December 2025 following Environment Agency Scoping Opinion responses.

Birds

- 6.4.24 The Cable Corridors will result in temporary, reversible effects to habitats that are not of high value to wintering birds. As such, impacts are expected to be negligible, and wintering bird surveys of the Cable Corridors were not undertaken to inform this ES. Similarly, the potential effects and limited habitat value is comparable for breeding birds, however, nesting birds are subject to legal protection and embedded mitigation will protect active nests and birds from harm. Embedded mitigation may include pre-construction surveys for sensitive birds (e.g. Schedule 1-listed species), seasonal avoidance, and/or nesting bird checks, as required, and secured via the **oCEMP [EN0110020/APP/5.9]**. As such, breeding bird surveys of the Cable Corridor have not been completed to inform this ES.

Impact Assessment Method

Identification of Important Ecological Features

- 6.4.25 CIEEM guidance on EclA (2018, updated 2024), defines important ecological features (IEFs) as “...*those that are considered to be important and potentially affected by the project*”. It is not necessary to assess features that are widespread, not of conservation importance, and with populations that are resilient to impacts.
- 6.4.26 The importance of each ecological feature present on a geographical scale has been determined and justified. The following categories have been used in this assessment:
- International/European;
 - National (England and the UK)
 - County (South Yorkshire and Derbyshire)
 - District (Doncaster and Rotherham)
 - Local; and
 - Negligible.
- 6.4.27 The importance of the ecological features has been described in relation to the extent of habitat or size of a population that may be significantly affected by the Proposed Development and in consideration of relevant legislation and policy.
- 6.4.28 The importance of ecological features can, therefore, differ from that which would be conferred solely by legislative protection or identification as a conservation notable species.
- 6.4.29 Wherever possible, information regarding the extent and population size, population trends and distribution of the ecological features was used to inform their categorisation, and to determine their importance in relation to the Proposed Development. Where detailed criteria or contextual data were not available at this stage, professional judgement was used to determine importance.

Spatial Scope

- 6.4.30 Key to understanding the extent of potential LSEs on important ecological features is the determination of an Aol for each IEF that reflects their sensitivity to environmental change. Each Aol is tied to the type of effects that could occur due to a particular development.
- 6.4.31 The construction, operation and maintenance, and decommissioning phases of the Proposed Development have the potential to result in the following broad environmental changes:
- Permanent and temporary land take resulting in habitat creation, habitat loss and degradation, associated with presence of permanent infrastructure
 - Loss of, disturbance to, or displacement of a species of flora or fauna because of temporary land take
 - Fragmentation of habitat, habitat loss, or degradation of habitat, or severance of ecological corridors (such as watercourse, hedgerows, and flyways), and reduction in landscape permeability due to the presence of infrastructure

- Increases in noise, vibration and human presence during the construction and decommissioning phases resulting in disturbance of fauna
- Increases in temporary lighting during the construction and decommissioning phases of the Proposed Development resulting in disturbance of crepuscular and nocturnal fauna
- Changes in hydrology (ground water levels and surface water run-off rates) resulting in habitat change
- Accidental spread of invasive non-native species due to construction activity
- Pollution of terrestrial and freshwater habitats through emissions (including as a result of construction traffic routing) during construction and decommissioning, and as a result of fire control measures on the BESS during the operation and maintenance phase; and
- Changes in Electromagnetic Field (EMF) and pollutant release through sediment agitation beneath freshwater habitats.

6.4.32 The most straightforward Aol to define is the area affected by the footprint of the Proposed Development and direct land-cover changes associated with the Proposed Development. This is because the Aol is the same for all affected ecological features. By contrast, for each environmental change that can extend beyond the area affected by the Proposed Development and land-cover change (for example noise created by construction), the Aol may vary between ecological features, dependent upon their sensitivity to the change and the precise nature of the change.

6.4.33 In consideration of these complexities, the definition of the Aol that extends beyond the Proposed Development was based upon professional judgement informed, as far as possible, by a review of published evidence or guidance (for example disturbance criteria for various species). Based on the level of information available for this assessment, a precautionary application to each Aol has been applied. The Aol for each broad environmental change are specified below.

- Temporary or permanent land take and habitat degradation - Aol within the Order limits for habitats and sedentary species; mobile species may be affected beyond that if the land within the Order Limits lies within their typical home-ranges
- Fragmentation of semi-natural habitats due to habitat loss or degradation and reduction in landscape permeability due to the presence of infrastructure - Aol within the Order Limits for habitats and sedentary species; mobile species may be affected beyond that if land within the Order Limits forms part of their typical home-ranges
- Increases in noise, vibration and human presence during the construction and decommissioning phases resulting in disturbance of fauna - Aol for sensitive species is up to 250m from construction works, noting that for mobile features of designated sites this is related to the species land use, as opposed to designation boundary
- Increases in temporary lighting through all phases of the Proposed Development, resulting in disturbance of fauna - Aol for sensitive species up to 250m from areas which require lighting, noting that for mobile features of designated sites this is related to the species land use, as opposed to designation boundary

- Changes in hydrology (ground water levels and surface water run-off rates) resulting in habitat change - Aol for sensitive species is within surface and ground water features, noting that for mobile species that occur on designated sites, this is related to the species range, as opposed to designation boundary. Surface and groundwater features are described in **ES Volume 1, Chapter 10: Water Resources and Flood Risk [EN0110020/APP/6.10.1]**.
- Accidental spread of Invasive Non-Native Species (INNS) due to construction activity - Aol for habitats and species is up to 250m from the Order Limits, or further if the source and the ecological feature are directly linked via the river system
- Air emissions and pollution of terrestrial and freshwater habitats through loss of chemicals and fines or dust from areas of construction and decommissioning - Aol for habitats and species is up to 250m from the Order Limits, and up to 500m from construction access routes, or further if the source and the ecological feature are directly linked via the river system; and
- Changes in EMF and ground heating below watercourses – Aol for migratory fish and other aquatic fauna is 1 to 2m from transmission cabling.⁵⁸ Changes in EMF and ground heating below watercourses – Aol for migratory fish and other aquatic fauna is 1 to 2m from transmission cabling.⁵⁹⁶⁰

6.4.34 The avoidance of LSEs through design are implicitly considered when defining each Aol. Furthermore, when scoping ecological features in, or out, from further assessment, embedded mitigation measures associated with good practice have been taken into account (for example dust suppression, appropriately scheduled vegetation removal etc.) (See Section 6.6 of this Chapter).

Temporal Scope

6.4.35 The temporal scope of the biodiversity assessment is consistent with the period over which all phases of the Proposed Development will be carried out. Further details regarding each phase of the Proposed Development are provided within **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]**, with a summary relevant to biodiversity provided below:

- Construction: 24 to 36 months
- Operation and Maintenance: 60 years; and
- Decommissioning: 12 to 24 months.

6.4.36 Within this assessment, the majority of LSEs are associated with the construction phase and, even though they may have longer term consequences, are only considered once (e.g. land take). The assessment describes the effects on the ecological features scoped in and highlights the importance of the temporal scope as necessary. However, there is not a separate consideration (with a separate conclusion) of the same LSE on each feature in different phases.

Significance Criteria

6.4.37 CIEEM (2018, updated 2024) defines a significant effect as one *‘that either supports or undermines biodiversity conservation objectives for ‘important ecological features’ or for biodiversity in general’*.

6.4.38 When considering LSEs on ecological features, whether these are negative or positive, the following characteristics of environmental change are taken into account:

- Extent – the spatial or geographical area over which the environmental change may occur
- Magnitude – the size, amount, intensity or volume of the environmental change
- Duration – the length of time over which the environmental change may occur
- Frequency – the number of times an environmental change may occur
- Timing – the periods of the day, year or season during which an environmental change may occur; and
- Reversibility – whether the environmental change can be reversed through restoration actions or regeneration.

6.4.39 The characteristics described above are all important in assessing effects, with the magnitude of impact as a result of the Proposed Development providing the most useful context.

Magnitude of Impact

6.4.40 The magnitude of impact takes into account the timing, scale, size, and duration of the impact. For the purposes of this assessment, the magnitude criteria have been defined based on CIEEM guidelines³⁴ and our professional experience and are summarised in **Table 6-7** below.

Table 6-7: Magnitude of Impacts

Magnitude of Impact	Description of Impacts	Example
High	The change permanently (or over the long-term) affects the conservation status of a habitat/species, reducing or increasing the ability to sustain the habitat or the population level of the species within a given geographic area. Relative to the wider habitat resource or species population, a large area of habitat or large proportion of the wider species population is affected. For designated sites, integrity is compromised. There may be a change in the level of importance of the feature in the context of the Proposed Development.	Permanent loss of a large area of irreplaceable habitat, such as removing several hectares of ancient woodland or lowland raised bog.
Medium	The change permanently (or over the long term) affects the conservation status of a habitat/species reducing or increasing the ability to sustain the habitat or the population level of the species within a given geographic area. Relative to the wider habitat resource or	Loss of part of a habitat of conservation value, such as removing a proportion of semi-improved grassland used by ground-nesting birds.

Magnitude of Impact	Description of Impacts	Example
	species population, a small-medium area of habitat or small-medium proportion of the wider species population is affected. There may be a change in the level of importance of this feature in the context of the Proposed Development.	
Low	The quality or extent of designated sites or habitats or the sizes of species' populations, experience some small-scale reduction or increase. These changes are likely to be within the range of natural variability, and they are not expected to result in any permanent change in the conservation status of the species or habitat or integrity of the designated site. The change is unlikely to modify the evaluation of the feature in terms of its importance.	Short-term disturbance to a species of local value, such as temporary displacement of foraging bats during construction.
Very Low	Although there may be some effects on individuals or parts of a habitat area or designated site, the quality or extent of sites and habitats, or the size of species populations, means that they would experience little or no change. Any changes are also likely to be within the range of natural variability and there would be no short-term or long-term change to conservation status of habitats/species features or the integrity of designated sites.	Short-duration disturbance (hours to days) outside sensitive periods such as breeding.
Negligible	A change, the level of which is so low, that it is not discernible on designated sites or habitats or the size of species' populations, or changes that balance each other out over the lifespan of a project and result in a neutral position.	Activities outside the ecological Area of Influence, such as noise levels below species' disturbance thresholds.

6.4.41 Consideration is also given to the duration of LSEs with the following timeframes referred to:

- Short term: less than 2 years
- Medium term: 2 to 5 years
- Long term: more than 5 years; or
- Permanent.

- 6.4.42 Both negative and positive effects are assessed as being significant if the favourable conservation status of an ecological feature would be altered as a result of the Proposed Development. Conservation status is defined in Paragraph 5.3.2 of CIEEM³⁴ as follows:
- *“Habitats - conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area”*; and
 - *“Species - conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area”*.
- 6.4.43 Professional judgement has been used, considering the available evidence, to determine whether the conservation status of an ecological feature will be altered either negatively or positively.
- 6.4.44 When considering designated sites, it is their integrity that is considered. This is defined by CIEEM³⁴ as *“the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.”*
- 6.4.45 The assessment of effects on integrity will draw upon the assessment of effects on the conservation status of the features for which the Site has been designated.
- 6.4.46 Where likely significant adverse effects are identified, embedded mitigation measures have been incorporated into the design where practicable. These are described in Section 6.6 of this Chapter where they are specific to a particular effect, in the assessment of LSEs below.

Defining the Effect

- 6.4.47 The likely significance (or otherwise) of identified effects is defined as follows:
- Not Significant: No Significant effect to the ecological feature
 - Significant Beneficial: Advantageous or positive effect to an ecological feature; and
 - Significant Adverse: Detrimental or negative effect to an ecological feature.

Basis of the Assessment

- 6.4.48 This assessment is based on baseline ecological information obtained from desk study and surveys, statutory consultation and design information available at the time of writing this Chapter.
- 6.4.49 The **ES Volume 1, Chapter 5: The Proposed Development** [EN0110020/APP/6.5], **Outline Design Parameters** [EN0110020/APP/7.3], and **Works Plans** [EN0110020/APP/2.3.1] present a summary of the design information for the Proposed Development (including construction, operation and maintenance and decommissioning), which has been used to inform this assessment.
- 6.4.50 The assessment of habitat losses is based on **ES Volume 3, Figure 5.1: Illustrative Masterplan** [EN0110020/APP/6.19] and using reasonable worst-case parameters on the habitats being lost under the infrastructure of the Proposed Development. The assessment of habitat losses is also based on the assumption of habitat being lost when the ground is cleared during ancillary works and the

construction of the Proposed Development. The assessment, therefore, considers the habitats that would be permanently lost under the footprint of the Proposed Development, temporarily lost under the disturbed habitat areas and those habitats which would be retained (see **Vegetation Removal Plan [EN0110020/APP/2.9.1]**).

- 6.4.51 Embedded mitigation measures for ecological receptors are detailed in Section 6.6 of this Chapter. Mitigation measures and detailed enhancement measures are included within the **oCEMP [EN0110020/APP/5.9]** and **oLEMP [EN0110020/APP/5.13]** submitted with the Application.
- 6.4.52 Habitat creation would occur within the Site as identified within **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]**. Information on the baseline BNG assessment is found in **ES Volume 3, Appendix 6.4: Baseline BNG Report [EN0110020/APP/6.20]**.
- 6.4.53 Biodiversity enhancements detailed in this ES are based on the assumption that at least 10% BNG will be achieved within the Proposed Development as specified in **Appendix 6.4: BNG Report [EN0110020/APP/6.20]**. Delivery of mitigation for the purposes of BNG will be within the Site. Where applicable, the BNG will seek to align with local biodiversity priorities and will seek to provide species specific benefits.
- 6.4.54 This assessment relies on input from supporting documents and other chapters of this ES, including:
- **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]**
 - **ES Volume 2, Chapter 7: Landscape and Visual [EN0110020/APP/6.7]**
 - **ES Volume 2, Chapter 10: Water Resources and Flood Risk [EN0110020/APP/6.10.1]**
 - **ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12]**
 - **ES Volume 2, Chapter 13: Traffic and Transport [EN0110020/APP/6.13.1]**
 - **ES Volume 2, Chapter 14, Noise and Vibration [EN0110020/APP/6.14.1]**
 - **oCEMP [EN0110020/APP/5.9]**
 - **oLEMP [EN0110020/APP/5.13]**
 - **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]**
 - **ES Volume 3, Appendix 6.4: Baseline BNG Report [EN0110020/APP/6.20]; and**
 - **Works Plans [EN0110020/APP/2.3.1].**

Assumptions

- 6.4.55 With reference to information provided in relevant ES Chapters and with reference to **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]**, the following assumptions have been made about the Proposed Development's design and construction methods:
- Temporary primary and secondary construction compounds are confined to habitats of low or negligible biodiversity value (e.g. arable fields, modified grassland) and would not directly affect biodiversity features at the construction phase;

- Access points, visibility splays, Site access tracks, new and existing watercourse track crossings, field access, and widening of gate entrances will all lead to permanent habitat losses where allowance for sufficient working width and manoeuvring for vehicle movements are required. The location of habitat losses is found in the **Vegetation Removal Plan [EN0110020/APP/2.9.1]**
- Where access tracks cross watercourses in the creation of new crossings, riparian habitats and watercourse channel would not be disturbed, damaged or lost
- Access to the Site would use major trunk roads to facilitate vehicular movements as close to the Order Limits as possible, as specified in **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**
- The construction method for installation of the Cable Corridor would typically be open cut trench and trenchless methods. For the open cut trenching method, the typical working width corridor of up to 40m is anticipated and the disturbance to habitats would be limited to within this corridor. The affected land along the Cable Corridor would predominantly be reinstated following a short construction period. The cable installation works would be temporary and would occur progressively, with operations moving in one direction, thereby minimising the disturbance or incursion into habitats at any one location along the length of the Cable Corridor
- It is assumed that access point infrastructure from the highway into the Cable Corridor for vehicles used in the construction of the Cable Corridor is in line with **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**, and is temporary, and all habitats reinstated/replaced in these locations; and
- It is assumed that temporary bridge structures are used to allow vehicular traffic across watercourses to enable the completion of Cable Corridor construction in temporary watercourse crossing locations and these temporary bridge structures are removed following completion of cable laying.

6.4.56 Where the Proposed Development's designs and details require further development, assumptions have been made based on professional judgment and on a reasonable worst-case scenario basis, in line with the 'Rochdale Envelope' approach, which is defined under Section 5.2 of **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]**.

Designated Sites

- 6.4.57 Effects on designated sites from air pollutants generated from construction and decommissioning traffic, and from construction activities within the Order Limits was informed by the air quality assessment as detailed in **ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12]**.
- 6.4.58 Within Brampton Common LWS it is assumed that species rich hedgerows (for which the LWS has been designated) will be avoided as far as practicable and that existing track entrances will be used for access during construction, operation and maintenance, and decommissioning. An exception is loss of part of an Important Hedgerow on the south boundary where track access is proposed for vehicular access during construction and operational phases.
- 6.4.1 It is assumed that trenchless crossings will avoid impacts during cable laying to an Important Hedgerow in Cable Corridor CRI-2 within Brampton Common LWS.

- 6.4.2 It is assumed that the primary and secondary construction compounds in Brampton Common LWS will be reinstated as grassland habitat following completion of construction.
- 6.4.3 It is assumed that there will be small areas of permanent habitat losses in connection with some visibility splays, and that these will be compensated for within Axle Road LWS, and Brampton Common LWS from construction within the Cable Corridor, and Whiston Meadows LWS within the Order Limits.

Habitats

- 6.4.4 It is assumed that hedgerows are avoided wherever practicable in the construction of internal tracks and completion of cabling within the Cable Corridor, that no ancient woodland or veteran trees will be affected, that other retained woodland and trees, and grassland will be protected in line with the **Outline Design Parameters [EN0110020/APP/7.3]**.
- 6.4.5 Small sections of hedgerows, (including Important Hedgerows), grassland, and limited locations for woodland, will need to be removed for the construction of internal tracks and other infrastructure. Habitat losses are identified in the **Vegetation Loss Plans**, and infrastructure layout detailed in **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]**.
- 6.4.6 It is assumed that permission will be granted for removal of Important Hedgerows from the LPA, and that sufficient mitigation is proposed including the commitment to replacement of hedgerows at decommissioning and compensatory planting at or just prior to construction, and that careful supervised removal at construction will take place as detailed within the **oCEMP [EN0110020/APP/5.9]**.
- 6.4.7 It is assumed that the aggregate material used to complete the internal tracks across the Order Limits is of material reflecting the underlying geology and soil chemistry, such that there are no changes in soil pH that could affect local botanical assemblages within adjacent grassland.
- 6.4.8 It is assumed that in locations where tree pruning or felling is to take place to facilitate track access or crossings, protected species may be impacted and further detailed surveys for protected species associated with trees or woodland will need to be completed to inform licensing requirements prior to construction.
- 6.4.9 It is assumed that within all woodland, retained trees, canopies, and RPAs will be protected in line with arboriculturist consultant guidance and as per BS 5837:2012 (Trees in relation to design, demolition and construction - Recommendations).
- 6.4.10 It is assumed that gaps within wet woodland will be used to avoid wet woodland trees and the Root Protection Zones (RPZs) of those trees to avoid impacts on this irreplaceable habitat. The only exception is for a new watercourse access track crossing on Anston Brook, which is considered in the assessment in Section 6.7.

Watercourses

- 6.4.11 Further information on watercourse crossing methods is found in **ES Volume 2, Chapter 10: Water Resources and Flood Risk [EN0110020/APP/6.10.1]**, the location of watercourses found in **ES Volume 3, Figure 10.14: Watercourse Crossings [EN0110020/APP/6.19]**.
- 6.4.12 All watercourses are defined as 'Ordinary watercourses'. It is assumed that these are considered as minor watercourses and on some of them, trenchless crossing along the Cable Corridor at a minimum 1.5m depth below the base of the

watercourse will take place in line with the **Outline Design Parameters [EN0110020/APP/7.3]** document. Other crossing locations have been identified that, in the absence of adjacent habitats with high ecological value (e.g. woodland, individual trees) to support protected species (e.g. otter, bats), and particularly where they could be dry at construction, will have the flexibility to be trenched during Cable Corridor installation. Information on locations where this approach would apply is provided in the **ES Volume 2, Chapter 10: Water Resources and Flood Risk [EN0110020/APP/6.10.1]**. It is also assumed that all habitats will be temporarily disturbed during Cable Corridor crossing, before immediate re-instatement. In addition, where cable crossings may be required within the Site, the installation method will be chosen taking account of watercourse conditions at the time of construction.

- 6.4.13 It is assumed that existing track crossing points over watercourses will be upgraded and strengthened on a like for like basis, with the same footprint and type of crossing, to include reinstatement of culverts.
- 6.4.14 It is assumed that any new bridge/crossing construction will comply with the DMRB manual.
- 6.4.15 Embedded mitigation measures are set out in Section 6.6.

Biodiversity Net Gain

- 6.4.16 Assumptions specific to BNG are set out in **ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20]**.

Limitations

- 6.4.17 Individual survey and assessment limitations are discussed below and are expanded upon further in each Technical Appendix.
- 6.4.18 Baseline surveys were completed within the Site, and sections of the Cable Corridor within the Order Limits. At times, inclement weather, land management activities or livestock limited land access. Wherever possible, land access was sought again, and surveys revisited. The survey disruption represents a minor limitation.
- 6.4.19 Where access was not available to conduct field surveys or design iterations introduced land not previously covered by surveys, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and landcover datasets. This has enabled sufficient information to be available to determine an assessment based on worst case parameters.
- 6.4.20 A commitment to complete unsurveyed areas of habitats and for protected species is provided in embedded mitigation through the **oCEMP [EN0110020/APP/5.9]**. The survey results will inform post consent activities including refining the precautionary assumptions in the BNG assessment and confirming any mitigation measures to be included in the CEMP.
- 6.4.21 Based on the extensive survey work undertaken, it is considered that sufficient baseline has been recorded to base the assessment on and inform the design. Nonetheless, and in order to ensure readiness for implementation should development consent be granted, further survey work comprising UKHab surveys, badger surveys, BBS surveys, GCN eDNA surveys, GLTA bat surveys, Otter and water vole surveys, hedgerow surveys, and fisheries eDNA surveys are ongoing to validate the findings of this assessment. The Applicant will provide the Examining

Authority with any outputs as part of that workstream (ensuring that sufficient time is provided for interested parties to comment on that material), but its approach in the ES has ensured that a reasonable worst-case scenario has been assessed through the use of public information, assumptions, and embedded mitigation (including requirements relating to avoidance measures, and requirements for pre-construction surveys which will inform post-consent activities). The Applicant is confident that the approach above meets the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 in providing information reasonably required to reach a reasoned conclusion based on a reasonable worst case scenario, is consistent with established precedent and practice of accepted DCO applications, and relevant case law (in particular, *R (Jones) v Mansfield District Council* [2003] EWCA Civ 1408 at [39], and *National Trusts' Application* [2013] NIQB 60 at [70]).

Habitat Surveys

- 6.4.22 The majority of surveys within the Study Area were undertaken during the optimal seasonal period for habitat assessment (see **ES Volume 3, Appendix 6.2: UK Habitat Baseline Report [EN0110020/APP/6.20]**). Surveys along the Cable Corridor were undertaken in December, outside the growing season; however diagnostic vegetation features were still present, and habitats were able to be classified to appropriate UKHab categories.
- 6.4.23 The assessment is based on field data gathered between June 2025 and December 2025. During this period, access was secured across most of the Order Limits, except for certain sections of the Cable Corridors. Where access was possible field surveys were targeted at areas where sensitive habitats were most likely to occur, with remaining sections assessed through desk-based methods.
- 6.4.24 For areas where field surveys were not undertaken, assessments relied on publicly available aerial imagery, satellite data, and existing habitat datasets. Habitat classifications in these locations are indicative and less precise than those derived from field survey. Nevertheless, with key areas surveyed and professional judgement applied, the desk-based assessment is considered sufficient to determine a worst-case assessment of affects.
- 6.4.25 In line with UKHab mapping conventions, only the uppermost habitat layer was mapped, with underlying habitats recorded separately. For example, access routes such as bridges were mapped, while habitats beneath (e.g., rivers) were noted during fieldwork to inform future detailed assessments.

Badger Surveys

- 6.4.26 Land access was obtained for the majority of the Order Limits (see **ES Volume 3, Appendix 6.3: Confidential Badger Survey Report [EN0110020/APP/6.20.1]** and **ES Volume 3, Figure 6.3.1: Confidential Badger Survey Results W1 – W3 [EN0110020/APP/6.19]**). Land parcels without land access permission in place were assessed from viewpoints. As such, it was not possible to obtain the same level of detail for these locations as areas directly accessed by the surveyors. However, it was possible to review aerial photography and species records, and make observations and inferences based on professional judgement to characterise the likely use by protected species including badger.
- 6.4.27 Badgers are a mobile species that will excavate new setts and / or abandon previously used setts. Therefore, it should be noted that the absence of badger

signs at the time of survey within a particular section of the Site does not indicate an absence of badger in that area.

Breeding Bird Surveys (BBS)

- 6.4.28 Land access permission for some breeding bird survey visits was restricted (see **ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]**). Where possible, such land was surveyed from public rights of way or from adjacent land where access was agreed. In some cases, this was not possible, and some fields were not visited during one or more of the four survey visits. To account for this limitation and to provide a reasonable worst-case scenario, results have been reviewed to estimate skylark density for habitats within accessible parts of the Site (e.g. number of territories per ha of arable), and this rate of occurrence has been applied to fields where access was not possible, to provide an overall estimate of the population within the Order Limits.
- 6.4.29 Methodology recommends that surveys start within 30 minutes of sunrise. Many of the surveys started later in the morning (up to an hour and 15 minutes after sunrise) but mostly finished before 10:00. Three surveys finished later than this, all at BBS Parcel 7: 11:45 for the first visit, 11:50 for the third and 10:15 for the last.

Great Crested Newt Surveys

- 6.4.30 Access was requested for all identified ponds within 250m of the Site. Survey efforts were limited to where access was granted (see **ES Volume 3, Appendix 6.8: Great Crested Newt Survey Report [EN0110020/APP/6.20]**), meaning some ponds (beyond the Site) identified for HSI and eDNA survey could not be accessed. Additionally, some ponds featured heavily vegetated banks, which limited the visibility and accessibility for sampling, however an eDNA sample was still obtained at each waterbody.
- 6.4.31 Whilst every effort to identify suitable ponds for assessment were made, some small ponds within garden curtilages may have been missed, as it would be difficult to identify the presence of these ponds from imagery and impractical to gain access to all residential properties.
- 6.4.32 Some areas of the Cable Corridor have not been surveyed on the ground and therefore only ponds identified from mapping and aerial imagery on or within 250m of the Cable Corridor have been considered for further assessment. Within these unsurveyed areas, there may also be ponds that are not apparent from mapping and aerial imagery. However, this is considered to be a minor limitation as when the width of the Cable Corridor is considered, along with the low density of ponds already identified, any newly identified ponds (and therefore potential for GCN) will be avoided in the unlikely event that they are present.
- 6.4.33 Four ponds beyond the Cable Corridor, but within 250m of it, could not be surveyed due to access restrictions. However, Ponds 4, 5 and 6 have been assessed and reported on in support of a separate planning application at Long Lane Substation and found to be absent or the ponds unsuitable (dried out) for GCN. Pond 11 is 110m to the south of the Cable Corridor and has not been eDNA surveyed. These surveys are planned in 2026 with results used to feed into post consent mitigation within the CEMP secured through a requirement in Schedule 2 of the **Draft DCO [EN0110020/APP/3.1.1/3.4]**.
- 6.4.34 Some survey results were inconclusive, with professional judgement indicating that water chemistry was the primary cause, however, these ponds will be

avoided in the Order Limits, and this is only considered a minor limitation to the assessment.

Reptile Surveys

- 6.4.35 Temperatures exceeded 20°C during survey visit 5 (12–16 May 2025) (see **ES Volume 3, Appendix 6.9: Reptile Survey Report [EN0110020/APP/6.20]**), and around 30 mats were checked outside the optimum range. This represents only a small proportion of total checks, and most surveys occurred within suitable temperatures. The effect on results is therefore considered a minor limitation.
- 6.4.36 Several refugia were missing or displaced, particularly in W3, likely due to public interference. All 19 mats in a land parcel on (W1) were removed between the initial and secondary survey periods, preventing checks 3–7. Across the Study Area, an estimated 115–125 mats (25–28% of those deployed) were lost by October 2025 through public removal, overgrown margins, or being blown into inaccessible areas. Despite the scale of loss, most mats had been checked multiple times before disappearing, so the data loss is only partial. This is considered a moderate limitation to the assessment.
- 6.4.37 Some refugia were accidentally damaged by farm machinery during boundary mowing, reducing sample size locally and potentially harming reptiles. By October 2025, an estimated 60–70 mats (13–15% of those deployed) were unusable due to damage. As most had been checked several times beforehand, this represents only a minor constraint.
- 6.4.38 There were a few areas where the full number of refugia checks was not possible, resulting in partial data; but in the context of the data collected across the Site represents a minor limitation.

Bat Surveys

- 6.4.39 Individual trees were assessed for bat roost suitability during GLTA surveys based on design information available at the time and land access availability. Further iterations both to the design and to the Order Limits has meant that some individual trees and those in small woodland blocks that could be affected by the Proposed Development were not surveyed.
- 6.4.40 A watercourse crossing at Anston Brook (3), had static monitoring of bat activity undertaken in summer and autumn 2025. Spring surveys were not possible which represents a minor limitation with the extent of data collected across the Site.

Otter and Water Vole Surveys

- 6.4.41 Due to changes to the Order Limits, watercourses that were not originally surveyed are now within the proposed Cable Corridor and access points including watercourses W8 and W10 (see **ES Volume 3, Appendix 6.11: Otter and Water Vole Survey Report [EN0110020/APP/6.20]**). In the absence of data, it is assumed that otter and water vole could be present, and that resting sites/burrows will, as far as practicable, be avoided in these watercourses through micro siting, such that the absence of survey data in these locations represents a minor limitation.
- 6.4.42 Where watercourses were initially assessed during Visit 1 to be unsuitable for water vole, surveyors used their professional judgement to determine whether a second survey was necessary. Where habitats were found to be unsuitable, then

the second visit did not take place. The absence of a second survey visit based on professional judgement is unlikely to represent more than a negligible limitation.

Hedgerow Regulations Assessment Surveys

- 6.4.43 Land access was obtained for the majority of the Order Limits (see **ES Volume 3, Appendix 6.12: Hedgerow Regulations Assessment Survey Report [EN0110020/APP/6.20.1]**). Land parcels without land access permission in place were assessed from viewpoints. As such, it was not possible to obtain the same level of detail for these locations as areas directly accessed by the surveyors. However, it was possible to review aerial photography and species records, and make observations and inferences based on professional judgement to characterise the habitats present.

Fisheries and White-Clawed Crayfish eDNA Surveys

- 6.4.44 One eDNA sample (SL28) was lost in transit (see **ES Volume 3, Appendix 6.13: Fisheries and WCC eDNA Survey Report [EN0110020/APP/6.20]**). SL28 can be inferred from SL25, taken 1.4km downstream, therefore the loss of this sample is a minor limitation.
- 6.4.45 Four watercourses were dry during the initial 2025 visits. These are likely ephemeral ditches that only occasionally hold water and are unsuitable for the target species. The inability to collect eDNA is considered a minor limitation.
- 6.4.46 Access restrictions prevented surveyors from visiting four sample locations. In the absence of survey data, the presence of target species is assumed and mitigation applied accordingly to include trenchless crossing, subject to the results of any future surveys. This is considered a minor limitation.
- 6.4.47 Three samples failed quality control for European eel qPCR analysis and produced inconclusive results. In such cases, target species are assumed present and mitigation applied subject to the results of any future surveys. This is considered a minor limitation.
- 6.4.48 Some eDNA could only be identified to genus level. Likely species can still be inferred from known distributions in England and Wales, so this is considered a minor limitation.
- 6.4.49 Seven of 16 fisheries metabarcoding samples returned 'no amplifiable DNA'. This most likely indicates absence of eDNA and therefore absence of target species, though sampling error or eDNA degradation cannot be ruled out. These results cannot be interpreted in isolation but can be considered alongside other aquatic data (e.g., SL26 testing positive for WCC, indicating good water quality and flow conditions). A precautionary, judgement-based approach will be taken to address this limitation.

Biodiversity Net Gain

- 6.4.50 Limitations specific to BNG are set out in **ES Volume 3, Appendix 6.4: BNG Report [EN0110020/APP/6.20]**.

6.5 Baseline

Baseline Data Sources

Existing Baseline Data Sources

- 6.5.1 Desk-based data sources that informed the baseline included:
- Derbyshire Biological Records Centre (DBRC) and Rotherham Biological Records Centre (RBRC)
 - Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) mapping database
 - Ordnance Survey (OS) Online Mapping
 - RMBC Open Data Source Mapping⁶¹
 - Centre for Ecology and Hydrology (CEH) Hedgerow Database; and
 - The Woodland Trusts Ancient Tree Inventory (ATI).
- 6.5.2 The baseline was also informed by field surveys completed between April 2024 and December 2025 (see **Table 6-6**). The approach for each existing baseline survey and assessment are in line with the relevant legislation, policy and guidance outlined in Section 6.2 and detailed in **ES Volume 3, Appendix 6.1: Legislation, Policy and Guidance [EN0110020/APP/6.20]**. Full methodologies to the above are found within **Technical Appendices 6.2 to 6.13**.

Future Baseline Data Sources

- 6.5.3 Future baseline Biodiversity and Nature Conservation conditions within the Study Area have also been defined by considering the following:
- The Study Area is comprised of predominantly rural and agricultural habitats, with typical boundary features, such as, field margins, hedgerows, ditches, and watercourses, and is subject to variability in agricultural land use and management. These habitats, and the features or species they contain, may be influenced in future years by changes brought about by agricultural or environmental management plans or strategies in the absence of the development
 - Any agricultural or environmental management plans or strategies (e.g. Local Nature Recovery Strategy (LNRS), Environmental Land Management (ELM) schemes) that may be applied in the time leading up to the construction of the Proposed Development needs to be considered in terms of whether it might significantly affect or undermine the assessment results
 - What the implications are for climate change projections on whether the Proposed Development would significantly affect climate change conditions within this area extent compared to climate change conditions in the absence of the Proposed Development.
- 6.5.4 In addition to the above, the BNG baseline of the Study Area currently covers all habitats with their Condition Assessment within the Site, along with high level habitat types in the Cable Corridor. This BNG baseline assessment may also be subject to future baseline changes noted above.

Existing Baseline Conditions

Desk Study

National Designated Sites

- 6.5.5 The nearest national designated site is Crabtree Wood Site of Special Scientific Interest (SSSI) (see **Statutory and Non-Statutory Designated Ecological Sites [EN0110020/APP/2.6]**). Crabtree Wood is designated for its base rich flush habitats and is located at 0.9km southeast of W3 (the nearest point of the Proposed Development). A total of eleven SSSIs are present within 5km of the Order Limits (see **Statutory and Non-Statutory Designated Ecological Sites [EN0110020/APP/2.6]**), which are designated for their habitats – (e.g., open water, grasslands, and ancient woodlands), and flora that these habitats support. Denaby Ings, Maltby Low Common, and Moss Valley are also designated SSSIs for terrestrial invertebrates, with Moss Valley also designated for its protected species and ornithological interests.
- 6.5.6 A summary of the national designated sites within 5km of the Order Limits that have not been previously scoped out can be found in **Table 6-8** (see also **Statutory and Non-Statutory Designated Ecological Sites [EN0110020/APP/2.6]**).

Table 6-8: Nationally Designated Sites within 5km of the Order Limits

Designated Site (SSSI)	Distance from Proposed Development	Designated Features
Crabtree Wood	0.9km southeast of W3	One of the two best base-rich flushes in Derbyshire
Anston Stones Wood	1.3km southeast of W2	Second best example of limestone woodland in south Yorkshire
Sprotborough Gorge	2.2km north northeast W1	Limestone, marshland, open water and ancient woodland
Edlington Wood	2.2km east W1	Secondary woodland of ancient origin. native species rich understory and ground flora
Cadeby Quarry	2.5km north W1	Geological interest. Limestone grasslands and flora, and scrub
Lindrick Golf Course	2.5km southeast W2	Calcareous grassland, scrub, woodland, and two limestone quarries
Denaby Ings	2.75km northeast W1	Macrophytes, open water, neutral grassland, whooper swan, and invertebrates
Ginny Spring	3.3km east W3	Magnesium limestone and associated ground flora. Alder/birch flush.
Moss Valley	4.1km west W3	Geological interest. Wet woodland and flora, invertebrates, white

Designated Site (SSSI)	Distance from Proposed Development	Designated Features
		clawed crayfish, GCN, grass snake, and ornithological interests
Roche Abbey Woodlands	4.3km east W2	Alder & Willow Carr. Ancient woodland and ground flora
Maltby Low Common	4.8km east W2	Acid, neutral, calcareous grasslands and flora. Terrestrial Invertebrates

Local Designated Sites

- 6.5.7 Brampton Common LWS lies partially within the Site and will be directly affected by the Proposed Development. Ulley Country Park LWS and Firsby Reservoir Local Nature Reserves (LNR) are adjacent to the Site. One ancient woodland was recorded adjacent to the Order Limits near W1 (see **Statutory and Non-Statutory Designated Ecological Sites [EN0110020/APP/2.6]**).
- 6.5.8 A summary of the local designated sites within 2km of the Order Limits can be found in **Table 6-9**.

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Table 6-9: Local Designated Sites within 2km of the Order Limits

Designated Site	Distance & Direction from Study Area	Designated features
Brampton Common LWS (LWS 027)	Within W2	Part of the designation is within the Order Limits. Designated for (H1)species-rich hedgerow and (B3) breeding skylark population.
Axle Lane LWS (LWS 009)	Within CRL	A small part of the designation is within the Order Limits. A significant area of open, mostly arable, land between the villages of Kiveton Park, Todwick and South Anston and includes the following compartments: - Fields between Kiveton Park, Todwick and South Anston - Lodge Hill Pond - Kiveton restored landfill site Axle Lane qualifies as a Local Wildlife Site under the following criteria: B2 - over 0.25% of the UK wintering population of Golden Plover V2 - presence of the eyebright <i>Euphrasia pseudokerner</i>, a vascular plant listed as a priority species in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
Whiston Meadows LWS (LWS036)	Within Order Limits but only for a very small area of visibility splay associated with an access location.	A very small part of the designation is within the Order Limits. This is a small site in the wooded valley of the Whiston Brook consisting of a complex of wetlands and damp grasslands and drier grass and woodland areas, surrounded by attractive rolling farmland. Amenity grasslands in the east progress gradually into a 'wilder' west area, serving as a 'buffer' between the urban and rural areas. The Whiston Meadows Local Wildlife Site includes the following compartments: - Whiston Meadows

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Designated Site	Distance & Direction from Study Area	Designated features
		- Blue Man's Bower Whiston Meadows qualifies as a Local Wildlife Site under the following criteria: G3 - acid grassland W3 - acid woodland G2 - wet grassland R11 - flowing water SW1 - standing water
Firsby Reservoir LNR	Adjacent to the southwest W1	Standing open water
Kings Pond Plantation LWS (LWS043)	Adjacent to W2	An isolated island of 'natural habitat' in the surrounding arable land, this site also includes a large freshwater pond in the grounds of Slacks Farm. Although called 'plantation' the woodland canopy is composed of pedunculate oak, goat willow along the western ditch, and a lot of young silver birch in the central areas. Some mature beech trees are present. The central area has a dense understory of bracken, with more nettle and bramble along the south/east edge. The west ditch had some hard rush and marsh thistle and these species extended a little way into the woodland. The King's Pond Plantation Local Wildlife Site includes the following compartments: - King's Pond Plantation - King's Pond King's Pond Plantation qualifies as a Local Wildlife Site under the following criteria: W3 - acid woodland W3 - neutral/calcareous woodland W3 - wet woodland

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Designated Site	Distance & Direction from Study Area	Designated features
Harthill Reservoir candidate LWS	Adjacent to W3	Standing open water proposed based on local wildlife interests
Ulley Country Park LWS CP (LWS 029)	Adjacent to central W2	Designated for neutral grassland, acid grassland & wet grassland, lowland heath, acid woodland & wet woodland
Burnt Wood LWS (LWS 030)	Adjacent to CRG-2	Burnt Wood has a fantastic bluebell-dominated ground flora. The soil is poor, sandy and acidic, so quite well drained. The LWS is generally fairly open; in the east corner is a larch and sycamore plantation but the majority of the wood is oak with beech, especially to the south-west edge, with some sycamore locally dominant. The wood contains some good old trees - 100-150 years+. Burnt Wood qualifies as a Local Wildlife Site under the following criteria: W3 - acid woodland V2 - presence of the nationally rare Monk's-hood <i>Aconitum napellus</i>
Nor Wood & Locks (LWS005)	Adjacent to W3	The Nor Wood & Locks Local Wildlife Site includes the following compartments: - Nor Wood Triangle - Woodall and Killamarsh Ponds - Nor Wood & Locks and surrounds Nor Wood & Locks qualifies as a Local Wildlife Site under the following criteria: W1 – Ancient woodland indicators W3 – acid woodland W3 - neutral/calcareous woodland W3 - wet woodland V2 – population of the nationally scarce Large-leaved Lime

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Designated Site	Distance & Direction from Study Area	Designated features
		G2 – neutral grassland G2 - wet grassland SW2 – standing water Ri1 – running water V2 – population of the nationally scarce True Fox-sedge W2 – NVC W6: <i>Alnus glutinosa-Urtica dioica</i> woodland W2 – NVC W8: <i>Fraxinus excelsior-Acer campestre-Mercurialis perennis</i> woodland
Treeton Wood LWS (LWS 031)	Adjacent to W2	Upland Sessile Oak-birch woodland with a narrow strip of Western Valley Ash-Wych Elm along the north-east half of the south-east side. Sessile oak tends to grow taller than the birches, creating a more uneven structure. Sycamore and beech, where present, occur more frequently as mature trees. Crab apple also occurs, but rarely. Holly dominates the shrub layer with young common whitebeam & hawthorn occasional. The field layer appears to vary with past management & physical features. A good example of elm, ash and hazel occurs alongside the stream. Treeton Wood qualifies as a Local Wildlife Site under the following criteria: W1 – ancient woodland W3 – acid woodland W3 – neutral/calcareous woodland
Ravenfield Park & Firsby Reservoirs LWS (LWS 081)	Adjacent to the west of W1	A series of water bodies linked to the Firsby and Hooton Brooks with surrounding open and woodland valley habitats, and includes the following compartments: - Firsby Reservoirs Local nature Reserve - Ravenfield Park, including Hooton Brook

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Designated Site	Distance & Direction from Study Area	Designated features
		- Ravenfield Gorse Ravenfield Park & Firsby Reservoirs qualifies as a Local Wildlife Site under the following criteria: W3 - acid woodland W3 - neutral woodland W3 - wet woodland G2 - neutral grassland G3 - acid grassland B3 - breeding population of Gadwall B3 - breeding population of Gadwall B3 - breeding population of Willow Tit B4 - breeding bird assemblages INV1 - presence of <i>Neoascia geniculata</i> & <i>Neoascia interrupta</i> (Nationally Scarce Diptera) INV1 - presence of <i>Symmorphus connexus</i> (Nationally rare hymenopteran)
Chesterfield Canal candidate LWS (LWS 004)	365m north of W3/ within CRL	This is an extensive collection of smaller sites that are linked along the route of the Chesterfield Canal. The whole LWS includes nine compartments and a range of qualifying habitat features, however, the <u>Chesterfield Canal</u> compartment comprises open water and canal bank habitats that qualify under the following habitats: H1 - species-rich hedgerows W3 - Neutral/calcareous woodland V2 - presence of Monk's-hood and Copse-bindweed SW - standing water
Killamarsh Pond LWS	10m north of W3	Standing open water

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Designated Site	Distance & Direction from Study Area	Designated features
Revel Wood LWS (LWS 098)	30m south of CRD-1	This is a small sessile oak - hazel wood on a steeply sloping site; the habitats present are typical of the acid soils present. A watercourse forms the south boundary for much of the LWS before flowing north-west to meet Whiston Brook. Revel Wood qualifies as a Local Wildlife Site under the following criteria: W1 - ancient woodland W3 - acid woodland W3 - neutral/calcareous woodland
Anston Brook Walk LWS (LWS 104)	60m east of W2	This is an area of neutral grassland bordered on the south by scrub then a railway line, and in the north by scrub and the Anston Book which connects the LWS upstream to Anston Stones Wood. Anston Brook Walk qualifies as a Local Wildlife Site under the following criteria: G2 - neutral grassland W3 - acid woodland
Anston Stone Wood LNR	60m southeast of W2	Limestone woodland, calcareous grassland, scrub and wetland
Pebbley Oaks Lane Proposed LWS	95m south of W3	Mixed broadleaved woodland
Dinnington Colliery Tip LWS (LWS 016)	200m northeast of W2	Dinnington Colliery tip (aka North Anston Pit Top) is a comparatively new and still developing site, so the stable and long-established aspects of the LWS, which have been used as the main determiners of site quality, are not present across the entire site but have influenced the restoration planting and habitat creation areas. The LWS includes the following compartments:

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Designated Site	Distance & Direction from Study Area	Designated features
		- Alcove Plantation - Cramfit Wood - Dinnington Community Woodland - Cramfit Brook and Marsh Dinnington Colliery Tip qualifies as a Local Wildlife Site under the following criteria: G2 -neutral grassland G2 - calcareous grassland W3 - neutral/calcareous woodland W2 - NVC W8 <i>Fraxinus excelsior</i> - <i>Acer campestre</i> - <i>Mercurialis perennis</i> woodland SW2 - standing water vegetation
Wickersley Wood LWS (LWS 042)	250m northwest of W2	Wickersley Wood is predominantly semi-mature oak-birch woodland with developed scrub and patches of heathland; small areas of beech, Sweet chestnut and sycamore are also present. The level of bare ground is notable and is related to heavy public use. Wickersley Wood qualifies as a Local Wildlife Site under the following criteria: W3 - acid woodland W3 - neutral/calcareous woodland W1 - ancient woodland
High Moor Pond LWS	250m west of W3	Habitat mosaic
Pebbley Reservoir LWS	330m southeast of W3	Standing open water - lake
Park Brook Grasslands LWS	350m southwest of W3	Unimproved acid grassland
Treeton Colliery LWS (LWS 122)	390m west of W2	Includes the former colliery spoil tip with grassland habitats typical of poor soil and formed ground and includes the following compartments:

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Designated Site	Distance & Direction from Study Area	Designated features
		- Treeton Colliery ex-spoil tip - Treeton Meadows Treeton Colliery qualifies as a Local Wildlife Site under the following criteria: G2 Plant species for semi-natural neutral grassland G2 Plant species for semi-natural calcareous grassland G3 Plant species for semi-natural acid grassland
Todwick Common LWS (LWS 008)	400m south west CRK-2	A large area of open, mostly arable, land between the village of Todwick and the M1; occasional small parcels of woodland, the Todwick Beck and a series of species-rich hedgerows create a valuable and attractive landscape. The Todwick Common Local Wildlife Site includes the following compartments: - Fields north of Goose Carr Lane - Goose Carr Lane - Fields south and west of Goose Carr Lane - Grassland at Storth Lane - Todwick Beck - Fields surrounding Low Laithes Farm - Woodland at Manor Road Todwick Common qualifies as a Local Wildlife Site under the following criteria: B2 – wintering population of Golden Plover B3 – breeding populations of Skylark & Yellowhammer M3 – population of Brown Hare H1 – species-rich / ancient hedgerow W3 - neutral/calcareous woodland G2 - neutral grassland

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Designated Site	Distance & Direction from Study Area	Designated features
		G2 - wet grassland W3 - neutral/calcareous woodland
Hooton Cliff LWS (LWS 082)	400m west of W1	Mixed semi-natural and plantation ash woodland with areas of grassland; historic maps show sand quarries and limekiln within the woodland. The LWS boundary also includes Cliff Lane which is a green lane bounded by Hawthorn, with the character of an overgrown hedgerow. Hooton Cliff qualifies as a Local Wildlife Site under the following criteria: V2 - presence of Large-leaved Lime W1 - ancient woodland W3 - neutral/calcareous woodland
Loscar Common LWS (LWS 002)	410m south CRL	Significant area of farmland with large field parcels separated by hedgerows and fencing; the LWS includes 7 areas of woodland including some ancient semi-natural and some plantation areas. The Loscar Common Local Wildlife Site includes the following compartments: - Loscar Wood - Cuthbright Wood - Honeysyke Wood - Loscar Common Plantation and Quarry - Arable fields and boundaries - Southard's Bottoms Loscar Common qualifies as a Local Wildlife Site under the following criteria: B3 - breeding population of Corn Bunting W1 - ancient woodland habitat W3 - acid woodland habitat W3 - neutral/calcareous woodland habitat

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Designated Site	Distance & Direction from Study Area	Designated features
Old Flatts Farm Marsh (LWS035)	460m northwest of W2	The LWS consists of marshland with a diverse range of communities in small area. The LWS is permanently waterlogged by ground water, alluvial soils leading to mesotrophic conditions and therefore moderate species diversity over the stand as a whole. Previously considered to be the most complete natural marsh in Rotherham, despite its compact size; since the closure of Treeton Colliery water quality and levels have been poor. Old Flatts Farm Marsh qualifies as a Local Wildlife Site under the following criteria: G2 - wet grassland SW1 - standing waters
High Moor Pond LWS	475m west of W3	Lowland swamp
Hut Lane Meadows LWS	500m west of W3	Unimproved neutral grassland
Thurcroft Mineral Trail (LWS097)	500m east of W2	The trail runs along the disused rail line to Thurcroft Colliery from Steadfolds Lane south to Laughton East Junction; the trail then continues south but is included in the Dinnington Marsh Local Wildlife Site. Thurcroft Mineral Trail qualifies as a Local Wildlife Site under the following criteria: G2 - neutral grassland G2 - calcareous grassland H1 - ancient / species-rich hedgerow
Comberwood Farm Pond LWS	525m southwest of W3	Not stated
Dinnington Marsh LWS (LWS 026)	550m east W2	Dinnington Marsh at Laughton Common is an area of open grassland, scrub and developing woodland, incorporating the fishing pond. Eel Mires Dike crosses the LWS; the dike receives water via a series of drains within the LWS and the

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Designated Site	Distance & Direction from Study Area	Designated features
		surrounding farmland, and the LWS includes the following compartments: - Fishing pond owned by SafetyKleen Ltd - Dinnington Marsh Dinnington Marsh qualifies as a Local Wildlife Site under the following criteria: B3 - breeding population of Grasshopper Warbler G2 - wet grassland V2 - presence of Pillwort FE3 - rich-fen FE4 - poor-fen G2 - neutral grassland SW1 - standing water
Crabtree Wood LWS	550m southeast of W3	Secondary broadleaved woodland
Canklow Wood LWS (LWS 037)	550m northwest of CRE	Canklow Wood is characterised by mature oak woodland, young developing oak-birch woodland and large areas of more open acid grassland with heathland habitats present and includes the following compartments: - Canklow Wood - Boston Park - Grassland north of Boston Park. Canklow Wood qualifies as a Local Wildlife Site under the following criteria: HE1 - presence of heathland FU3 - locally important for wax-caps G3 - acid grassland W1 - ancient woodland W3 - acid woodland

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Designated Site	Distance & Direction from Study Area	Designated features
		W3 - neutral/calcareous woodland.
Nitticarhill Wood LWS	565m southeast of W3	Ancient woodland – plantation broadleaved
Comberwood Farm Meadow LWS	600m southwest of W3	Semi-improved neutral grassland
Hellaby Bridge Brickworks LWS (LWS 059)	900m east of CRB	The boundary of this site has been drawn to reflect the agreed site restoration and great crested newt translocation mitigation scheme. The LWS' key interest is its population of great crested newts, which initially colonised the ponds that were formed during the temporary cessation of mineral extraction on the LWS. Hellaby Bridge Brickworks qualifies as a Local Wildlife Site under the following criteria: AR3 - an exceptional population of Great Crested Newt
Treeton Dyke LWS (LWS 032)	800m southwest of W2	This site contains a range of habitats within a small area forming a 'natural' enclave of attractive countryside adjacent to industrial development and close to the conurbations of Treeton, Aughton, Swallownest and Fence. The whole area has significant wildlife interest and is a prime bird-watching site, especially parts of Forgemasters tip, the marsh to the north-west of Hail Mary Hill and the south arm of the Dyke; these relate to the variety of habitats present and least physical disturbance. The Treeton Dyke Local Wildlife Site includes the following compartments: - Hail Mary Hill and Falconer Wood - Forgemasters Tip - Treeton Dyke - Fields south-east of Treeton Dyke

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Designated Site	Distance & Direction from Study Area	Designated features
		Treeton Dyke qualifies as a Local Wildlife Site under the following criteria: NV2 – presence of the moss <i>Aloina aloides</i> var. <i>ambigua</i> B3 – breeding population of Grasshopper Warbler SW1 – standing water W1 – ancient woodland W3 – acid woodland W3 – neutral/calcareous woodland W3 – wet woodland G2 – neutral grassland FE1 – rich-fen V2 – presence of Loose Silky-bent INV2 – scarce invertebrate assemblage
Lilly Hall LWS (LWS 058)	950m east of CRB (north of W2)	This is a linear strip of remnant ancient woodland to the north of Lilly Hall Farm. Lilly Hall qualifies as a Local Wildlife Site under the following criteria: W1 - ancient woodland W3 - neutral/calcareous woodland
Hawke Wood Pond LWS	825m south of W3	Reptile/amphibian assemblage – great crested newt
Crabtree Wood LNR	900m southeast of W3	Standing open water, green corridor for wildlife movement
Norwood Triangle Complex LWS	960m north of W3	Scrub
Chesterfield Canal – Norwood LWS (LWS 004)	995m north of W3	Citation details not available
Butcherlawn Pond LWS	1.0km south of W3	Invertebrate assemblage - Odonata
Catcliffe Flash LNR	1.1km west of W2	Flowing river habitat

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Designated Site	Distance & Direction from Study Area	Designated features
Car Plantation LWS	1.1km southeast of W3	Secondary broadleaved woodland
Foers Wood LWS (LWS 126)	1.1km south of W2	The LWS is privately owned mature wet woodland with running and standing water features, managed for wildlife. There is no public access to the LWS and the isolation and lack of disturbance, combined with the positive management by the landowners has developed a diverse, complex woodland site. Foers Wood qualifies as a Local Wildlife Site under the following criteria: G2 Plant species for semi-natural neutral grassland W1 Botanical indicators of ancient woodlands in South Yorkshire W3 Vascular indicator plants of wet woodland M1 Any site that supports roosts of two or more species of bat M2 Any site that is regularly used for foraging by at least four species of bat M3 Any site that regularly supports a population of a native mammal species listed in Annex 2 of the Habitats Directive or any mammal listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) AR1 Any site that supports four or more species of native amphibian and/or reptiles AR2 Any site that supports a good population of great crested newt (<i>Triturus cristatus</i>)
Austen Park LWS (LWS 099)	1.1km south of W2	This is a small open grassland site surrounded by residential development; the LWS boundary is formed by a species-rich mature hedge. Austen Park qualifies as a Local Wildlife Site under the following criteria: H1 – ancient / species-rich hedgerow.

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Designated Site	Distance & Direction from Study Area	Designated features
Longrybank Wood LWS	1.2km south of W3	Ancient woodland – plantation broadleaved
Thompson's Holt Pond LWS	1.3km south of W3	Standing open water - pond
Thurcroft Hall LWS (LWS044)	1.4km north of W2	This site is formed by semi-mature habitats that surround a former brick clay and coal extraction site, now in-filled and restored, to the west of Thurcroft Hall. A range of habitats are present including woodland, thought to be plantation but on an old woodland site, and wetlands associated with Brookhouse Dike. The Thurcroft Hall Local Wildlife Site includes the following compartments: - The Terrace - Fields to the west of Thurcroft Hall - Brookhouse Dike and ponds Thurcroft Hall qualifies as a Local Wildlife Site under the following criteria: W3 - neutral/calcareous woodland G2 - neutral grassland G2 - wet grassland W1 - ancient woodland W3 - wet woodland
Barlborough Hall South Pond potential LWS	1.4km south of W3	Not Stated
High Wood and Thompson's Holt LWS	1.4km southwest of W3	Ancient semi-natural oak woodland
Dinnington Open Public Space LWS (LWS018)	1.4km northeast of W2	A reclaimed spoil tip from the former Dinnington Main colliery; this site was restored in the 1990s with grassland and shrub planting. There are distinct areas of open grassland surrounded on three sides by maturing scrub woodland.

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Designated Site	Distance & Direction from Study Area	Designated features
		Dinnington Public Open Space qualifies as a Local Wildlife Site under the following criteria: G2 - neutral grassland G2 - wet grassland
Thrybergh Country Park LWS (LWS080)	1.4km west of W1	Thrybergh Country Park is a reservoir site with significant ornithological interest. Thrybergh Country Park qualifies as a Local Wildlife Site under the following criteria: B3 – breeding population of Gadwall B3 – breeding population of Grasshopper Warbler
Wickersley Gorse LWS (LWS039)	1.5km west of W2	A rich mosaic of different habitat types with neglected stone walls and old hedges marking ancient field boundaries. A watercourse runs north-east to south-west through the LWS increasing the habitat diversity. Wickersley Gorse qualifies as a Local Wildlife Site under the following criteria: G2 - neutral grassland G2 - wet grassland G3 - acid grassland W1 - ancient woodland W3 - acid woodland W3 - neutral/calcareous woodland W3 - wet woodland
Gulling Wood and Silver Wood LWS (LWS 061)	1.5km northwest of Cable Corridor (north of W2)	A former beech plantation this site is now the only large mature woodland in the locality and is thus a very valuable nature conservation site that includes the following compartments: - Gulling Wood

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Designated Site	Distance & Direction from Study Area	Designated features
		- Silver Wood Gulling Wood and Silver Wood qualify as a Local Wildlife Site under the following criteria: B3 - breeding population of Song Thrush W1 - ancient woodland W3 - acid woodland W3 - neutral/calcareous woodland
North Anston Butterfly House LWS (LWS204)	1.7km east of W2	This site is the grounds of the purpose-built tropical butterfly house, wildlife and falconry centre, which includes limestone grassland, woodland and ponds. North Anston Butterfly House qualifies as a Local Wildlife Site under the following criteria: G2 - neutral grassland G2 - calcareous grassland W3 - neutral/calcareous woodland V1 - presence of <i>Onobrychis viciifolia</i> [Sainfoin] V2 - presence <i>Tilia platyphyllos</i> [Large-leaved lime]
Woodhouse Washlands LWS (LWS033)	1.9km southwest of W2	Woodhouse Washlands Local Nature Reserve is bisected by the boundary between Sheffield and Rotherham which is formed by the River Rother. This is a significant washland with areas of marsh, rush-dominated mire, semi-improved wet grassland plus ruderal and marginal communities and Hawthorn scrub; ponds and ox-bow remain as a remnant of the species-rich washland once extensive throughout the Rother valley. The Local Wildlife Site designation applies to the LWS within the RMBC authority boundary. The Woodhouse Washlands Local Wildlife Site includes the following compartments:

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Designated Site	Distance & Direction from Study Area	Designated features
		- Woodhouse Washlands north-east of River Rother, north of the British Rail viaduct - British Rail viaduct and embankments within Woodhouse Washlands - Woodhouse Washlands north-east of River Rother, south of the British Rail viaduct Woodhouse Washlands qualifies as a Local Wildlife Site under the following criteria: - G2 – Neutral grassland - G2 – wet grassland - M3 – presence of Water Vole - SW1 – Standing water
Rother Valley Country Park LWS (LWS 006)	1.9km west of W3	The LWS boundary excludes the golf course area of the country park. The qualifying area of the LWS includes the following compartments: - RVCP compartment 5 - Meadowgate Lake Nature Reserve - Rother Valley CP main lake - Rother Valley CP boating lake - Killamarsh Meadows & Nethermoor Lake - County Dyke and surrounds - River Rother within Rother Valley Country Park Rother Valley Country Park qualifies as a Local Wildlife Site under the following criteria: - G2 - wet grassland - G2 - neutral grassland - H1 – species-rich / ancient hedgerows - B3 – breeding populations of Skylark & Yellowhammer

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Designated Site	Distance & Direction from Study Area	Designated features
		B5 – the highest scoring WEBS site in the SBSG region (2002 report) M3 - presence of Brown Hare population B3 – breeding population of Reed Bunting H2 – species-rich hedgerows INV2 – invertebrate assemblage
Old Denaby Wetland LNR	2.0km northwest of W1	River, oxbow and subsistence wetland wildlife

Protected and Priority Species

- 6.5.9 Collectively, the data requests to local biological record centres returned 653 records of bird species of conservation importance since 1 January 2015 within the Study Area. These data comprised 85 species, most of which are typical of the habitat in the Study Area. Some records, such as wildfowl and wading birds, pertained to wetland habitats not found within the Order Limits. Species typical of farmland and hedgerow habitats and assumed to be present on the Site, but not recorded during the walkover, included grey partridge (*Perdix perdix*) and tree sparrow (*Passer montanus*).
- 6.5.10 The data included 16 species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (WCA) and are therefore afforded legal protection from disturbance at or near an active nest. Most of these occur as vagrants or non-breeding visitors to the area (e.g. on passage or during winter), but species with the potential to nest within the Site, or surrounds, included quail (*Coturnix coturnix*), barn owl (*Tyto alba*), kingfisher, peregrine (*Falco peregrinus*), and Cetti's warbler (*Cettia cetti*).
- 6.5.11 The desk study identified records of the following species in the surrounding area that were not identified during the extended UKHab survey:
- Seven species of foraging and commuting bats (brown long-eared bat, common and soprano pipistrelles, Natterer's (*Myotis nattereri*), Daubenton's (*M. daubentonii*), Leisler's (*Nyctalus leisleri*) and noctule (*N. noctule*)), and some unidentified *Myotis* species (all protected species)
 - Otter (*Lutra lutra*; a protected species)
 - Harvest mouse (*Micromys minutus*) and European hedgehog (*Erinaceus europaeus*) (both priority species)
 - Great crested newt, grass snake (*Natrix natrix*; a protected species) and common toad (*Bufo bufo*; a priority species)
 - One record of white-clawed crayfish (*Austropotamobius pallipes*; a protected species)
 - Six priority insect species: ghost moth (*Hepialus humuli*), cinnabar moth (*Tyria jacobaea*), dingy skipper (*Erynnis tages*), shaded broad-bar (*Scotopteryx chenopodiata*), small heath (*Coenonympha pamphilus*), and wall brown butterfly (*Lasiommata megera*)
 - Bluebell (*Hyacinthoides non-scripta*; a protected species); and
 - Invasive species such as signal crayfish (*Pacifastacus leniusculus*), wall cotoneaster (*Cotoneaster horizontalis*), and New Zealand Pygmy weed (*Crassula helmsii*).

Desk Based UKHab Assessment – Cable Corridors

- 6.5.12 The habitats observed through analysis of aerial imagery along the Cable Corridors are contiguous to the Site and would also be likely to support or have the potential to support similar species. Habitat condition assessments have been undertaken on habitats which were identified as having ecological value and helped inform the scope of species surveys. The high-level interpretation of aerial imagery has identified the following broad habitat types in **Table 6-10**.

Table 6-10: Desk Based UKHab Assessment of the Cable Corridors

Habitat Type (UKHab code)	Area (ha) and percentage cover of Cable Corridor
Cropland (c1a, c1b, c1c, c1c5, c1d and c1d8)	227.8ha, 69.7%
Grassland (g, g3c, g4)	65.6ha, 20.1%
Urban (u1b, u1b5, u1c, u1e, and u1f)	16.2ha, 5.0%
Woodland and forest (w1, w1f, w1g, w1h)	13.3ha, 4.0%
Heathland and shrub (h3, h3h)	4.0ha, 1.2%
Hedgerow (h2, h2a, h2a6)	19.3km
Rivers and streams (r2, r2b)	2.5km
Sparsely vegetated land (s)	0.05ha, 0.02%

- 6.5.13 From the results of the desk-based assessment, habitats identified of negligible biodiversity value included cropland and urban habitat categories, which represented approximately 74.7% of the Cable Corridors.
- 6.5.14 Grassland habitats of different types offered low to moderate value to biodiversity and comprised a further 20.1% of the total Cable Corridors. Whilst hedgerow, shrub, woodland and forest habitat categories comprised a 19.3km length and 5.2% area of moderate to high value.
- 6.5.15 Rivers and streams were of varying value to biodiversity, predominantly comprised of minor ordinary watercourses of moderate condition and 2.5km in length.
- 6.5.16 Further detailed information on habitats is found in **ES Volume 3, Appendix 6.2: UK Habitat Survey Report [EN0110020/APP/6.20]**.

Baseline Survey Findings

- 6.5.17 Further information on the Baseline Surveys for species and habitats within the Study Areas are found in **ES Volume 3, Technical Appendices 6.2 to 6.13**, as listed in Paragraph 6.1.7.

Habitats – Site

- 6.5.18 As identified under the **ES Volume 3, Appendix 6.2: UK Habitat Survey Report [EN0110020/APP/6.20]**, the Site contains non-priority habitats and priority habitats. The priority habitats are those that are considered Habitats of Principal Importance in England under the NERC Act 2006. Priority habitats on the Site recorded in **ES Volume 3, Figure 6.2.3: Priority Habitats [EN0110020/APP/6.19]** include:
- Native Hedgerows
 - Wet Woodland (Deciduous woodland)
 - Ancient Woodland
 - Arable Field Margins; and
 - Eutrophic Standing Waters.

- 6.5.19 A UKHab assessment and condition assessment has been completed of the Study Area, with full results provided in **ES Volume 3, Appendix 6.2: UK Habitat Survey Report [EN0110020/APP/6.20]** and summarised below.
- 6.5.20 The land surveyed was predominantly (approximately 43.9%) cereal (e.g. wheat, barley, and oat) and (approximately 16.1%) non-cereal cropland use (e.g. rapeseed, flax, and bean crops). The fields appeared to be intensively sprayed, with limited arable weeds such as camomile (*Matricaria chamomilla*) and field speedwell (*Veronica agrestis*) recorded. However, the UKHab survey recorded small areas of cereal and non-cereal fields that constituted arable field margins (a priority habitat) or were otherwise managed for wildlife and providing a buffer from field boundary habitat. Field margins typically ranged from 2m to 6m in width and recorded a range of commonly found arable weed species, including thistles, camomile, fat hen (*Chenopodium album*), ragwort, (*Jacobaea vulgaris*), field speedwell, doves foot cranesbill (*Geranium molle*), and chickweed (*Stellaria media*). Other/un-specified agricultural land included set-aside, horticultural land, and other arable land.
- 6.5.21 Modified grassland comprised approximately 12.8% of the surveyed land, which was dominated by perennial ryegrass (*Lolium perenne*) with creeping buttercup (*Ranunculus repens*) and white clover (*Trifolium repens*). Smaller areas of neutral grassland (approximately 2.5%) were found in scattered locations throughout the Study Area, typically comprising Yorkshire fog (*Holcus lanatus*) and cock's-foot (*Dactylis glomerata*), with areas dominated by *Deschampsia* sp.
- 6.5.22 In areas surveyed, the arable fields were bordered by a mix of predominantly native hedgerows, which typically included a mix of blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*) and elder (*Sambucus nigra*), or less, for species poor hedgerows. Species rich hedgerows comprised of species such as blackthorn, hawthorn, holly (*Ilex* sp.), elder, field maple (*Acer campestre*), pedunculate oak (*Quercus robur*), hazel (*Corylus avellana*), and grey willow species (*Salix* sp.), and included trees in places. No Ancient Woodland is present in the Site. A veteran pedunculate oak was recorded within W1, in an arable field.
- 6.5.23 Watercourses and waterbodies (e.g. reservoirs) lie adjacent to, or in within the Site. However, several smaller watercourses and ponds were also recorded within the Site.

Habitats – Cable Corridor

- 6.5.24 A UKHab assessment has been completed of the Cable Corridor Study Area, with full results provided in **ES Volume 3, Appendix 6.2: UK Habitat Baseline Report [EN0110020/APP/6.20]**, **ES Volume 3, Figure 6.2.2: UK Habitat Classification – The Cable Corridor (EN0110020/APP/6.19)** and summarised below.
- 6.5.25 For those sections of the Cable Corridor where field surveys were not undertaken, the assessment was informed by publicly available sources, including aerial imagery, satellite data, and existing habitat and land-cover datasets.
- 6.5.26 Overall, habitats identified within the Cable Corridors were similarly comprised as the Site. Cropland was the predominant habitat type, covering approximately 69.7% of the Cable Corridor, followed by grassland (20.1%) with small patches of Woodland (4%). The Cable Corridor also crosses several small watercourses and roads.

- 6.5.27 Approximately 19.3km of Native hedgerow priority habitat was recorded throughout the field boundaries of the Cable Corridor, as well as small areas of Arable Field Margin and Lowland Mixed Deciduous Woodland priority habitat.

Ancient Woodland and Veteran Trees

- 6.5.28 There is *circa* 0.25 ha of ancient woodland present in Cable Route B bordering W1.

Woodland

- 6.5.29 Only small, fragmented areas of lowland mixed deciduous woodland and broadleaved deciduous woodland (approximately 3.7%) were recorded within the Cable Corridor. Smaller areas of native scrub (approximately 1.2%) were found in scattered locations within the Site, and typically comprised blackthorn, hawthorn, and bramble species (*Rubus sp.*).

Hedgerows

- 6.5.30 A total of 70.73km of native hedgerows, species-rich hedgerows, and other native hedgerows were recorded within the field margins throughout the Site and the Cable Corridors.
- 6.5.31 A Hedgerow Regulations Assessment Survey to identify 'Important' hedgerows has been completed of the Study Area, with full results provided in **ES Volume 3, Appendix 6.12: Hedgerow Regulations Assessment Survey Report [EN0110020/APP/6.20.1]** and summarised below.
- 6.5.32 Forty-six (46) hedgerows were considered to be 'Important', following assessment under the Hedgerow Regulations 1997 assessment criteria. Hedgerows were considered 'Important' under Cultural Heritage Criteria, Wildlife and Landscape Criteria, or a combination of both.
- 6.5.33 Removal of an 'Important' hedgerow requires permission to be obtained from the Local Planning Authority (LPA), or if not important, notification from the LPA to confirm that removal is permitted. Any hedgerow losses would also need to be compensated for, through additional hedgerow planting and/or enhancement of retained hedgerows. This would also ensure that statutory requirements with respect to Biodiversity Net Gain (BNG) are met.

River Condition Assessments / MoRPh

- 6.5.34 A River Condition Assessment Survey has been completed of the Study Area, with full results provided in **ES Volume 3, Appendix 6.4.1: River Condition Assessment Survey Report [EN0110020/APP/6.20.1]**, **ES Volume 3, Figure 6.4.4: MorPH Survey Locations (EN0110020/APP/6.19)** and summarised below.
- 6.5.35 Fifteen subreaches were surveyed in W1. Of these, 10 were in 'Moderate' condition and 5 were in 'Fairly good' condition.
- 6.5.36 Thirty subreaches were surveyed in W2. Of these, 25 were in 'Moderate' condition, 4 were 'Fairly good' condition and one was in 'Fairly poor' condition.
- 6.5.37 Five subreaches were surveyed in W3. Of these, 3 were in 'Moderate' condition and 2 were in 'Fairly poor' condition.
- 6.5.38 Of the 14 subreaches surveyed along the Cable Corridor, 3 in 'Moderate' condition were in Cable Route B, 2 in 'Moderate' condition and one in 'Fairly good' condition were in Cable Route C, 3 in 'Moderate' condition were in Cable Route D1, one in 'Moderate' condition was in Cable Route E, one in 'Moderate' condition was in

Cable Route F, one in 'Moderate' condition was in Cable Route K1 and two in 'Moderate' condition were in Cable Route L.

- 6.5.39 Six of the subreaches surveyed were deemed to have in watercourse encroachment, and 50 of the subreaches surveyed were deemed to have riparian encroachment.

Any improvements to these watercourses as part of the BNG metric 4.0 are discussed within **ES Volume 6, Appendix 6.4: Baseline BNG Report [EN0110020/APP/6.20]**.

Species

Bats

- 6.5.40 Further information on the results for bat surveys is detailed in **ES Volume 3, Appendix 6.10: Bat Survey Report [EN0110020/APP/6.20.1]**, with results shown on **ES Volume 3, Figure 6.10.1 to 6.10.3 [EN0110020/APP/6.19]**. Summary information on the bat surveys is outlined below.
- 6.5.41 GLTA have predominantly been completed where access has permitted amounting to 83% of all identified trees within the Site. GLTA have also been completed in accessible areas of the Cable Corridor.
- 6.5.42 Bat call analysis was completed for transects in May, June and September 2025 and remote monitoring between April and September 2025. Common pipistrelle (*Pipistrellus pipistrellus*) dominates the recordings throughout the transects with 100s to 1000s of calls, with Soprano pipistrelle (*Pipistrellus pygmaeus*), Noctule/Leisler bats (*Nyctalus spp*), *Myotis sp*, Brown long-eared bat (*Plecotus auritus*) confirmed across all transects in W1, W2, W3. A potential roost or important foraging ground for Noctule bat (*Nyctalus noctula*) has been recorded in W3, Cable Route B, with 235 bat passes recorded.
- 6.5.43 The presence in small numbers of Nathusius pipistrelle (*Pipistrellus nathusii*) whose distribution is not fully understood, and Serotine bat (*Eptesicus serotinus*) (International Union for Conservation of Nature (IUCN) classified as 'vulnerable') have been confirmed through QA of collected bat data. No bats listed under Annex 2 of the Habitat Directive have been identified using the Site.
- 6.5.44 118 trees have been surveyed using GLTA within W1, W2, W3. Of these, 71 trees were categorised as FAR, 13 trees as not requiring further assessment and were scoped out, and 34 trees as containing PRFs.

Great Crested Newt

- 6.5.45 Further information on the results for GCN surveys are detailed in **ES Volume 3, Appendix 6.8: Great Crested Newt Report [EN0110020/APP/6.20]**, with results shown on **ES Volume 3, Figures 6.8.1- 6.8.4: GCN – HSI and eDNA Assessment [EN0110020/APP/6.19]**. A summary of the GCN surveys is outlined below.
- 6.5.46 An HSI of Ponds 113, 118, and 119 were assessed in W1; Ponds 25, 40, 46, and 117 assessed in W2, and Ponds 120/P7 in W3. Previously Ponds 26, 73, 77 and 98 were within the Site, however, as a result of the design refinement, they are now outside of the Order Limits although, they remain within the Study Area for GCN, and therefore, a HSI assessment of these ponds was possible.
- 6.5.47 Ponds 26, 46, 118, 119, and 120 recorded a 'Poor' HSI score and suitability for GCN presence, ponds 25, 73, and 117 a 'Below Average' HSI score, ponds 40

and 113 recorded an 'Average' HSI score, and Ponds 77 and 98 an 'Excellent' HSI score.

- 6.5.48 The eDNA samples from the four ponds (Ponds 25, 73, 77 and 98) surveyed within the Study Area in June 2024 were all analysed and found to be negative and hence GCN, a protected species, were not present in them.
- 6.5.49 Five further ponds (Ponds 113, 117, 118, 119 and 120/P7) within the Study Area were surveyed in June 2025 for eDNA. Following analysis three of these five ponds recorded a negative eDNA for GCN, whilst a further two recorded inconclusive eDNA results for GCN.
- 6.5.50 All ponds within the Order Limits were surveyed for GCN and found to be absent for this species.
- 6.5.51 Seventeen ponds were identified within the 250m buffer of the Site. Of these seventeen ponds within the 250m buffer of the Site, fifteen of them were scoped out of assessment. Ponds 24, 33, 35, 60, 64, 106, 108, 110, 111 were separated by distance (>100m); Ponds 13, 28, 81, 100 had barriers (watercourses, roads, or development); Ponds 40, and 43 are attached to fisheries. The remaining two ponds, Ponds 36 and 37 could not be accessed therefore their status remains unknown.
- 6.5.52 Four ponds lie within 250m of the Cable Corridor none of which could be accessed; P4 at 100m west of Cable Route E, P5 at 15m north of Cable Route E, P6 at 45m north of Cable Route E and P11 at 110m south of Cable Route C. Due to the distance from, and width of, the Cable Corridor, the core habitat of P11 to any GCN (terrestrial and aquatic) can be avoided through cable micro siting.
- 6.5.53 A planning application at Long Lane 400kV Substation (planning application RB2025/1468) noted within the ecology report that three ponds were present within 250m (that would correspond with ponds P4, P5, and P6). Of the three ponds noted in the ecology report, one was sufficiently separated from the Site by distance and barrier, another was predominantly dry and acting as a flood area for the River Rother, and the remaining pond recorded a negative result for GCN eDNA.
- 6.5.54 Furthermore, no records of GCN have been recorded within the 250m buffer of the Order Limits during the desk study, with negative survey records recorded on review of the MAGIC database there is less likelihood of connected ponds with large metapopulations of GCN within the Study Area.
- 6.5.55 In summary, no ponds are being lost to the Proposed Development. Great crested newt was not recorded on the Site and no ponds are located within the Cable Corridor. Absence of GCN recorded from surveys within the Site provides an assessment that GCN is not likely to be an IEF within the Site.
- 6.5.56 Six ponds were identified within the 250m buffer of the Order Limits (two within the buffer of the Site and four within the buffer of the Cable Corridor) where there is connectivity to the Site and surveys have not been undertaken and therefore status of GCN in these is unknown.

Otter and Water Vole

- 6.5.57 Further information on the results for otter and water vole surveys is detailed in **ES Volume 3, Appendix 6.11: Otter and Water Vole Survey Report [EN0110020/APP/6.20]**, with results shown on **ES Volume 3, Figures 6.11.1 to 6.11.8 [EN0110020/APP/6.19]**. A summary of the otter and water vole survey results is outlined below.

- 6.5.58 Two potential otter holts a couch and three otter spraints were recorded along Anston Brook in W1. Four otter spraints and jelly were recorded along Broad Bridge Dyke in W3. No holts have been confirmed, although further otter surveys of these two watercourses will be completed in the location of two proposed track crossings (crossing locations 3, 7) to inform any required additional mitigation measures to be secured through the CEMP.
- 6.5.59 Sewage fungus found in Cramfit Brook, make it less suitable for fisheries and therefore otter forage. Ulley Brook, Cramfit Brook, Anston Brook, and an unnamed tributary at LP200 have been assessed. Mink and crayfish burrows (likely signal crayfish) were observed during surveys as incidental records.
- 6.5.60 Evidence of mink was recorded along Ulley Brook in W2, which is predatory and invasive species that predate on and competes for territory with water vole. Signal crayfish are known to denude the overall macroinvertebrate species assemblage within watercourses and will predate on small fish, which has the potential to reduce fisheries and therefore food sources for otters. However, signal crayfish themselves are predated on by otter.
- 6.5.61 Suitability for water vole has been found in places across the Site with macrophyte forage and sheltering opportunities on the bankside, however no water vole have been recorded. Watercourses in other areas across the Study Area have been identified with densely wooded banks, which provide shading to the watercourse and riparian habitats on the bank. Through shading, these watercourses provide a reduced ground cover for sheltering water vole that may lead to increased predation.
- 6.5.62 With woodland shading, there are reductions in thickness of macrophyte coverage and areas of continuous macrophyte coverage that water vole requires for forage to sustain populations and expand distributions.
- 6.5.63 Similar observations were made on the Cable Corridors where access permitted, with no water vole signs identified on CRB, CRC, CRD1, and CRL. Many of the watercourses were low flow or dry at the time of survey, and those with shading provided limited suitable forage and sheltering opportunities for water vole. No otter resting places or holts were identified in the Cable Corridor locations.
- 6.5.64 No evidence of water vole has been identified within the Study Area of the Site and within surveyed areas of the Cable Corridor.

Reptiles

- 6.5.65 Further information on the results for reptile surveys are detailed in **ES Volume 3, Appendix 6.9: Reptile Survey Report [EN0110020/APP/6.20]**, with results shown on **ES Volume 3, Figure 6.9.1 and Figure 6.9.2 [EN0110020/APP/6.19]**. A summary of the reptile surveys is outlined below.
- 6.5.66 A total of 13 records of grass snake (*Natrix natrix*) have been recorded during surveys; eight in W1, four in W2, and one in W3. These were recorded during the surveys or as incidental records whilst completing other assessments. Additionally, three records of an unidentified snake species were recorded in W3.
- 6.5.67 Survey findings suggest there is an indicative low population of grass snake present in the Study Area. No reptile surveys within the Cable Corridors were undertaken.

Badger

- 6.5.68 Due to issues around persecution, evidence of badger setts and their field signs are excluded from the body of the ES and have been reported in **ES Volume 3,**

Appendix 6.3: Confidential Badger Survey Report [EN0110020/APP/6.20.1] which is made available to appropriate stakeholders. Where identified through assessment, details regarding mitigation during construction, operation & maintenance, and decommissioning with regards badgers are included.

White-Clawed Crayfish, Eels, and Fish Species

- 6.5.69 Further information on the results for white-clawed crayfish, eels, and fish eDNA surveys are detailed in **ES Volume 3, Appendix 6.13: Fisheries and WCC eDNA Report [EN0110020/APP/6.20]**, with results shown on **ES Volume 3, Figure 6.13.1: Aquatic eDNA Sample Locations [EN0110020/APP/6.19]**. A summary of these eDNA surveys is outlined below.
- 6.5.70 White-clawed crayfish were identified in the Chesterfield Canal and Broad Bridge Dike following eDNA surveys, within the boundary of the Chesterfield Canal LWS, which had direct hydrological connectivity to the access track crossing point 7 and Cable Corridor crossing point 23 (**ES Volume 3, Figure 10.14: Watercourse Crossings [EN0110020/APP/6.19]**).
- 6.5.71 The absence of any white-clawed crayfish in the desk study other than linked to the Chesterfield Canal, along with the presence of signal crayfish within the Ulley Brook system, and where there are ditches and watercourses subject to drought conditions are likely to limit the distribution of white-clawed crayfish to the Chesterfield Canal and Broad Bridge Dike.
- 6.5.72 The eDNA results for eels have been negative in 16 of the assessed locations, with inconclusive results in Kearsley Brook, Pinchmill Brook, and Anston Brook. A precautionary approach should apply in these watercourses to assume presence of eels and requirement to comply with the Eels (England and Wales) Regulations 2009. This means ensuring unimpeded passage for eels within these watercourses.
- 6.5.73 Fisheries eDNA results recorded Atlantic salmon in Firsby Brook, and it is assumed that the presence is correct and that the SAFFA 1975 applies. Bullhead was recorded in locations on Ulley Brook (SL16, SL17), Cramfit Brook (SL22), and Anston Brook (SL23, SL24) and are a priority species. The presence of these species confirms the permanence of these waterbodies (i.e. not subject to drought conditions) and that the water quality is sufficiently good enough to support fish species and protected species that may predate on them.

Other Notable Species

- 6.5.74 Incidental records of priority species, including brown hare (*Lepus Europaeus*), hedgehog (*Erinaceus europaeus*), and common toad (*Bufo bufo*) were recorded during completion of baseline surveys.
- 6.5.75 Brown hare was observed during the bird surveys across the Site, where up to 14 brown hare were recorded at any one time. Common toad was recorded under artificial refugia in W2 during reptile surveys, with hedgehog recorded in W1 during bat transect surveys.

Invasive Non-Native Species

- 6.5.76 Invasive non-native species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were identified within the desk study and as incidental records during surveys in a number of locations.
- 6.5.77 Within watercourses and riparian habitats associated with them, Himalayan balsam (*Impatiens glandulifera*) was recorded extensively in a number of locations including along banksides on Anston Brook, Cramfit Brook, Kearsley Brook, and

along the Cable Corridor mostly within W2, with seeds spread through vectors such as mammal disturbance or through water flow after being washed along watercourses. Giant hogweed (*Heracleum mantegazzianum*) was recorded ten times within W1, most frequently growing within hedgerows, with a cluster round 'Brick Field'. Japanese knotweed (*Fallopia japonica*) was found in a discrete location in W1 near a stone barn, and hedgerow in Brampton Common LWS.

- 6.5.78 During surveys, four incidental records of mink (*Neovison vison*) had been observed using riparian habitat along Ulley Brook (Watercourse 6, and Watercourse 10), whilst two records of signal crayfish and their burrows were found within watercourses on Ulley Brook near Turnshaw Plantation and Stowbridge Field in W2. Both species are known to suppress native species, such as water vole, white-clawed crayfish, and aquatic macroinvertebrate assemblages.

Birds

- 6.5.79 An initial walkover by ornithology specialists was completed in June and July 2024. The visits sampled land throughout the Order Limits, with the aim of reviewing habitat suitability for birds and collating records of species, to help inform the scope of more detailed surveys. A total of 53 species were recorded within, close to or overflying the Proposed Development. Overall, the breeding bird assemblage was typical of the geographic area and habitats present. The Site was dominated by winter-sown arable farmland, which is suboptimal for most bird species associated with open farmland habitats. However, pea/bean fields and grassland (some cut) were interspersed through the Site, providing variation. Species of conservation importance associated with farmland habitats included Lapwing (*Vanellus vanellus*), Skylark (*Alauda arvensis*), Yellow wagtail (*Motacilla flava*), Yellowhammer (*Emberiza citrinella*), and Linnet (*Linaria cannabina*).
- 6.5.80 As per paragraph 6.4.24, wintering and breeding bird surveys of the Cable Corridor have not been completed to inform this ES.

Wintering Bird Survey

- 6.5.81 A Wintering Bird Survey (WBS) was carried out between October 2024 and March 2025. A total of 32 target species (as defined in **Table 6-6**) were recorded. These species are detailed in **ES Volume 3, Appendix 6.5: Wintering Bird Survey Report [EN0110020/APP/6.20]** and summaries for select target species can be found below:
- 6.5.82 Golden plover (*Pluvialis apricaria*) – observed six times, twice in flight over the area and four times resting or feeding within the Site. The largest flock recorded was 47 during November;
- 6.5.83 Lapwing – there were 17 observations of lapwing during the WBS in all months except December. The largest flock was 39 in November, and by March observations included territorial birds;
- 6.5.84 Skylark – skylark were the most frequently observed target species during the WBS, with 172 observations throughout the survey period with a peak count of 139 in October. Much of the Site was considered suitable for wintering skylark and occurrence appeared strongly linked with food availability, with preference shown for winter stubble, winter wheat or pasture; and
- 6.5.85 Of the open habitats within the Study Area, winter stubble returned the most observations of target species (68 occurrences), followed by winter wheat (52 occurrences), and bare (turned / tilled) soil (48 occurrences). Barn owl were also recorded in six locations around the Study Area.

Breeding Bird Survey

- 6.5.86 A Breeding Bird Survey (BBS) was carried out between April and June 2025. A total of 80 bird species were recorded during the surveys, including 44 species of conservation importance. All four target species showed evidence of breeding or holding territory within the BBS Area: lapwing, grey partridge, skylark and yellow wagtail. Additionally, three Schedule 1-listed species were recorded breeding or holding territory: hobby (*Falco subbuteo*), barn owl (*Tyto alba*) and Cetti's warbler (*Cettia cettia*). A full list of species recorded during the BBS, including the wider breeding bird assemblage, can be found in **ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]** and **ES Volume 3, Appendix 6.7: Confidential Ornithology Report [EN0110020/APP/6.20]**.
- 6.5.87 For the purposes of avoiding potential for acts of persecution, data in relation to hobby and barn owl have been anonymised within this assessment, with location information excluded from this assessment and noted within a confidential appendix. A brief summary of target species and Schedule 1-listed species can be found below.
- 6.5.88 Lapwing – a total of seven confirmed and 15 possible pairs were identified within the Site. An additional eight possible and one confirmed pair was also noted in fields adjacent to the Site. Whilst a number of nesting attempts were identified, successful breeding was not observed. Of these territories, seven confirmed and 13 possible nesting pairs were located in fields within the proposed solar PV array. Fields with access restrictions were typically of low suitability for lapwing;
- 6.5.89 Grey partridge – breeding was confirmed in W1 when an adult was seen with at least 12 chicks. A further eight possible territories were identified across the Study Area;
- 6.5.90 Skylark – Widespread and abundant across the Site, particularly in W1 and W3. A total of 90 confirmed and an additional 97 possible territories were identified by the surveys, with further territories also noted outside the Site in adjacent fields. Of these territories, 59 confirmed and 60 possible territories (119 total) were located in fields within the proposed solar PV array. As a precaution, a further 18 territories are included in the total (205 overall) to account for fields with limited access. Details of how this figure was estimated are included in **ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]**;
- 6.5.91 Yellow wagtail – recorded in small numbers in W1, with a single territory confirmed and a further four possible territories identified. A single possible territory was also identified in W2;
- 6.5.92 Hobby – a territory was confirmed in W1, although the precise nest location was not confirmed. There were four additional sightings of hobby across the rest of the Study Area to the south. None of these demonstrated breeding behaviour but it is possible that these sightings related to individuals breeding in the wider area and using the Site to forage, or possibly migrants passing through;
- 6.5.93 Barn owl – An adult was observed carrying food into a derelict barn during the BBS. This behaviour is strongly suggestive of breeding, and further checks will aim to confirm this. Due to the typically nocturnal or crepuscular ecology of this species, detecting them was outside the scope of the BBS;
- 6.5.94 Cetti's warbler - There was a single singing male in W1 adjacent to Firsby Reservoir LWS and two singing males along Ulley Brook, in W3; and

- 6.5.95 Further details about the sensitivity of ornithological features identified during the BBS can be found in **ES Volume 3, Appendix 6.7: Confidential Ornithology Report [EN0110020/APP/6.20]**;

Future Baseline Conditions

- 6.5.96 This Section considers the likely changes to the current baseline that may occur over the duration of the Proposed Development. It also considers the changes that may occur in the absence of the Proposed Development.
- 6.5.97 The Study Area within the Order Limits and up to 30m is dominated by arable fields, with occasional cattle or sheep grazed improved grassland fields, bounded by ditches, streams, hedgerows, occasionally ponds, with the occasional standard trees. Small woodland blocks and ancient woodland fall adjacent to the Order Limits, with a very small section of ancient woodland also present within the Cable Corridor linking to W1.
- 6.5.98 In the absence of the Proposed Development, these habitats would be managed in the same way, continuing to provide habitat for those (limited) legally protected, notable and invasive non-native species identified in the current baseline. Some of these species have adapted to live successfully in agricultural habitats, such as badger, brown hare and ground nesting birds.
- 6.5.99 In the short, medium, and long term, species populations and distributions would continue to fluctuate in response to standard agricultural management, such as crop rotations and grazing. As a result of intensive farming practices, most UK species populations are in decline. Therefore, in the absence of the Proposed Development, it is likely that this trend would continue, with more common, widespread and adaptable species populations remaining extant.
- 6.5.100 In the longer term, changing climatic conditions resulting from 'climate change' may impact the resilience of certain habitats and species, for example water levels in the ditch systems may change over time. Generally, though, because of the intensive nature of management that already exists in the areas of agricultural land, climate change is unlikely to significantly impact most of the land that occurs within the Order Limits during the lifetime of the Proposed Development.

Features Scoped into Assessment of Effects

- 6.5.101 When scoping features into the assessment, consideration needs to be made as to whether they are considered Important Ecological Features (IEFs). These are specific biodiversity elements of the environment, such as habitats, species, or designated sites, that are considered crucial for maintaining biodiversity and ecosystem functionality. These features are designated as important due to their rarity, sensitivity, or conservation status within an area.
- 6.5.102 Information on IEFs is derived from evidence obtained during desk based and survey work completed to date (detailed in the Technical Appendices).
- 6.5.103 **Table 6-11** summarises all features that have been identified within the Study Area (that have not been previously scoped out) to determine which features are of sufficient sensitivity that potential effects of the Proposed Development may undermine their conservation status and/or risk a breach of legislation and are therefore IEFs. Where a feature is of low sensitivity and/or not subject to potential effects from the Proposed Development these are not an IEF and therefore not assessed further.

Table 6-11: Scoping of Important Ecological Features

Feature	Summary	Assessment Scope and Potential Effects
National Statutory Designated Sites – SSSI	Crabtree Wood SSSI is 0.9km, Anston Stones Wood SSSI is 1.3km, Lindrick Golf Course SSSI is 2.1km, Edlington Wood SSSI 2.2km, Sprotborough Gorge SSSI is 2.2km, and Roche Abbey Woodlands SSSI is 3.9km from the Site and are the nearest national designated sites. The Crabtree Wood, Anston Stones Wood, and Edlington Wood SSSIs are designated for their ancient woodland and other habitats and associated botanical interests. Ancient woodland being an 'irreplaceable' habitat covering just 2.5% of England's land that is under threat from development and poor management, conversion to plantation, with a decline in quantity and quality over the last 100 years. Crabtree Wood SSSI contains a diverse assemblage of locally rare botanical species. Anston Woods SSSI is described for botanical interest as having one of the finest remaining fragments of native ancient woodland in northern England. Lindrick Golf Course SSSI is designated for its species rich limestone grassland, which is a NERC listed as Habitats of Principal Importance in England and highly threatened habitat. Edlington Wood SSSI is designated for its ancient, predominantly deciduous woodland. on Magnesium Limestone, which is recognised as the largest single block in South Yorkshire. It is nationally significant for its exceptional stands of ancient yew trees. Sprotborough Gorge is designated for its marshland, open water, and ancient woodland. habitats that are NERC listed as Habitats of Principal Importance in England, and in the case of ancient woodland, irreplaceable and referenced under the NPPF. Based on policy, legal and conservation status, these sites are of district to county importance. Roche Abbey Woodlands SSSI is designated for its ancient woodland habitats and botanical interest, with a natural mix of sessile oak, ash and lime being described as very rare. Yew woodland which is rarer in the north is present in places, along with calcareous grassland, with alder and willow carr associated with Laughton Pond adding to botanical and entomological interest.	The potential effect from dust, nutrient nitrogen and acid deposition pollution from haulage routes and on-site construction works to habitats and botanical interests has been reviewed. The nearest nationally designated site to the Order Limits is Crabtree Wood at 900m. Therefore, all nationally designated sites are sufficiently distant from the Order Limits for there to be no direct air quality impacts to botanical IEFs in nationally designated sites. However, some traffic and transport haulage routes are sufficiently close to some designated sites such that air quality impacts have the potential to impact their botanical IEFs. This includes the Crabtree Tree Wood SSSI, Anston Stones Wood SSSI, Lindrick Golf Course SSSI, Edlington Wood SSSI, and Sprotborough Gorge SSSI, which are considered further within the assessment for potential effects from air pollution from haulage as IEFs. Whilst there is hydrological connectivity to Sprotborough Gorge SSSI from the Site and therefore the potential for water pollution from activities during construction, the proposed location of the BESS within the Proposed Development does not have hydrological connectivity to this SSSI, with the BESS bounded to the north by the M1 and the nearest watercourse, Whiston Brook over 600m to the south. Therefore, whilst there is a pathway for potential water pollution from construction related activities in the Site, there is no pathway for potential water pollution from fire response actions during the operation phase of the Proposed Development from the BESS to this open water designated SSSI. Crabtree Wood, Anston Stones Wood, Lindrick Golf Course, and Roche Abbey Woodlands SSSIs also all have hydrological connectivity from the Site, with the potential for water pollution from activities during construction to enter these designations, however, there is no pathway for the potential water pollution from construction activities to the terrestrial features for which these sites have been designated. Therefore, Crabtree Woods, Anston Stones Wood, Lindrick Golf Course, Roches Abbey Woodlands, and Sprotborough Gorge nationally designated sites will be assessed further for water quality impacts, but not on the features of the designations as IEFs. All other national designated sites are separated by distance from the Site, and not sufficiently close to the main haulage routes for the potential dust, nutrient nitrogen, and acid deposition pollution effects described above from the Proposed Development to impact them, and are not hydrologically linked to the Order Limits, so are not considered further within the assessment.
Local Designated Sites – LNR and LWS	Four locally designated sites are recorded within the Order Limits as: • Brampton Common LWS partially within W2; • Axle Lane LWS (LWS009) within Cable Corridor CRL; • Whiston Meadows LWS (LWS036) within Order Limits but only for small area of visibility splay for an access point in W2; and • Chesterfield Canal candidate LWS (LWS004) at 365m north of W3/in Cable Corridor CRL. A further eight locally designated sites recorded adjacent to the Order Limits as: • Firsby Reservoir LNR adjacent to W1;	Given that Firsby Reservoir LNR is adjacent to the Site, and Anston Stone Wood LNR is 60m from the Site, there is the potential for effects from construction directly to these designations and to any species it supports, including: lighting, dust and pollution, and noise and vibration. There is potential for pollution between the Site and Anston Stone Wood LNR via Anston Brook. Therefore, Firsby Reservoir LNR and Anston Stone Wood LNR are assessed further as an IEF. Where local designations lie within the Order Limits, there is the potential for direct permanent and temporary habitat loss at construction, disturbance to features of the local designations at construction and operation. This has the potential to include

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Feature	Summary	Assessment Scope and Potential Effects
	• Harthill Reservoir Candidate LWS Adjacent to W3 • Kings Pond Plantation LWS (LWS043) adjacent to W2 • Ulley Country Park LWS (LWS029) adjacent to W2 • Burnt Wood LWS (LWS030) adjacent to Cable Corridor CRG-2 • Nor Wood & Locks LWS (LWS005) adjacent to W3 • Treeton Wood LWS (LWS031) adjacent to W2; and • Ravensfield Park & Firsby Reservoirs LWS (LWS081) adjacent to the west of W1. A further eight locally designated sites are recorded in close proximity to or with connectivity to the Order Limits as: • Killamarsh Pond LWS 10m North of W3 • Revel Wood LWS (LWS098) at 30m south of Cable Corridor CRD-1 • Anston Brook Walk LWS (LWS104) at 60m east of W2; • Anston Stone Wood LNR at 60m from the Site at its nearest location • Pebley Oaks Lane pLWS 95m south of W3 • Dinnington Colliery Tip LWS (LWS016) at 200m northeast of W2 • Wickersley Wood LWS (LWS042) at 250m northeast of W2; and • Pebley Reservoir LWS 330m southeast of W3. Firsby Reservoir and Anston Stone Wood LNR are statutory designated under the National Parks and Access to the Countryside Act 1949 (as amended). These statutory designated sites are designated for their NERC 2006 Act listed Habitats of Principal Importance in England, such as open standing water and broadleaved woodland, and other habitats. The LWSs listed above are designated under local policy criteria thresholds for biodiversity and require consideration to their conservation within the planning system. The LWSs are designated as non-statutory sites at the local level. Based on policy, legal and conservation status, these designated sites are of local importance. <u>Local sites listed above within the Order Limits</u> Brampton Common LWS is partially within the Site and is designated for its ancient native species rich hedgerows and skylark features. Proposals include for the construction of the Proposed Development within part of the LWS. Whilst avoidance measures to avoid impacts to hedgerows are proposed wherever possible using existing access tracks and gateways, the construction of solar PV modules would be within habitats that are used by Skylark and hedgerows may be impacted with the construction of internal tracks. Other than being features of this designated site, Skylark are NERC listed Species of Principal Importance in England, with hedgerows listed as a Habitat of Principal Importance in England and their conservation needs to be considered further within the planning system. Both skylark and hedgerows are widely distributed within England but have declined over recent decades. A small section of Axle Lane LWS is within the Order Limits in Cable Corridor CRL, with temporary disturbance from the Proposed Development during cable laying. It is designated as an LWS for supporting over 0.25% of the UK wintering population of Golden Plover, and for its botanical interest in supporting Chalk eyebright <i>Euphrasia pseudokerner</i>, a vascular plant listed as a Priority Species in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.	habitats such as native species rich hedgerows, trees, grassland, or protected or priority faunal or floral species. The four local designations that fall within the Order Limits are subject to potential impacts that are predominantly temporary during construction of the Cable Corridor at Axle Lane LWS, and the Chesterfield Canal LWS, or long term within the Site on Brampton Common LWS, and Whiston Meadows LWS. Brampton Common LWS is partially within the Site, where loss of ground nesting habitats and displacement of skylark would occur in part of the Site. Potential loss of hedgerow to expand gateway access and through construction of access tracks, and temporary damage to habitats within hedgerows from cable laying and construction laydowns. A very small section of Whiston Meadows LWS is within the Site comprising visibility splays required for access within the Site, leading to small losses of hedgerow and modified grassland that are not listed as features of the designation, but will lead to very small area habitat loss within the designation. All these local sites are assessed further for the presence of its IEFs in relation to temporary and long-term loss, damage, or disturbance impacts to habitats or species. Air quality pollutant effects from the Order Limits to the sensitive habitat and botanical features of local sites have a range of up to 250m from the Order limits. Pollutants carried from aquatic sources directly through watercourse pathways from the Order Limits to local sites have the potential to impact sensitive aquatic habitats that are features of local site designations through hydrological connectivity. Aquatic habitats that are in very close proximity to the Order Limits (<i>circa</i> 10m) have the potential to be impacted by aquatic pollutants across land to the sensitive aquatic features of local designations without a direct hydrological pathway. LNRs and LWSs within the Order Limits or 250m of it with features sensitive to air quality, and contain aquatic features as part of their designations and are very close to, or have hydrological connectivity over a greater distance to the Order Limits, include: Firsby Reservoir LNR, Anston Stone Wood LNR, Harthill Reservoir Candidate LWS, Killamarsh Pond LWS, Pebley Reservoir LWS, LWS036, LWS043, LWS029, LWS005, LWS081, LWS 004, LWS016, have the potential for disturbance effects from construction directly to it and to any species it supports, including lighting, dust and pollution, and noise and vibration, <u>and</u> have hydrological connectivity where there is the potential for aquatic pollutants to directly damage or disturb aquatic features of these local sites. All these local sites are assessed further for the presence of its IEFs. Additionally, LWSs to include: Pebley Oaks Lane Proposed LWS, LWS027, LWS009, LWS030, LWS098, LWS104, and LWS042 with sensitive habitats or botanical interests within the Order Limits or 250m of the Order Limits that have the potential for disturbance effects from construction directly to it and to any species it supports, including lighting, dust and pollution, and noise and vibration are also assessed further as IEFs. Two LWSs, Wickersley Wood LWS and Pebley Reservoir LWS have hydrological connectivity where there is the potential for aquatic pollutants to directly damage or disturb aquatic features of these local sites and are assessed further for the presence of its aquatic IEFs. All 41 other local statutory designated sites listed in Table 6-9 are not hydrologically connected and at least 250m or more away from the Order Limits and sufficiently

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Feature	Summary	Assessment Scope and Potential Effects
	Additionally, there is hydrological connectivity from Site on Broad Bridge Dyke to Chesterfield Canal LWS that has lowland swamp habitats, which is a critically threatened habitat. The aquatic habitats of this LWS are also bisected by Cable Corridor CRL. <u>Local Sites listed above beyond the Order Limits</u> The LWS designations that are recorded adjacent or in close proximity, or with connectivity to the Order Limits (as listed above) are designated for supporting a range of habitat types, and their floral or faunal interest. This includes protected species and habitats, nationally rare species, and NERC Act 2006 listed Habitats and Species of Principal Importance in England. <u>Other Local Sites</u> There are a further 41 remaining locally designated sites listed in Table 6.9 that are separated from the Site by distance and do not have connectivity to the Order Limits.	separated from the Site for there to be effects on the ecological features of the designations and are not assessed further as IEFs.
Habitats – Ancient woodland	There are four ancient woodland blocks adjacent to the Site or within 50m of it, including: Moat Wood in W1; Burnt Wood and Spring Wood in W2; and Nor Wood (linked contiguously by deciduous woodland adjacent to the Site) in W3. A small ancient woodland is found within part of Cable Corridor CRB next to Firsby Brook. Ancient woodland makes up just 2.5% of the UK land area that have been continuously wooded since 1600 and are recognised as irreplaceable habitats that support a range of protected and priority fauna and flora species. Their protection from development is noted under Paragraph 180 of the NPPF national policy. Based on policy, legal and conservation status, these ancient woodlands are of district importance.	Given that ancient woodland is adjacent to and within the Order Limits, there is the potential for effects from construction indirectly to it and to any species it supports, including: lighting, dust and pollution, and noise and vibration. Due to trenchless crossing technique, there is a very limited potential for direct effects to Firsby Brook ancient woodland through cable construction in CRB. Therefore, ancient woodland is assessed further as an IEF.
Habitats – Ancient and veteran trees	There is one veteran oak tree identified during surveys in the north of W1 (~1.3km east of Hooton Roberts). No other ancient or veteran trees were identified within the Order Limits on review of the Ancient Tree Inventory (ATI). Ancient or veteran trees are of ecological importance in supporting large and diverse numbers of invertebrates and often support other nationally protected species. They are of great value to biodiversity, landscape, and often on a cultural heritage basis. Their protection from development is noted under Paragraph 180 of the NPPF national policy. Based on policy, legal and conservation status, this site is of local importance.	Given that a veteran oak tree is on the Site, there is the potential for effects from construction directly to it and to any species it supports, including: lighting, dust and pollution, and noise and vibration. Therefore, veteran trees are assessed further as an IEF.
Habitats - Priority Habitats	Native hedgerows, wet woodland, arable field margins, and eutrophic standing waters are found on-site and are listed under NERC as a Habitats of Principal Importance, and their conservation needs to be considered for planning submissions. Native hedgerows are also afforded protection under the Hedgerow Regulations 1997 (as amended), where the hedgerows are considered 'Important', and further protected as a designation feature within the Brampton Common LWS. Forty-six hedgerows considered to be 'Important' were recorded within the Study Area (see Volume 3, Appendix 6.12: Hedgerow Regulations Assessment Report [EN0110020/APP/6.20.1]). These habitats are found in small, fragmented areas on-site across the Order Limits. Based on policy, legal and conservation status, these habitats are of local importance.	Priority habitats have the potential to be impacted on a temporary and short-term basis through disturbance during all phases of the development, and small areas of these habitats may be permanently lost where at construction, habitat land take is required for access and infrastructure. Therefore, priority habitats are assessed further as an IEF.
Habitats – all others	All other habitats are of low conservation importance and typically represented by modified grassland, arable and agricultural land that makes up 83% of the Order Limits and is widespread and very common. Habitats of negligible to low value are to be selected preferentially for installing the infrastructure of the Proposed Development, and where this is proposed, grasslands of higher value to the arable and agricultural land use are proposed for creation within the Development Design. Based on policy, legal and conservation status, these habitats are of negligible importance.	Any impacts would be Negligible, and the other habitats will not be assessed further as an IEF.
Bats – Roosting	Roosting bats and their places of shelter are protected under the Conservation of Habitats and Species Regulations (2017) (As amended), with species also recorded as Species of Principal Importance under the NERC Act 2006. Roosting bats vary in range across the UK, and often	Whilst no bat roosts have been confirmed within the Study Area (see ES Volume 3, Appendix 6.10: Protected Species Bat Survey Report [EN0110020/APP/6.20.1]),

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Feature	Summary	Assessment Scope and Potential Effects
	dependent on individual species distribution and scarcity, with distribution of some species not fully understood. Based on policy, legal and conservation status, these species are of county importance.	potential bat roosting opportunities remain available to a range of bat species that have the potential to be impacted in the following ways: • Disturbance to roosts from: lighting, noise and vibration • Direct damage or roost loss from pruning or felling of trees, or damage caused by snagging machinery/vehicles • Foraging habitat loss within a bat species core sustenance zone that could lead to roost collapse; and • Based on the above, these species will need to be assessed further as an IEF.
Bats – Foraging and Commuting	Bats are fully protected from disturbance, killing and injury under the Conservation of Habitats and Species Regulations (2017) (As amended), with species also recorded as Species of Principal Importance under the NERC Act 2006. Bat species vary in range across the UK, and often dependent on individual species distribution and scarcity, with distribution of some species not fully understood. Foraging habitat for roosting bats is important to each bat species Core Sustenance Zones (CSZs), and strong linear habitat features are important for commuting bats in the landscape (e.g. thick hedgerows, treelines, watercourses etc.). Bat species recorded to date has included: common pipistrelle, soprano pipistrelle, Nathusius pipistrelle, serotine bat, brown long-eared bat, Myotis spp, and Nyctalus Spp. Of these species, Serotine bats conservation status is classified as ‘Vulnerable’, with Nathusius pipistrelle ‘Near Threatened’. The majority of bat calls recorded were from common and soprano pipistrelles, which are the most common and widespread species. Based on policy, legal and conservation status, these species are of county importance.	Connected habitats suitable for commuting and foraging bats remain available to a range of bat species throughout the Order Limits that have the potential to be impacted in the following ways: • Potential effects of disturbance to commuting and foraging areas from: lighting, noise and vibration • Direct loss of habitat connectivity from pruning or felling of trees, or removal of hedgerows, and other habitats • Foraging habitat loss within a bat species CSZ; and • Based on the above, these species will need to be assessed further as an IEF
Protected Species - GCN	GCN are listed as a European protected species under the Conservation of Habitats and Species Regulations 2017 (as amended). Whilst this species range has been declining in the UK due to habitat loss and degradation (50% of ponds in the last 100 years), the UK remains a stronghold within the wider European area. No ponds surveyed to date have identified the presence of GCN within the Site. There are no ponds within the Cable Corridor and four ponds within 250m of the Cable Corridor (P4, P5, P6, and P11) (see ES Volume 3, Appendix 6.8: Great Crested Newt Report [EN0110020/APP/6.20]). Based on survey data, and on its conservation value, GCN is of negligible value within the Site and Cable Corridor.	Despite evidence of suitable habitats present, GCN are considered absent from accessible ponds within the Order Limits (see ES Volume 3, Appendix 6.8: Great Crested Newt Report [EN0110020/APP/6.20]). A study associated with a separate planning application (RB2025/1468) has found that GCN distribution is not known within Ponds 4, 5, and 6, although they have not been accessed for survey in this study. Only Pond 11 within 250m of the Order Limits remains unstudied, so there remains the potential for disturbance, killing or injury to GCN within terrestrial habitats suitable for this species during construction and decommissioning. On the basis that GCN have the potential to be present within the Study Area, this species is assessed further as an IEF.
Protected Species – Otter and water vole	Water vole is a nationally protected species. The species has been subject to significant population declines of 94% in their original range, with habitat loss, water pollution, and predation from American mink the main causes. Surveys have recorded no evidence of water vole within accessible areas of the Study Area, however suitable habitat has been recorded. American mink have been observed within the Site. Otter is a European protected species under the Conservation of Habitats and Species Regulations 2017 (as amended) from killing, injury, or disturbance, and are nationally protected in the UK under the Wildlife and Countryside Act 1981 (as amended). Following a rapid decline close to extinction within the UK during the 1950’s to 1970’s, otter has increased their distribution and numbers in the UK; however, they are still considered ‘near threatened’ in conservation terms. Surveys for otter have confirmed that otter are present within the Study Area, with resting places and couches present but no holts identified during surveys.	The presence of otter signs and the availability of suitable habitats for water vole within the Study Area means that these species are assessed further as an IEF.
Protected Species - Reptiles	Although commonly occurring reptiles are a nationally protected species that is widespread throughout the UK, their distribution can be patchy and locally common to those locations. A low population of grass snake has been identified as present but sparsely distributed across the Site during reptile surveys and would be expected in contiguous habitat across all the Order Limits. Based on current indicative data and conservation status, reptiles are of local importance.	Without appropriate mitigation, there is the potential for disturbance, killing and injury to reptiles during the construction and decommissioning phase of the development, where small areas of habitat such as scrub, grassland and hedgerows could be lost, temporarily disturbed or damaged, or there is a short-term loss of habitats to facilitate installation of infrastructure in the Proposed Development. Due to its presence and legal status reptiles are assessed further as IEFs.

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Feature	Summary	Assessment Scope and Potential Effects
Protected Species - Badgers	Badgers are widespread within rural environments, but are a species subject to persecution, with setts protected under the Protection of Badgers Act (1992) and specific details on location are therefore found within the badger confidential annex. Suitable habitats are present in the Study Area. Observations of badgers and any setts within the Site or 30m are recorded in ES Volume 3, Appendix 6.3: Confidential Badger Survey Report [EN0110020/APP/6.20.1] . Based on policy, legal and conservation status, this species is of local importance.	Badgers are a mobile species that have the potential to be impacted at all phases of the development on a temporary or long-term basis, directly or indirectly from impacts. Therefore, this species is assessed further as an IEF.
Protected Species – White Clawed Crayfish	White clawed crayfish is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (As amended). It has declined dramatically since the 1970's when the Signal Crayfish escaped into watercourses throughout the UK, spreading the crayfish plague and outcompeting the native WCC. WCC distribution is now patchy and limited to strongholds in the UK. Desk study records of signal crayfish have been recorded, and these have been observed within watercourses within the Site to confirm presence. The presence of this Schedule 9 WCA listed invasive species would normally mean that WCC would be locally extinct. However, a single desk study record of WCC at 2.5km from Site and within hydrologically connected habitat was identified. eDNA surveys returned two positive results for WCC in Broad Bridge Dike and Chesterfield Canal, indicating a population of WCC in and around W3. Based on policy, legal and conservation status, WCC is of local importance.	This species is uncommon and scarcely distributed and if present, and in the absence of mitigation measures, is at risk of adverse effects due to potential water pollution, that could occur at the Construction and Decommissioning phase of the development. As the record of WCC was found offsite in Broad Bridge Dike and the Chesterfield Canal, there is hydrological connectivity to the Site and potential for this species to be present in it. There is the potential for direct impacts of damage to or loss of WCC places of shelter and to injury or killing WCC themselves during Construction at watercourse track crossing point 7 and cable crossing point 23. As WCC are considered to be present within the Study Area (in and around W3), this species is assessed further as an IEF.
Protected Species – Migratory fish	Bullhead is an IUCN Red List of threatened species and is a Habitats Directive Annex II listed species. Barbel is not rare or protected but is indicative of clean oxygenated waters and is subject to restocking and conservation initiatives. Brown trout is a NERC listed Species of Principal importance in England. Eel is a critically endangered species and is listed under IUCN Red list of Threatened Species. It is also a NERC listed Species of Principal importance in England, and its uninterrupted passage is promoted through The Eels (England and Wales) Regs 2009. eDNA survey results suggest that European eel is likely absent from the Study Area. However, as some samples were inconclusive, and some areas were not sampled due to access limitations, the presence of European eel must be assumed in several localities including Kearsley Brook, Pinchmill Brook, and Anston Brook. Atlantic salmon was recorded in Firsby Brook, and <i>Cottus</i> species (likely European Bullhead) were identified within the Study Area in Cramfit Brook, Ulley Brook, and Anston Brook. It is understood from the Environment Agency that some of these species are present in the River Rother. Based on policy, legal and conservation status, these species are likely to be of local importance where present.	There is the potential that short- and long-term impacts on migratory and other fish of conservation value could occur during all phases of the Proposed Development as follows: • electromagnetic fields where high voltage cables pass underwater watercourses • impacts from noise and vibration associated with construction; • impacts from pollution and increased sedimentation • impacts from open cut crossing of watercourses and potential loss or damage to habitats • impacts from light pollution on watercourses and biodiversity; and • With the potential for effects, salmon, eel, and bullhead fish species are assessed further as an IEF.
Priority Species	Brown hare, hedgehog, and common toad are all listed as Species of Principal Importance on the NERC Act 2006. These species have recorded declines across the UK: 30% or more for hedgehog in the last 25 years, 80% in brown hare in a century, and 68% in 30 years in common toad. Whilst usage of the Site by hedgehog and common toad were very low in individual numbers, Brown hare was found extensively within the Study Area as incidental records to scheduled surveys, with the open fields and landscape areas likely important for this species in the wider landscape. Based on policy and conservation status, brown hare is of local importance.	Maintaining habitat connectivity for brown hare across the Site through construction and operation and maintenance is a required consideration. Therefore, brown hare is assessed further as an IEF. Given the very small numbers of hedgehog and common toad recorded within extensive habitats, any impacts will be negligible despite their conservation status, and hedgehog and common toad will not be assessed further as IEFs.
Birds – wintering assemblage	Birds recorded during the WBS were representative of the habitats present within the Study Area. Usage of the Site by target species was very low (see ES Volume 3, Appendix 6.5: Wintering Bird Survey [EN0110020/APP/6.20]). The habitats present within the Study Area are mirrored in the surrounding landscape and represent a small area of habitat relative to the wider district / region. Based on policy and conservation status, these species are of Negligible importance.	Given the small numbers and low importance, any impacts will be negligible and the wintering bird assemblage will not be assessed further as an IEF.
Birds – breeding assemblage	A range of species typical of the habitats were recorded during the BBS. Most birds breeding within the Study Area were passerines in scrub, hedgerow and woodland habitats. Of the 80 species recorded, 44 were species of conservation importance but all are widespread in suitable habitat throughout much of the UK (see ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]). Based on policy and conservation status, the breeding bird assemblage is of local importance.	Many species within the assemblage are common and widespread and would not be subject to high magnitude or long-term effects due to their preferred habitats and ecology. Solar farms have been shown to benefit many passerines by contributing to landscape heterogeneity compared to intensive agriculture ⁶² . Works associated with the construction and operation of the Proposed Development; however, have the potential to cause damage to the nests, eggs and chicks of birds, which may constitute

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Feature	Summary	Assessment Scope and Potential Effects
	Note: Target species and birds with increased legal protection are considered separately, below.	an offence. Mitigation is required of avoid such effects and, as such, the breeding bird assemblage is assessed further as an IEF with a focus on direct harm to nesting birds during both construction and operation phases.
Birds – breeding lapwing	Lapwing is a red-listed Bird of Conservation Concern (BoCC) and Species of Principal Importance (SPI) on the NERC Act (2006). The UK population has declined by 63 % since 1967 ⁶³ . Potentially up to 22 lapwing pairs were recorded within the Site, with up to 20 in the solar PV array (see ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]). There are no regional population estimates available, but this is assumed to be important at a local level, Based on policy and conservation status, lapwing is of local importance.	Lapwing were located in open habitats within the BBS Area (see ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]); therefore, have the potential to be displaced by Proposed Development. As such, lapwing is assessed further as an IEF. The assessment considers habitat loss, harm to nests, eggs or chicks during the construction phase and long-term displacement during the operation phase.
Birds – breeding skylark	Skylark are a declining, red-listed BoCC and SPI. Potentially up to 205 territories were recorded within the Site, of which at least 119 were in the solar PV array (see ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]). There are no regional population estimates available, but this is assumed to be important at a local level. Based on policy and conservation status, skylark is of local importance.	Skylark were typically recorded from open arable, farmed and grassland habitat throughout the Site, and may be displaced by solar infrastructure. They may also be impacted by habitat loss, disturbance and / or damage to nests, eggs or chicks during the construction phase, and may be displaced throughout the operation phase. Therefore, skylark is assessed further as an IEF. The assessment considers habitat loss, harm to nests, eggs or chicks during the construction phase and long-term displacement during the operation phase.
Birds – breeding yellow wagtail	Yellow wagtail is a declining, red-listed BoCC and SPI. There was one confirmed and five possible territories recorded during the surveys, and habitat was generally limited (see ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]). Due to the small numbers recorded, based on policy, conservation status, and presence in the Site, yellow wagtail is of Negligible importance.	Yellow wagtail may be subject to impacts but, due to the small numbers recorded, the population is not notable and will be assessed as part of the breeding assemblage feature, and therefore not an IEF.
Birds – breeding grey partridge	Grey partridge is red-listed BoCC and SPI. They apparently bred successfully within the Study Area, with an adult observed with chicks, and a further eight possible territories (see ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]) however, the origin of the birds is not known, and they may be from local releases. Due to the small numbers recorded, based on policy, conservation status, and presence in the Site, grey partridge is of Negligible importance.	Grey partridge may be subject to impacts but, due to the small numbers recorded, the population is not notable and will be assessed as part of the breeding assemblage feature, and therefore not an IEF
Birds – Barn owl	Barn owl is listed on Schedule 1 of the WCA and is common and widespread (i.e. a green-listed BoCC) that have increased since 1995 with an estimated UK population of 4,000 pairs in 2016 ⁶⁴ . To-date, a single breeding territory has been confirmed within the Site (see ES Volume 3, Appendix 6.7: Confidential Ornithology Report [EN0110020/APP/6.20]). Based on current data and conservation status, barn owl is of Negligible importance. For the purpose of protecting birds from illegal persecution, disturbance, or egg collecting results are provided in a confidential appendix.	Barn owl occur at low densities but may be subject to impacts as a result of the Proposed Development. This may include disturbance, particularly during the construction phase, which, as a Schedule 1-listed species, may constitute an offence. As such, barn owl is assessed further as an IEF. The assessment considers disturbance during both the construction and operation phases.
Birds – Hobby	Hobby is listed on Schedule 1 of the WCA and is common and widespread (i.e. a green-listed BoCC) with an estimated UK population of between 241 – 648 pairs ⁶⁵ including 30 in Yorkshire. A single breeding territory was located partly in W1, though it is possible that this species is also breeds in the wider area and forages over the Site (see ES Volume 3, Appendix 6.7: Confidential Ornithology Report [EN0110020/APP/6.20]). Based on current data and conservation status, hobby is of Negligible importance.	Hobby occurs at low densities but may be subject to impacts as a result of the Proposed Development. This may include disturbance, particularly during the construction phase, which, as a Schedule 1-listed species, may constitute an offence. The species' sensitivity to disturbance is classified as 'medium' in prevailing guidance ⁶⁶ . As such, hobby is assessed further as an IEF. The assessment considers disturbance during both the construction and operation phases.
Birds – Cetti's warbler	Cetti's warbler is listed on Schedule 1 of the WCA and is common and widespread (i.e. a green-listed BoCC). The UK population increased by 1,122% between 1995 and 2023 ⁶⁷ and the species continues to expand its range northward. Three singing males were recorded during the BBS: one near W1 and two in W2 (see ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]). Based on current data and conservation status, Cetti's warbler is of Negligible importance.	Cetti's warbler occurs at low densities and is restricted by habitat requirements. The territory near W1 is over 150m away from the Site and therefore won't be subject to effects. The two territories in W2 are along Ulley Brook, along the boundary of the Site. Cetti's warbler is more tolerant of disturbance than two non-passerine species considered and not an IEF.

6.6 Embedded Mitigation

- 6.6.1 The mitigation measures relevant to Biodiversity and Nature Conservation included here are design-based embedded mitigation measures and best practice working methods that will be adopted based on descriptions provided in **ES Volume 1, Chapter 4: Alternatives and Design Iterations [EN0110020/APP/6.4]** and **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]**. As such this Section provides a high-level summary of measures that are ‘embedded’ within the Proposed Development’s design (including the Order Limits). These embedded mitigation measures are considered in the assessment presented in this ES.
- 6.6.2 A Commitments Register has been included within the submission (see **ES Volume 3, Appendix 2.3: Commitments Register [EN0110020/APP/6.20]**).
- 6.6.3 The Proposed Development seeks to minimise adverse ecological effects and to maximise the opportunities for biodiversity benefit by following the ‘*mitigation hierarchy*’ as generally referred to in the Overarching National Policy Statement for Energy (NPS EN-1)²¹ and Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (regulation 14(2)(c))³, including measures to avoid, prevent, reduce and if possible, offset any identified significant adverse effects.
- 6.6.4 Avoidance and mitigation measures are being achieved as a result of careful site selection, through planning and technical consultation iterations, and design development that has occurred. The mitigation hierarchy would continue to be applied through all future stages of the Proposed Development including during the detailed design stage (post-consent), and through the adoption of good construction and operation principles.

Construction

Protection of Existing Semi-Natural Habitats

- 6.6.5 The Applicant has committed to implementing a Construction Environmental Management Plan (CEMP) and Construction Traffic Management Plan (CTMP) during construction activities for the Proposed Development. An **oCEMP [EN0110020/APP/5.9]** and **outline Construction Traffic Management Plan [EN0110020/APP/5.12.1]** has been produced and submitted with this ES. The **oCEMP [EN0110020/APP/5.9]** and **oCTMP [EN0110020/APP/5.12.1]** includes measures for the protection of existing habitats which will be further developed at detailed design and include but are not limited to:
- Dust suppression -wetting down of tracks and vehicle wheels, speed restrictions for vehicles
 - Pollution Prevention Measures – Safe equipment, materials, fuel, oil, and chemical storage; and
 - Lighting and noise control measures - reducing disturbance to fauna using habitats.
- 6.6.6 The Proposed Development has been designed to locate the BESS and Substation infrastructure within existing habitats of negligible value, such as arable land, as per the **Works Plans [EN0110020/APP/2.3.1]**. This ensures permanent losses of habitat are restricted to lower value habitats, and in combination with

prescribed habitat enhancements and creation aim to support meeting the statutory net gain for the Proposed Development.

- 6.6.7 Where available, existing farm track infrastructure and public highways will be utilised, and new tracks to enable the build out of the Proposed Development seek to traverse habitats of negligible and low value where possible.
- 6.6.8 Transport routes that have been selected based on existing bridge specifications sufficient to allow construction traffic to pass without the need for upgrades to public highway bridges. This will ensure that existing aquatic habitats and the species that they support are, with **oCTMP [EN0110020/APP/5.12.1]** and CEMP measures in place, not subject to permanent losses.
- 6.6.9 The application of protective buffers around habitats from the developed areas within the Order Limits will be applied to prevent adverse effects on habitat function and quality. These are stated in the **Outline Design Parameters [EN0110020/APP/7.3]** and would include:
- Ancient and semi-natural woodland - a buffer zone of at least 15m from the boundary of the ancient or broadleaved woodland edge boundary to avoid root damage (known as the root protection area)⁶⁸
 - Ancient/veteran trees, a minimum buffer zone of at least 15 times larger than the diameter of each tree in an ancient or broadleaved woodland edge or per individual ancient or veteran tree. The buffer zone should be 5 metres from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter
 - Watercourses – a horizontal buffer of 10m from the top of each bank for rivers, streams and canals and 5m from the top of the bank for ditches is stated (except where conditions are suitable for trenched cable installation). This aligns with Natural England guidelines in the Statutory Metric to maintain the ecological function and habitat quality of priority watercourses⁶⁹. Where trenchless crossings are proposed for Cable Crossing of watercourses, a depth of at least 1.5m beneath the watercourse is proposed
 - The Proposed Development also proposes a minimum 10m protective buffer from ponds, and 5m from the edge of hedgerows (beyond the 2m mandated in legislation for the management of hedgerows)⁷⁰; and
 - These buffer zones are to protect the habitat itself. Buffers will need to be reviewed where protected species are present, in line with species-specific guidance.

Avoiding Fragmentation of Habitats

- 6.6.10 Use of existing crossings, tracks, access points, field entrances is proposed to limit the fragmentation of the existing habitats on-site where reasonably practicable.
- 6.6.11 Wherever watercourse crossings (for access tracks) are proposed and migratory species or commuting species are known to be present, crossings will be designed, such that species are not restricted in their range through these habitats. The design of the crossings will incorporate specifications detailed within the Design Manual for Roads and Bridges (DMRB) documents to allow species full range for migrating, commuting, and foraging.
- 6.6.12 Gapping up of hedgerows and strengthening of existing habitat connectivity is proposed through new habitat creation (e.g. the creation of open grassland areas between sensitive habitats, new connecting hedgerows, and the creation of rides etc.). This commitment is secured through the **oLEMP [EN0110020/APP/5.13]**.

Protection of Terrestrial and Freshwater Habitats from Pollution

6.6.13 Measures at the construction phase that are proposed for addressing pollution and control measures in freshwater, which are detailed within the **oCEMP [EN0110020/APP/5.9]**, following established pollution prevention protocols including, but not limited to:

- Safe storage of plant, fuel, oils, and chemicals to remove pathways for pollution to enter surface or groundwater habitats
- Use of dust suppression measures – including washing down of vehicle wheels and access tracks
- Speed reduction measures on-site to reduce emissions and reduce dust loading; and
- Technical information on the removal of pathways to watercourses and groundwater have been included in the **oCEMP [EN0110020/APP/5.9]**.

Retention of Terrestrial Habitats to avoid losses

6.6.14 Measures at the construction phase that are proposed for addressing and minimising habitat loss and control measures in terrestrial habitats, which are detailed within the **oCEMP [EN0110020/APP/5.9]**, and include, but not limited to:

- Lifting, temporarily storing, and then reinstating grassland habitat to avoid grassland habitat loss after cable laying and after temporary vehicle access points are removed.

Species Protection

Reducing Noise and Vibration

6.6.15 Measures at the construction phase that are proposed for vibration and noise are detailed in **ES Volume 2, Chapter 14: Noise and Vibration [EN0110020/APP/6.14.1]**. Measures that directly benefit Biodiversity and Nature Conservation will be delivered through the CEMP and oCTMP, and include, but are not limited to:

- Use of lowest noise and vibration rated suitable equipment, and those fitted with mufflers and silencers where reasonably practicable
- Restriction on timings of equipment use to daytime hours (0700hrs to 1900hrs Monday to Friday; and 0700hrs to 1300hrs Saturday) unless in exceptional circumstances which would be short term in duration;
- Use of acoustic barriers or screens near sensitive receptors (human and biodiversity) where necessary; and
- Maintaining sufficient depth (>1.5m) below the base of watercourses and wet ditches with sensitive aquatic biodiversity features present, where possible, such that vibration in the water column is avoided during trenchless crossing activities.

Reducing the Temporary Impacts of Lighting on Sensitive Ecological Features

- 6.6.16 Lighting will be restricted during crepuscular and nocturnal hours where reasonably practicable, with the majority of works activities to take place between the hours of 0700hrs and 1900hrs Monday to Friday, and 0700 hrs to 1300hrs on Saturdays. Exceptions to this may be required for trenchless crossings or for time sensitive construction activities such as concrete pouring.
- 6.6.17 As detailed in **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]**, temporary security and compound lighting would be restricted to the use of motion sensitive or low impact lighting, which would include a shroud or shield to direct lighting only to where it is needed. Lighting would follow industry guidelines³⁶, with hoods or other features round the lighting to direct lighting away from sensitive features such as habitats that support crepuscular or nocturnal species.

Controlling the Spread of Terrestrial Invasive Non-Native Species

- 6.6.18 As non-native invasive species are present within the Site and are restricted from being spread in the wild under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)⁵, these species and appropriate management measures to address them are included within the **oCEMP [EN0110020/APP/5.9]**.
- 6.6.19 The **oCEMP [EN0110020/APP/5.9]** considers the potential vectors of spread, such as through plant and machinery movement, personnel footfall, storage and movement of materials.
- 6.6.20 The measures taken would involve but not be limited to:
- The creation and provision of a Method Statement to be followed by contractors with respect to INNS and the provision of a contractor briefing for construction staff prior to construction works taking place
 - A process for reporting the potential presence of INNS by contractors, the identification of, and cordoning off areas with INNS present by an Ecological Clerk of Works (ECoW) where works are to be avoided; and
 - The visual inspection of footwear and wheel washing to remove INNS seeds and to avoid spreading botanical species between different areas of the Site.

Protection of Terrestrial and Freshwater Species

- 6.6.21 Measures to protect terrestrial and aquatic species are included in the **oCEMP [EN0110020/APP/5.9]**. This assessment provides an outline of proposed mitigation only, with full details to be included within the CEMP. Protective measures may include:
- Measures to ensure protected species found within watercourse habitat are avoided, include the application of horizontal and vertical protective buffer distances during construction and as highlighted in Paragraph 6.6.9
 - Safe storage of plant, fuel, oils, and chemicals to remove pathways for pollution to enter surface or groundwater habitats and impact species
 - Technical information on the removal of pathways to watercourses and groundwater

- Speed reduction measures on-site to reduce emissions, dust loading and noise, where there is the potential to impact sensitive botanical and faunal features
- Any excavations to be filled and not left overnight, or where this is not possible, to be covered, or escape ramps for mammals included if left open overnight
- Provision of gaps or holes in the perimeter fence line to allow badgers and other mammals free movement within their range
- No stockpiling of aggregate piles or materials other than on hard standing areas
- Ensure habitats that contain protected species are suitably fenced and separated from on-site works and personnel; and
- A contractor briefing will be delivered by a suitably experienced ECoW to make contractors aware of protected and priority species and relevant legislation.

Feature-Specific Safeguarding Measures

Designated Sites

- 6.6.22 The timing, buffer inclusion, lighting and noise controls, aquatic pollution prevention, and dust suppression mitigation measures are summarised within this Section and proposed for detailing within the **oCEMP [EN0110020/APP/5.9]**, to provide general safeguarding measures for designated sites. Measures are included where applicable to address dust and air emission impacts to botanical features of Sprotborough Gorge SSSI and to address habitat loss and disturbance to designated features within Brampton Common LWS.

Ancient Woodland

- 6.6.23 Planning advice advises that a minimum avoidance buffer zone from ancient woodland is at least 15m from the boundary of the woodland to avoid root damage⁷¹. Where assessment shows other impacts are likely to extend beyond this distance, it is likely to need a larger buffer zone. On this basis, the offset buffer distance of 25m is proposed between each ancient woodland block and construction areas as part of the **Outline Design Parameters [EN0110020/APP/7.3]**. The buffer zone will also include created habitats such as grassland, that would replace existing arable habitat to provide an enhancement on current habitats. Mitigation measures relevant to ancient woodland to be included within the **oCEMP [EN0110020/APP/5.9]** include:

- Dust suppression
- Lighting controls
- Noise control measures, and
- Contractor briefing.

Ancient / Veteran Trees

- 6.6.24 For ancient or veteran trees, planning advice advises that the buffer zone should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter. This is proposed to avoid direct impacts, with protective and avoidance

measures detailed in the **oCEMP [EN0110020/APP/5.9]** provided with the ES to address direct and indirect impacts.

Priority Habitats

Native Hedgerows

- 6.6.25 The vast majority of hedgerows will be retained within the Order Limits, and general protection measures, as specified in the **Outline Design Parameters [EN0110020/APP/7.3]**, include a 5m avoidance buffer for hedgerows. Detailed measures are included in the **oCEMP [EN0110020/APP/5.9]** and hedgerows would be protected in compliance with best practice.
- 6.6.26 The loss of sections of hedgerow will need to be compensated for by improving the quality of existing hedgerows or additional new hedgerow planting included in the **oLEMP [EN0110020/APP/5.13]**. This would include, but is not limited to, the following measures:
- Gapping up of hedgerows
 - Reinstatement of hedgerows with a species rich hedgerow mix where they have been removed to provide temporary vehicle access on the Cable Corridor
 - Improvement of hedgerows for conservation value with the addition of trees
 - Utilising optimum conservation management practices
 - The thickening of existing hedgerows with new adjacent linear planting; and/or
 - The planting of new connecting hedgerows with the Site.
- 6.6.27 Existing lower value hedgerow habitats to be retained will be the focus of habitat enhancement measures in achieving net gain and other conservation objectives.

Wet Woodland

- 6.6.28 The impacts on this habitat are the same as those identified for ancient woodland. On this basis, and except for an access track crossing on Anston Brook, a minimum buffer zone of at least 15m from the boundary of the woodland to avoid root damage is proposed. These measures are proposed to avoid direct impacts from construction, with mitigation measures detailed in the **oCEMP [EN0110020/APP/5.9]**.

Arable Field Margins

- 6.6.29 To avoid impacts from construction activities on retained arable field margins, these habitats would be marked with suitable fencing or tape installed with a suitable buffer distance to denote areas that machinery or people should be excluded from entering. A contractor briefing would take place to inform personnel of the importance of these areas for conservation and where they need to be avoided.

Protected Species

- 6.6.30 Embedded mitigation measures specific to the protected species below are included in the **oCEMP [EN0110020/APP/5.9]** which has been submitted with the Application.

Bats

- 6.6.31 Where there is the presence of PRFs within individual or groups of trees, avoidance measures through use of trenchless crossings under woodland, or micro-siting of the cable laying location would avoid impacts on potential bat roosts where possible.
- 6.6.32 Where trees with PRFs are present and it is not possible to avoid felling, pruning or disturbance to these features, further tree climbing surveys will be completed to confirm roost presence.
- 6.6.33 If evidence of a bat roost is found at pre-construction, and if appropriate mitigation measures are not possible to avoid disturbance, a derogation licence would be required from Natural England.
- 6.6.34 To protect roosting, foraging and commuting bats from disturbance, mitigation measures on lighting controls, at construction, would, where reasonably practicable, be limited to working hours that avoid crepuscular and nighttime hours within the Site and minimal use of security and construction lighting elsewhere. Temporary construction lighting would follow best practice guidelines to avoid light spill onto sensitive habitats.
- 6.6.35 During construction, fencing will be used to buffer the habitats used by bats to ensure that disturbance from machinery and personnel, equipment and material storage is reduced to limit impacts to bat commuting corridors and foraging areas, such that opportunities for commuting and foraging bats are maintained and the efficacy of roosts is maintained.
- 6.6.36 The cessation of arable farming practices would reduce fertiliser and insecticide inputs to benefit invertebrate populations and therefore prey availability for foraging bats.
- 6.6.37 Information on the locating of bat boxes and habitat creation to benefit bats will be included in the **oLEMP [EN0110020/APP/5.13]**.

Great Crested Newt

- 6.6.38 No mitigation measures specific to GCN are required for ponds within Order Limits or 250m buffer where they have been confirmed as absent of this species. The pond avoidance distance of 10m will be applied as specified within the **Outline Design Parameters [EN0110020/APP/7.3]**.
- 6.6.39 For those ponds where status has not been confirmed outside Order Limits and the ponds are within 100m of connected suitable habitat, there is a low risk of finding GCN, but as a precautionary measure, works will be undertaken under a Non-Licensed Method Statement (NLMS) where deemed necessary by a suitably licensed ECoW. The NLMS would include but not be limited to measures that reduce the potential for pollution to waterbodies, the fencing of sensitive habitats, use of Reasonable Avoidance Measures (RAMs), provision of a contractor briefing, timing of works. The NLMS will be secured through the CEMP.
- 6.6.40 Should any ponds or terrestrial habitat within Order Limits and a 250m buffer from works be found to support GCN, appropriate mitigation measures will be applied to prevent/minimise the risk of disturbance. Where disturbance is unavoidable then a licence would be applied for from Natural England with an accompanying method statement which will set out the appropriate mitigation and compensation measures which will be conditioned through the licence.

Otter and Water Vole

- 6.6.41 Surveys of the remaining stretches of watercourse will be undertaken to confirm the status of otter and water vole, including identification of otter resting places and water vole burrows. Where resting places/burrows are identified, appropriate measures will be implemented to avoid and reduce disturbance as far as practicable; such as micro-siting of works, protection of banksides, protective fencing and measures to allow continued passage alongside water bodies and secured through the CEMP.
- 6.6.42 Water vole has not been recorded in watercourses within the Site or where access has been possible within watercourses in the Cable Corridor and with survey and appropriate mitigation measures applied it is not anticipated that a Natural England water vole (CL31) displacement licence will be required.
- 6.6.43 Measures to avoid impacts of disturbance from equipment and personnel noise to otter holts and resting places would include but not be limited to the use of noise baffling, visual barriers, provision of a toolbox talk to contractors, the inclusion of an ECoW, and timing restrictions limiting works to daytime hours and when otters are not breeding.
- 6.6.44 Other general measures would be to ensure that any pipework that is being stored has pipe ends attached to avoid otters becoming entrapped within, and that open trenches are covered overnight or provided with escape ramps at each end.
- 6.6.45 Additionally, watercourses that otters have been identified foraging or commuting on as well as resting or breeding, will need to remain unobstructed and hydrologically connected. Where a crossing is required, dependent on design, an otter ledge or pass may be required, which follows the design detailed within the DMRB.
- 6.6.46 Where disturbance to otter is unavoidable then a Natural England European Protected Species Mitigation (EPSM) derogation licence would be applied for with an accompanying method statement which will set out the appropriate mitigation and compensation measures which will be conditioned through the licence.

Reptiles

- 6.6.47 The mitigation measures for reptiles within the Order Limits will be consistent and involve the use of RAMs. This is based off the current Reptile Survey findings within the Site and the temporary nature of works within the Cable Corridor.
- 6.6.48 RAMs for reptiles will also be detailed within a method statement attached to the **oCEMP [EN0110020/APP/5.9]** and will apply to suitable habitat within the Order Limits. This will include but is not limited to the following mitigation measures:
- Provision of an ECoW to supervise works in sensitive areas and to provide a contractor briefing to construction personnel
 - A search by the ECoW of habitats within an area prior to construction or removal would take place
 - In small areas, a supervised two-stage cut of valuable habitat to reptiles during warm weather conditions (19°C plus) would be applied. This would involve a high cut to 100mm, followed by a cut to ground 24 hours later
 - Where reptiles are found and they do not vacate an area, these individuals would be carefully picked up by the ECoW and moved to suitable nearby habitat not subject to works activity; and

- Provision of temporary fencing and suitable buffer to separate work areas from this important ecological feature where this species has been encountered during surveys and the habitats are being maintained.

6.6.49 Where habitats of value to reptiles are lost through temporary construction works activities, these would be re-instated or replaced in-situ at the completion of works activities.

White Clawed Crayfish

6.6.50 White clawed crayfish are protected from killing and injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended)⁵. Measures to safeguard white clawed crayfish are included within the **oCEMP [EN0110020/APP/5.9]**.

6.6.51 Mitigation measures for white clawed crayfish where required within the Order Limits will include but are not limited to:

- Provision of a WCC licensed ECoW to supervise works in sensitive areas and to provide a Method Statement, and contractor briefing to construction personnel
- The application of standard pollution prevention measures within watercourses containing WCC during construction
- Complete works on watercourses containing WCC at a time of year when WCC females are not 'berried' and breeding will not be disrupted (i.e. July to September)
- Signal crayfish are present within the Order Limits that are known to be a vector for spreading crayfish plague (*Aphanomyces astaci*) that is fatal for WCC. Ensure that biosecurity measures are taken to avoid the potential for spreading crayfish plague by making sure all material, equipment and footwear is free of detritus, disinfected and dry before entering watercourses known to contain WCC
- Given the presence of WCC within Broad Bridge Dike (W15) a presence/absence survey to confirm whether bankside or instream habitats within the vicinity of the proposed new access track watercourse crossing contain refugia for this species (e.g. substrate voids or watercourse burrows), so micro siting the crossing location can avoid features that support WCC; and
- Where it is not possible to avoid WCC burrows or instream habitats containing WCC through the measures above, a WCC mitigation licence for development activities (A05a) will need to be sought and to register for licence CL23 to move WCC if works are to take place between 1 July and 30 September.

Migratory Fish

6.6.52 Freshwater fish species, their sustainable management and protection of habitats are protected under the Salmon and Freshwater Fisheries Act 1975 (SAFFA). Eels are further protected through the Eels (England and Wales) Regulations 2009 to ensure their recovery through the removal of obstructions and installation of eel passes at dams or other structures that impede migration. Mitigation measures to safeguard fisheries are included within the **oCEMP [EN0110020/APP/5.9]**.

6.6.53 Mitigation measures for freshwater fish and eels where required within the Order Limits will include but is not limited to:

- Provision of an ECoW to supervise works in sensitive areas and to provide a Method Statement, and contractor briefing to construction personnel
- The application of standard pollution prevention measures within watercourses containing freshwater fish during construction
- Ensure that biosecurity measures are taken to avoid the potential for spreading fish pathogens by making sure all material, equipment and footwear is free of detritus, disinfected and dry before entering watercourses known to contain fish or eels
- Where temporary crossings are required on the Cable Corridor, ensure appropriately designed bridges are used to avoid impacting the banks and watercourse channel where fish are present
- Where in-channel works are required (i.e. upgrade of existing watercourse crossings, new watercourse track crossings) complete works when watercourse are low or dry and fish rescue (if needed) will be less disruptive to fish populations and works will not require over pumping; and
- Where fish rescue may be required, an online permission to catch fish (nets, traps, or electric fish) will need to be sought from the Environment Agency and a permit to catch fish obtained.

Badgers

- 6.6.54 Badgers and their setts are protected under the Protection of Badgers Act 1992. Measures to safeguard badgers are included within the **oCEMP [EN0110020/APP/5.9]**.
- 6.6.55 Mitigation measures for badgers where required within the Order Limits will include but is not limited to:
- Provision of an ECoW to supervise works in sensitive areas and to provide a contractor briefing to construction personnel
 - Provision of ramps within open excavations or covers provided if they are not filled before the end of the working day
 - Provision of temporary fencing and 30m buffer to separate work areas from this important ecological feature;
 - Ensuring that pipework to be used in the construction infrastructure has pipe ends fitted to avoid badgers becoming stuck within them and asphyxiating
 - Lighting control measures on equipment used within nighttime hours (e.g. machinery used for trenchless crossings), to ensure lighting does not shine on sensitive habitats used by badgers such as hedgerows and woodland; and
 - Where required, noise and vibration controls, (e.g. use of lowest noise rated equipment suitable to complete the works, inclusion of acoustic barriers in fencing etc.).
- 6.6.56 Should badger setts be found within the Order Limits and disturbing works are within 30m of a sett entrance, additional mitigation measures will be implemented, such as changing the working method to be less disturbing. If these measures are applied and proposed works are still considered to constitute disturbance, then a derogation licence would be applied for from Natural England.

Nesting Birds

- 6.6.57 Measures to safeguard nesting birds will be included within the CEMP.
- 6.6.58 Under the WCA it is an offence to kill or injure any wild bird, or to damage or destroy nests and eggs. Breeding species listed on Schedule 1 of the WCA are afforded initial protection from disturbance. Note that this assessment provides an outline of proposed mitigation only; full details will be included within the CEMP.
- 6.6.59 Given the nature of the project, it will not be practical to undertake all works outside of the main breeding-bird season (March to August inclusive).
- 6.6.60 A 'toolbox' talk would be delivered by a suitably experienced ECoW to make contractors aware of ornithological sensitivities and relevant legislation.
- 6.6.61 If any nests are identified during the pre-construction surveys, a suitable exclusion zone around the nest would be established. Limits would be placed on works within the exclusion zone/s, which may include restrictions on personnel or vehicles entering or passing through until the ECoW has confirmed that the chicks have fledged or that the breeding attempt has reached a natural conclusion.
- 6.6.62 Pre-construction surveys and / or nest check methods would be dictated by the species that may be present and, in some cases, such as Schedule 1-listed species may be required in the weeks or months prior to planned works to identify territorial behaviour and aid the detection of nests or likely nesting areas.
- 6.6.63 Precise mitigation measures are likely to vary based on the situation, species and Site conditions, and will be reviewed on a case-by-case basis and, if necessary, agreed with appropriate consultees. For example, if construction is planned in the breeding season, it is recommended that skylark breeding habitat, including arable crops and grassland, is cut or cleared prior to the breeding season and maintained at a height of no more than 15cm to prevent birds from returning to nest. If the field is cropland, then it can be harvested as per standard agricultural practice and then maintained in a condition that is unfavourable for nesting skylark. This would reduce the potential risk of loss or harm of active nests.

Priority Species

Brown Hare

- 6.6.64 To avoid entrapment of brown hare in excavations, the inclusion of a means of escape with ramps or ensuring the excavation is covered will be included as mitigation measures.
- 6.6.65 Pipework on-site for drainage or as part of the cable laying has the potential to trap brown hare, with the addition of cap ends on stored pipework needed to avoid impacts from this effect.

Operation and Maintenance

Lighting

- 6.6.66 Lighting is not required within the solar arrays. However, it would be installed in the primary and satellite substation compounds and the BESS location(s) and would be used only as needed for maintenance and security purposes. All lighting would be either controlled by PIR sensors or manually operated and would be directed into the compounds, avoiding hedgerows, tree lines, woodland blocks,

watercourses, ponds, and other areas to minimise impact on nocturnal or crepuscular fauna and potential sensitive residential receptors where possible.

Maintaining Habitat Connectivity Across the Proposed Development

- 6.6.67 Habitat planting and enhancements to benefit habitat connectivity are proposed across the Site, along with habitat management and monitoring, and biodiversity enhancement prescriptions to benefit protected and priority species. These measures are detailed within the **oLEMP [EN0110020/APP/5.13]**. Buffer distances to ensure the Proposed Development is separated from sensitive biodiversity features are detailed within the **ODP [EN0110020/APP/7.3]**.
- 6.6.68 Within the Proposed Development, mammal gates are proposed to be fixed within the perimeter fencing to ensure that protected species such as badger, or priority species such as brown hare or hedgehogs are able to access their full range for foraging and commuting across the landscape.
- 6.6.69 Wherever watercourse crossings (for access tracks) are proposed and otter are known to be present, or habitats are suitable for this species, the design of the crossings will incorporate specifications for otters detailed within the DMRB⁷² documents. These detail the standard design of mammal ledge on the inside of watercourse crossings to allow otter full range for commuting and foraging.
- 6.6.70 Proposals for the enhancement of watercourse and hedgerow habitats through planting and incorporating management practices to maximise benefits for biodiversity, would in time provide improved habitats for aquatic and riparian species (e.g. fisheries, otter), with the potential to provide stronger commuting and foraging routes for mammals (e.g. bats, and badger) beyond what is currently available.

Badgers, Otters and Other Mammals

- 6.6.71 To avoid fragmentation of habitats for badger within the Site, there would be ground level gates constructed within the perimeter fencing at strategic locations, large enough to allow movement of badger, otter and other mammal species.
- 6.6.72 Strategic locations for siting ground level gates would be adjacent to habitat parcels of medium or high distinctiveness (open grassland and woodland edge) and on or close to established mammal paths. Specific locations for locating these gates would be identified during pre-construction surveys for mammals, due to the potential for commuting routes to change frequently, however, holes would be sufficiently distributed taking account of habitat suitability and badger or otter signs, with a higher frequency around suitable habitats and known locations of badger or otter activity.
- 6.6.73 In line with the **ODP [EN0110020/APP/7.3]**, CCTV is proposed for installation on the perimeter fencing that would have an infrared functionality during nighttime hours, and would avoid the need for perimeter lighting, and any potential for light spill that comes with it. Lighting on BESS and substation infrastructure would be directed inwards to where it is needed and would be PIR motion activated or manually operated, as per the **ODP [EN0110020/APP/7.3]**. The specification of this lighting will comply with best practice and in line with the Institute of Lighting Professionals (ILP) guidance⁷³.

- 6.6.74 Ground level gates would be constructed that would also be suitable for brown hare, and as specified in Paragraphs 6.6.67 and 6.6.71.

BNG Habitat Creation and Enhancement

- 6.6.75 Further information on the baseline BNG is found within **ES Volume 3, Appendix 6.4: Biodiversity Net Gain Report [EN0110020/APP/6.20]**.
- 6.6.76 At the time of writing (April 2026) there was no legislative requirement for the Proposed Development, as a Nationally Significant Infrastructure Project (NSIP), to achieve a 10% BNG. However, the BNG requirement will be implemented for NSIPs from 2 November 2026⁷⁴ and the Applicant is committed to delivering at least 10% BNG.
- 6.6.77 In the absence of specific guidance for the BNG process relating to NSIPs and DCO applications at the time of writing, this assessment follows current best practice and follows the guidance available for Town and Country Planning Act (TCPA) applications.
- 6.6.78 Schedule 7A of the Town and Country Planning Act 1990³ (inserted by the Environment Act 2021) requires developments to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of the on-site habitat (i.e. all habitats within the boundary of the development), irrespective of whether the habitats are impacted by the development.
- 6.6.79 Habitat enhancements must be maintained for at least 30 years from the completion of the habitat creation or enhancement works.
- 6.6.80 Areas of habitat creation and enhancement are identified in **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]**. The masterplan outlines where habitat creation and enhancement prescriptions will be applied within the Site as part of the Proposed Development. In developing the masterplan and **oLEMP [EN0110020/APP/5.13]** for the Proposed Development, the following broad principles were proposed that applied to habitat compensation, creation and enhancement:
- Any compensation for habitat losses, any creation, and any enhancements of habitats would be restricted to the Site with the exception of ornithological compensation as detailed in the **oLEMP [EN0110020/APP/5.13]**, and habitat reinstatement within areas of the Cable Corridor
 - Habitat creation and enhancement within the Site will apply to both area habitats (e.g. grassland) and linear habitat (e.g. hedgerows, and watercourses)
 - Habitat creation and enhancement focussed on ensuring a minimum of 10% BNG is achievable; and
 - The habitat creation seeks to maintain and promote habitat connectivity across the Site for a range of habitat types, and the species that use them, (e.g. hedgerows linking woodland for commuting bats, open 'rides' for mammals to maintain their range, and enhanced riparian and aquatic habitat connectivity).
- 6.6.81 **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]** provides detailed areas for habitats that will be created within the Proposed Development. Broad habitat types will be created, which will include, but are not limited to the following:

- Hedgerow creation and enhancement (e.g. gapping up of existing hedgerows, the planting of trees within hedgerows, planting of more woody species to promote a greater species richness)
- Creation of grasslands (e.g. new field margins, shade tolerant grasslands under solar PV modules, and along rides);
- Planting of trees and small woodland blocks; and
- Proposals for the inclusion of habitats as part of the mitigation will consider the requirements of a range of farmland birds, including skylark and lapwing.

- 6.6.82 It is expected that the carefully considered habitat creation and enhancement prescription measures proposed within **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]** and secured with long term management mechanisms through the **oLEMP [EN0110020/APP/5.13]**, will provide long term significant positive benefits at a landscape scale for a range of protected, priority, and commonly occurring species (including flora and pollinating insects) that would not otherwise be available to them in the absence of the Proposed Development.
- 6.6.83 A monitoring schedule to track the establishment and success of habitat enhancements and creation is included within the **oLEMP [EN0110020/APP/5.13]**. The **oLEMP [EN0110020/APP/5.13]** also describes the principles of adaptive management to ensure the BNG target are achieved. Details of plant and habitat establishment approach is included within the **oLEMP [EN0110020/APP/5.13]** and referenced within **ES Volume 2, Chapter 7: Landscape and Visual Impact Assessment [EN0110020/APP/6.7]**.

Decommissioning

- 6.6.84 The decommissioning phase of the Proposed Development is assumed to require similar mitigation measures to the construction phase, given much of the decommissioning would involve the removal of the Proposed Development infrastructure. Details are currently provided in the **outline Decommissioning Environmental Management Plan (oDEMP) [EN0110020/APP/5.11]** submitted with the Application.
- 6.6.85 Mitigation measures will be included within a Decommissioning Environmental Management Plan (DEMP), which will be produced near the end of the operation and maintenance phase. However, conditions at the end of the operational life of the Proposed Development are uncertain at present, and as a result, the Biodiversity and Nature Conservation requirements at decommissioning are subject to change. An **oDEMP [EN0110020/APP/5.11]** is submitted with the Application.
- 6.6.86 The legislative framework for the protection of habitats, designations, flora and fauna may also change, with some of these biodiversity features either having enhanced new protections, or the removal of the current protective status at the time of decommissioning.
- 6.6.87 It is assumed however, that basic protection measures for fauna would remain in place at the time of decommissioning to safeguard species as required.

6.7 Assessment of Effects

- 6.7.1 This Section presents an assessment of LSEs on ecological features, based on available baseline information and taking account of the mitigation measures set out in Section 6.6. Where the status of species is still to be confirmed, a precautionary approach to the assessment has been taken based on the Proposed Development description, desk study and survey findings and embedded mitigation measures including species-specific measures, following best practice guidance.

Construction

Designated Sites

SSSIs

- 6.7.2 Within 5km of the Order Limits there are six nationally designated sites (SSSIs), Crabtree Woods, Anston Stones Wood, Lindrick Golf Course, Roches Abbey Woodlands, Edlington Woods, and Sprotborough Gorge, which have been identified as IEFs.
- 6.7.3 Within 2km of the Order Limits there are 20 locally designated sites (LNRs/LWSs), which include (Firsby Reservoir LNR, Anston Stone Wood LNR, Harthill Reservoir Candidate LWS, Killamarsh Pond LWS, Pebley Reservoir LWS, Pebley Oaks Lane Proposed LWS, Wickersley Wood LWS, LWS036, LWS043, LWS029, LWS005, LWS081, LWS004, LWS016, LWS027, LWS009, LWS030, LWS098, LWS104, and LWS042) that have been identified as IEFs.
- 6.7.4 **ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12]** concludes that risk of construction dust effects are predicted to be Negligible, for ecological receptors because there are no nationally designated statutory ecological receptors within 250m of the Order Limits. As a result, with the correct implementation of the recommended embedded mitigation including the Dust Management Plan, construction dust effects will be **Not Significant**. The outline Dust Management Plan has been included within the **oCEMP [EN0110020/APP/5.9]**
- 6.7.5 Construction traffic for transporting equipment and materials to Site could increase air quality emission effects [PM_{2.5}, PM₁₀, NO_x, and NO₂] that has the potential to adversely affect designated sites for particular habitat types and botanical interest. Based on the transport routes identified (see **ES Volume 3, Appendix 13.2: Transport Statement [EN0110020/APP/6.20.1]**), further traffic and transport information available to date is provided as a quantitative assessment in **ES Volume 2, Chapter 13: Traffic and Transport [EN0110020/APP/6.13.1]**. Construction traffic is short term and at a frequency and quantity that transport derived air pollution above the baseline is **Not Significant**. Although the nationally designated sites, which have been identified as IEFs, are located within the 250m Study Area from the source of air emissions on construction traffic routes, the absence of a Significant Effect from air quality emissions during transport also means that air quality emissions and dust effects are of short term duration, of a negligible magnitude, at the local scale and are also **Not Significant** to the IEFs for which the national sites are designated.
- 6.7.6 There is the potential for pollution as a result of construction activities to affect SSSIs with aquatic habitats where there is hydrological connectivity. To address

the potential for general pollutant effects through a hydrological pathway to the SSSIs, an **oCEMP [EN0110020/APP/5.9]** has been produced that details pollution prevention measures and careful drainage design that removes this pathway for potential effects from aquatic pollution. Crabtree Woods, Anston Stones, Wood, Lindrick Golf Course, Roches Abbey Woodlands, and Sprotborough Gorge SSSI have a hydrological link to the Site; however, (with the exception of Sprotborough Gorge which does have aquatic designation features) the features for which each of the SSSIs have been designated are terrestrial and not aquatic. With the pollution prevention measures detailed in the **oCEMP [EN0110020/APP/5.9]** in place, there is not a pathway to affect these designation features (whether terrestrial or aquatic), with the duration of effect being short term, of negligible magnitude and **Not Significant** to IEFs of the SSSIs.

Firsby Reservoir LNR

- 6.7.7 Firsby Reservoir LNR is 240m from the Order Limits and therefore there is the potential for impacts from vehicles and equipment generating dust, lighting, noise and vibration that could disturb or damage the aquatic habitats. As stated in **ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12]** and Paragraph 6.7.5 of this ES, following assessment, air quality and dust emissions from construction site works are **Not Significant** to IEFs within 250m of the Order Limits. The **oCEMP [EN0110020/APP/5.9]** includes measures that further removes pathways for effects from air quality and dust emission effects, as well as from the effects of lighting, noise and vibration on Firsby Reservoir LNR at construction, which are of short-term duration, local scale, of Negligible magnitude and are, therefore, **Not Significant**.

Brampton Common LWS

- 6.7.8 Brampton Common LWS is partially located within the Site, and as a result, will be directly affected by the Proposed Development. Of the total area of the LWS (145 ha), approximately 81ha is within Order Limits; of this, 36ha is proposed for solar, 8ha within the Cable Corridor and 37ha is allocated for green infrastructure. Brampton Common LWS is designated for its breeding skylark population and species rich hedgerows, but it is understood through consultation that it is not currently actively managed for these features.
- 6.7.9 The BBS found that the LWS had one of the lowest skylark densities within the Order Limits (see **ES Volume 3, Appendix 6.6: Breeding Bird Survey Report [EN0110020/APP/6.20.1]** for further information). It is considered that Brampton Common LWS is not currently important for skylark as the habitats and management are suboptimal, and therefore there is limited opportunity for effects on this feature in the context of the LWS. Habitat enhancement within and adjacent to the LWS are expected to improve habitats for this species, offering improved foraging opportunities. Skylark more generally across the Order Limits are assessed further in Sections 6.7.106 and 6.7.107.
- 6.7.10 Brampton Common LWS is also designated for its native species-rich hedgerows. A review of historical mapping⁷⁵ identified that the native species hedgerows within the LWS have been present within the landscape since at least the 19th century, and many of these hedgerows can be classified as 'Important' as defined by the Hedgerow Regulations 1997.
- 6.7.11 General protection measures for hedgerows are included in the **oCEMP [EN0110020/APP/5.9]**, with details on hedgerow management strategies included in the **oLEMP [EN0110020/APP/5.13]**. Hedgerow loss would be minimised as far as possible, including using existing field gateways for access. However, the

requirement to extend the width of access points to accommodate construction vehicles and to ensure safe visibility splays is expected to result in some, loss of hedgerow.

- 6.7.12 Furthermore, a new internal access track from the southern boundary of the Brampton Common LWS where there is currently no alternative access and existing track network, will be needed to facilitate the build out of the Proposed Development and installation of solar PV array within the LWS field parcels. This will result in the permanent loss of a small section of an Important Hedgerow of 6m in width and a loss of habitat connectivity along the southern perimeter of the LWS.
- 6.7.13 At the construction phase, site clearance, access establishment and associated works will affect the structure and function of the LWS resulting in a low magnitude, local, adverse **Significant** effect in the short-term.
- 6.7.14 The enhancement proposals for the LWS will compensate for short-term effects through the measures described in the **oLEMP [EN0110020/APP/5.13]** (see Operation and Maintenance), which will ultimately provide a long term beneficial effect as per Section 6.7.122.

Axle Lane LWS

- 6.7.15 As part of the Proposed Development, cable laying along Cable Corridor CRL will pass through Axle Lane LWS. To enable the installation of the cable and allow vehicular access, a temporary road access junction with visibility splays will be created that will lead to the temporary loss of hedgerow and grassland habitat for the duration of the cable laying within Cable Corridor CRL.
- 6.7.16 Whilst these habitats are not designation features of the Axle Lane LWS, general protection measures for grassland and hedgerows are required, and these are included in the **oCEMP [EN0110020/APP/5.9]**, with details on hedgerow creation and management strategies included in the **oLEMP [EN0110020/APP/5.13]**.
- 6.7.17 Hedgerow loss would be minimised as far as possible, however, the requirement to extend the width of access points to accommodate construction vehicles and to ensure safe visibility splays is expected to result in some temporary hedgerow losses during construction. Whilst small sections of hedgerow will need to be removed and will be lost, this is for a temporary period, and beyond that time the hedgerow habitats can be created within the existing footprint, as referenced within Section 6.6.
- 6.7.18 Grassland habitats can be temporarily removed and carefully stored safely away from works areas for the very temporary period of time that works are proposed to take place on Cable Corridor CRL, before reinstatement within the LWS. This is desirable to avoid grassland losses, but it is also the habitat that the rare Chalk Eyebright, a botanical feature of the designation is likely to be present in, so protecting the grassland from habitat loss also protects this feature from loss as well. Reference to the general retention of grassland within Cable Corridors is referenced in Section 6.6.
- 6.7.19 Axle Lane LWS is also designated for wintering Golden Plover, supporting 0.25% of the UK population. Given the short duration of cable laying activities, avoiding the winter period to complete works in Cable Corridor CRL, will avoid effects of disturbance to this species and a feature of the designation. General protection measures for birds during construction are included in the **oCEMP [EN0110020/APP/5.9]**. If it is not possible to completely avoid the winter, or this contradicts other proposed mitigation, a pre-construction review of habitat

suitability and/or surveys may determine the current use of the LWS by Golden Plover and inform alternative mitigation to be agreed with the LPA.

- 6.7.20 At the construction phase, hedgerow losses will be minor, temporary, and for the duration of the Cable Corridor works, before being reinstated. Grassland will be subject to temporary disturbance, and not subject to loss, with reinstatement following completion of works which will also preserve Chalk Eyebright where it is present. Timing of works to avoid the winter period, will avoid disturbance to golden plover wintering bird species. With embedded mitigation in Section 6.6, along with the General protection measures for hedgerows, grassland habitats, and birds during construction are included in the **oCEMP [EN0110020/APP/5.9]**, and the hedgerow creation and management strategies included in the **oLEMP [EN0110020/APP/5.13]**, effects from habitat and species disturbance, and habitat loss to the features of Axle Lane LWS will be of a short term duration of effect, of negligible magnitude, at the Local level and **Not Significant** to the IEFs of Axle Lane LWS.

Whiston Meadows LWS

- 6.7.21 Whilst not a designation feature of Whiston Meadows LWS, hedgerows and roadside margins along Long Lane will need to be removed as part of the creation of visibility splays as part of safe access to Cable Corridor CRE. If there are permanent losses of hedgerow and other habitats as a result of works for the Proposed Development (as opposed to works for NGET's proposed 400kV Long Lane Substation which is subject of a separate planning application), these are proposed for compensation within the Site, with information on the creation and management of hedgerows included in the **oLEMP [EN0110020/APP/5.13]**. Measures to protect retained hedgerows and other habitats are referenced in Section 6.6 and detailed within the **oCEMP [EN0110020/APP/5.9]**. The aquatic and terrestrial habitat features for which the LWS is designated will be protected through adherence to the protective measures including pollution prevention measures detailed within the **oCEMP [EN0110020/APP/5.9]**. The features of the LWS will be protected and there are no losses of these habitats.
- 6.7.22 Loss of hedgerow habitat for the designation are very minor in proportion to the size of the overall LWS area (<0.6% of the total LWS area), impacting relatively lower value habitats within the LWS, and do not impact those habitats for which it is designated. Compensation for those habitat losses are incorporated into the Site. On this basis, effects of habitat loss to Whiston Meadows LWS will be of short-term duration of effect at construction, of negligible magnitude, and **Not Significant** to the IEFs of Whiston Meadows LWS.

Chesterfield Canal LWS

- 6.7.23 Chesterfield Canal LWS has hydrological connectivity from the Site in W2 and is crossed by Cable Corridor CRL.
- 6.7.24 There is the potential for pollution as a result of construction activities within the Site to affect the aquatic habitats of Chesterfield Canal LWS through hydrological connectivity from Broad Bridge Dike. To address the potential for general pollutant effects through a hydrological pathway to this designation, an **oCEMP [EN0110020/APP/5.9]** has been produced that details pollution prevention measures and careful drainage design that removes this pathway for potential effects from aquatic pollution. With the removal of this pathway for aquatic pollution by implementing pollution prevention measures detailed in the **oCEMP [EN0110020/APP/5.9]**, there is no impact to the designation features Chesterfield Canal LWS from this potential source.

- 6.7.25 Where Chesterfield Canal is crossed by Cable Corridor CRL, there will be a requirement to ensure the installation of the PV cable takes place following a trenchless methodology. This will need to be at sufficient depth to avoid major infrastructure, such as the canal, a railway line and woodland block. The **ODP** states that the minimum depth of trenchless crossings within the Order Limits will be 1.5 m; however, for the Chesterfield Canal crossing, this is expected to be greater and a minimum 3m depth. Direct effects from EMFs on migratory fish and other species within the LWS are not expected at this depth, and along with disturbance to sediments are addressed through general protective and pollution prevention measures detailed within the **oCEMP [EN0110020/APP/5.9]**.
- 6.7.26 Whilst machinery to trenchless cross Chesterfield Canal LWS has the potential to lead to noise and light pollution, control measures to reduce and mitigate noise and lighting are provided in the **oCEMP [EN0110020/APP/5.9]**. Lighting controls are expected to follow that advised in the **Outline Design Parameters [EN0110020/APP/7.3]**, and in line with ILP guidance to avoid light spill onto sensitive habitats.
- 6.7.27 With the protective measures in place through the **oCEMP [EN0110020/APP/5.9]**, following guidance and with reference to embedded mitigation in Section 6.6, pathways for the effects of aquatic pollution will be removed, the effects of disturbance to the LWS and features of the designation will be of a temporary, short-term duration, of negligible magnitude, Local and **Not Significant** to IEFs of the Chesterfield Canal LWS.

LNRs and LWSs – Terrestrial Pollutants

- 6.7.28 The local sites: Firsby Reservoir LNR, Anston Stone Wood LNR, Harthill Reservoir Candidate LWS, Killamarsh Pond LWS, Pebley Reservoir LWS, Pebley Oaks Lane Proposed LWS, LWS036, LWS043, LWS029, LWS005, LWS081, LWS004, LWS016, LWS027, LWS009, LWS030, LWS098, LWS104, and LWS042 are located within 250m from the Order Limits, and therefore, may be subject to lighting, noise, dust, and pollution effects from the Proposed Development.
- 6.7.29 **ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12]** acknowledges that non-statutory designated sites are not subject to assessment of critical loads for nutrient nitrogen or acid deposition.
- 6.7.30 LNRs and LWSs with features, such as hedgerow, woodland and ancient woodland habitats containing protected and priority species that are sensitive to lighting and noise require a buffer from developments. Established guidance states that an offset buffer of at least 15m from the edge of ancient woodland is applied to ensure avoidance of effects; however, as per the **Outline Design Parameters [EN0110020/APP/7.3]**, a minimum buffer distance of 25m will apply to woodland. This buffer distance is proposed between the designation and construction areas to mitigate potential effects, along with other mitigation measures included within the **oCEMP [EN0110020/APP/5.9]**.
- 6.7.31 However, with the buffer distance applied, embedded mitigation measures detailed in Section 6.6, and measures detailed in the **oCEMP [EN0110020/APP/5.9]**, the effects from lighting, noise, dust, and pollution effects from the Proposed Development on LWSs and LNRs are anticipated to be of a short-term duration and at the local scale, and as a result, they would be Negligible and **Not Significant**.

LNRs and LWSs - Aquatic Pollutants

- 6.7.32 The local sites: Firsby Reservoir LNR, Anston Stone Wood LNR, Harthill Reservoir Candidate LWS, Killamarsh Pond LWS, Pebley Reservoir LWS, Wickersley Wood LWS, LWS036, LWS043, LWS029, LWS005, LWS081, LWS004, LWS016 are located within, or in very close proximity (c. 10m) to the Order Limits, or at a further distance but with hydrological connectivity between the Order Limits and the LNR/LWS designations, and therefore, may be subject to aquatic pollution effects from the Proposed Development.
- 6.7.33 There is the potential for pollution as a result of construction activities to affect LNRs/LWSs with aquatic habitats where there is hydrological connectivity. To address the potential for general pollutant effects through a hydrological pathway to the LNRs/LWSs, an **oCEMP [EN0110020/APP/5.9]** has been produced that details pollution prevention measures and careful drainage design that removes this pathway for potential effects from aquatic pollution.
- 6.7.34 The LNRs/LWSs highlighted in Section 6.7.19 have a hydrological link to the Order Limits, and with the removal of a pathway for aquatic pollution by implementing pollution prevention measures detailed in the **oCEMP [EN0110020/APP/5.9]**, there is no impact to the designation features of the LNRs/LWSs from aquatic pollution, with the duration of effect being short term, of negligible magnitude and **Not Significant** to IEFs of the LNRs/LWSs.

Habitats

Ancient Woodland

- 6.7.35 Ancient woodland is irreplaceable habitat that often supports protected and priority flora and fauna. These habitats have the potential to be impacted directly through damage incurred by construction machinery and vehicles, or indirectly through disturbance impacts to these features from lighting, noise, dust, and pollution having the potential to have a moderate magnitude of effect.
- 6.7.36 With a proposed buffer distance of 25m as specified in the **Outline Design Parameters [EN0110020/APP/7.3]** and the implementation of mitigation measures identified within Section 6.6, and detailed in the **oCEMP [EN0110020/APP/5.9]**, potential effects from disturbance or harm to ancient woodland are reduced. As a result of this, they are therefore assessed as short term duration, Negligible magnitude, local and **Not Significant**.

Ancient / Veteran Trees

- 6.7.37 No ancient or veteran trees have been identified within W2 or W3, however, there is one veteran oak tree in W1. There are 111,000 trees which have been identified as ancient or veteran within England⁷⁶. Based on the land size of England, this represents a density of *circa* 117ha per ancient or veteran tree. The presence of just one veteran tree within the Site represents a scarce ecological feature within the Site in comparison to the national density.
- 6.7.38 A review of the Ancient Tree Inventory (ATI) has found no further ancient or veteran trees present within the Order Limits. Baseline surveys to date have found no further evidence of ancient or veteran trees within the Order Limits other than the veteran oak tree in W1.

- 6.7.39 The impacts to this veteran tree found within the Order Limits are expected to be the same as for ancient woodland and would apply to any other ancient or veteran tree.
- 6.7.40 With a proposed buffer distance covering the Root Protection Area (RPA) in line with the **Outline Design Parameters [EN0110020/APP/7.3]**, and the implementation of mitigation measures in Section 6.6 and identified within the **oCEMP [EN0110020/APP/5.9]**, potential effects from disturbance or harm to this IEF are much reduced. Potential effects are therefore assessed as Short term, of Very low magnitude, local and **Not Significant**.

Priority Habitats

Native and Important Hedgerows

- 6.7.41 The vast majority of hedgerows will be retained within the Order Limits, and general protection measures, as specified in the **Outline Design Parameters [EN0110020/APP/7.3]**, include a 5m avoidance buffer for hedgerows. Detailed measures are included in the **oCEMP [EN0110020/APP/5.9]** and hedgerows would be protected in compliance with best practice.
- 6.7.42 Hedgerow surveys have been completed in the Site, and parts of the Cable Corridor. At this stage, where an 'Important' hedgerow assessment has not been completed of hedgerows within the Cable Corridor, it is assumed hedgerows will be avoided during cable laying through use of gateways, gaps in hedgerows or through trenchless crossing. These measures will be confirmed through further surveys prior to construction.
- 6.7.43 Native hedgerows are found throughout the Order Limits, with some of these identified as 'Important' under the Hedgerow Regulations. There are anticipated hedgerow losses to facilitate access for machinery to the Cable Corridor at 23 locations with one of these an Important hedgerow. There are internal track crossings at five locations, with two of these Important hedgerows; and to ensure that there are suitable highway visibility splays at access points. These locations can be seen in the **Vegetation Removal Plan [EN0110020/APP/2.9.1]**.
- 6.7.44 The **Outline Design Parameters [EN0110020/APP/7.3]** state that the upper end of the width of the access track is 6m; therefore, excluding the visibility splays, this represents 0.57km in hedgerow loss, which equates to approximately 0.6 % of the 95.28km of hedgerows within the Order limits. This is considered a low magnitude, local, adverse **Significant** effect in the medium-term.
- 6.7.45 Of these hedgerows, 24.55km are considered 'Important' hedgerows and the Proposed Development would result in a loss of 0.09km, which equates to approximately 0.4 % of the 'Important' hedgerows within the Order Limits. This is considered a low magnitude, local, adverse **Significant** effect in the medium-term.
- 6.7.46 The enhancement of Hedgerows through the measures described in the **oLEMP [EN0110020/APP/5.13]** will compensate for short-term effects (see Operation and Maintenance), which will ultimately provide a long term beneficial effect through a gain in hedgerow units and quality across the Order Limits, as per Section 6.7.122.
- 6.7.47 Where loss of 'Important' hedgerows is unavoidable during construction, these will be compensated with additional planting prior to construction within the Site and be re-instated at decommissioning, with details on location of losses and

compensation measures to be provided to the LPA in advance of permission to remove.

Wet Woodland

- 6.7.48 Best practice mitigation measures will be implemented for the protection of retained wet woodland, which are detailed within the **oCEMP [EN0110020/APP/5.9]** and referenced in the embedded mitigation in Section 6.6. Small areas of wet woodland priority habitat are found on the Site in W2 adjacent to Anston Brook.
- 6.7.49 To facilitate construction of a track crossing over Anston Brook, a section of Wet Woodland habitat up to 6m wide will be lost, which will also potentially lead to some loss of habitat connectivity. Up to 0.03ha of habitat would be lost, which equates to 0.9% of the 3.29ha of Wet Woodland within the Order Limits. As this is listed under Section 41 of the NERC Act 2006 as a Habitat of Principal Importance in England and has connectivity to offsite Ancient Woodland, an irreplaceable habitat, this is considered a permanent loss; however, the works will result in a very small number of trees being removed as a worst-case scenario. Additionally, the track crossing will be micro sited, and construction managed through specific measures in the CEMP including oversight by an ECoW to reduce the extent of loss and damage.
- 6.7.50 Given the small area, and with implementation of the micro-siting, potential effects of loss of wet woodland habitat during construction are considered a low magnitude, local, adverse **Significant** effect in the medium-term.
- 6.7.51 Enhancement proposals for wet woodland will compensate for short-term effects through the measures described in the **oLEMP [EN0110020/APP/5.13]** (see Operation and Maintenance), which will ultimately provide a long term beneficial effect as per Section 6.7.122.

Arable Field Margins

- 6.7.52 This priority habitat provides botanical interest and is an important habitat to priority and protected species of flora and fauna.
- 6.7.53 Within the footprint of internal tracks identified within **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]**, there is a loss of Arable Field Margin habitat; however, these are in very small quantities within the Site (0.05 ha, 0.2 %) which is a Low magnitude effect for this habitat type which is widespread in the area and therefore **Not Significant**.
- 6.7.54 Direct disturbance and degradation through vehicle and machinery movement have the potential to impact these habitats on a temporary and short-term basis within small areas of the Site. This direct disturbance and degradation are likely to provide a Low magnitude of effect to this habitat type.
- 6.7.55 Foot traffic and machinery have the potential to affect this habitat through the spread of INNS into it from footwear or vehicle tyres. The spread of INNS may impact the structure of the botanical flora over the longer term and represents an impact that has a moderate magnitude of effect.
- 6.7.56 Further information on avoidance buffers and biosecurity around INNS are included within the **oCEMP [EN0110020/APP/5.9]** and as referenced in Section 6.6. With the proposed embedded mitigation in place, effects to this habitat from

disturbance and degradation are short term, of Low magnitude and **Not Significant**.

Species

Roosting, Foraging and Commuting Bats

- 6.7.57 In the absence of mitigation there is the potential for LSEs of the Proposed Development on individual roosting bats during construction through permanent land-take, increases in noise, and vibration, and increases in temporary construction or security lighting.
- 6.7.58 In ensuring roosting bats are supported and maintained in their current range, avoidance of habitats of high value for roosting and foraging/commuting bats (e.g. trees, hedgerows, tree lines, and woodland edge habitat) has been prioritised for retention in **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]**, with the majority of land-take occurring in lower value arable fields that would not offer value to bats.
- 6.7.59 In line with best practice guidance, to avoid the disturbance of, or damage to habitats protective fenced buffers around trees and other higher value bat habitats near construction activities and access routes will be provided.
- 6.7.60 Effects of construction on bats will be avoided and mitigated through best practice measures as referenced in Section 6.6. These measures are detailed within the **oCEMP [EN0110020/APP/5.9]**.
- 6.7.61 The Proposed Development proposes to avoid the habitats most used by bats by retaining woodland, hedgerows and tree lines within the Order Limits where reasonably practicable. Mitigation measures to protect these retained habitats are provided in Section 6.6.
- 6.7.62 Where habitat losses cannot be avoided, small sections of hedgerow and tree line habitat up to 6m wide per location will be lost to facilitate access to the Cable Corridor, vehicular access to the Site, and where internal tracks cross these habitat features.
- 6.7.63 This will lead to individual tree loss, hedgerow section loss, and lead to minor permanent loss of habitat connectivity at Site access points and where there are internal track crossings.
- 6.7.64 Habitat losses at the access points to the Cable Corridor will be of short-term duration and replaced with similar newly created habitats on completion of cable laying activities, which will seek to reinstate habitat connectivity for bats.
- 6.7.65 The overall effects of construction on bats are negative, of short-term duration, of Low magnitude, local and likely **Not Significant**.

Great Crested Newt

- 6.7.66 No ponds are being lost to the Proposed Development. Great crested newt was not recorded on the Site and no ponds are located within the Cable Corridor. Absence of GCN recorded from surveys within the Site provides an assessment that GCN is not likely to be an IEF within the Site.
- 6.7.67 Six ponds were identified within the 250m buffer of the Order Limits where there is connectivity to the Site and surveys have not been undertaken.

- 6.7.68 For those ponds where status has not been confirmed outside Order Limits and the ponds are within 100m of connected suitable habitat, there is a low risk of finding GCN, but as a precautionary measure, works will be undertaken under a Non-Licensed Method Statement (NLMS) where deemed necessary by a suitably licensed ECoW. The NLMS would include but not be limited to measures that reduce the potential for pollution to waterbodies, the fencing of sensitive habitats, use of Reasonable Avoidance Measures (RAMs), provision of a contractor briefing, timing of works. The NLMS will be secured through the CEMP.
- 6.7.69 Where it is known that GCN are absent, then the avoidance distance of 10m specified within the **Outline Design Parameters [EN0110020/APP/7.3]** would apply.
- 6.7.70 Further information on avoidance buffers is included within the **oCEMP [EN0110020/APP/5.9]** and as referenced in Section 6.6. With the proposed embedded mitigation in place, effects to this species are short term, of Negligible magnitude and **Not Significant**.

Otter and Water Vole

- 6.7.71 Water vole has not been recorded from surveys within the Site and where surveyed within the Cable Corridor and provides assessment that this species is not likely to be an IEF within the Study Area. For the purposes of the assessment and where surveys for water vole have not taken place prior to construction, applying the precautionary approach as detailed within Section 6.6 and the **oCEMP [EN0110020/APP/5.9]** is sufficient to avoid potential effects to water vole and the requirement for licensing.
- 6.7.72 The presence of otter has been confirmed within the Study Area, although no otter resting places (natal dens, non-natal holts, and couches) have been confirmed as present. Surveys of the remaining stretches of watercourse will be undertaken to confirm the status of otter, including identification of resting places. Where resting places are identified, appropriate measures will be implemented (depending on whether they are natal or non-natal) to avoid and reduce disturbance as far as practicable; such as micro-siting of works, protection of banksides, protective fencing and measures to allow continued passage alongside water bodies and secured through the CEMP. Where disturbance is unavoidable a EPSM licence will be applied for from Natural England with an accompanying method statement which will set out the appropriate mitigation and compensation measures which will be conditioned through the licence.
- 6.7.73 With the proposed mitigation in place, effects on otter and water vole are Negative, short term, of Negligible magnitude, local and **Not Significant**.

Reptiles

- 6.7.74 Habitats suitable for common and widespread reptile species, including hedgerow margins, grassland, banks and ditch edge habitats, scattered scrub, and woodland margins are present within approximately 10% of the Site. Surveys have been completed within these habitats, with the presence of grass snake consistently identified in very low numbers across W1, W2, and W3.
- 6.7.75 There is the potential for impacts on reptiles from disturbance, damage or destruction, either directly to individual reptiles or indirectly to them through habitat disturbance or land-take during construction.

- 6.7.76 The desk based UKHab assessment and baseline surveys have identified that the habitats within the Cable Corridor are similar and contiguous to those found in the Site. On this basis the habitats would be expected to contain a similar distribution and species assemblage as those within the Site.
- 6.7.77 Construction works within the Cable Corridor are subject to avoidance of valuable habitats wherever practicable, and habitats, such as grassland, would only be subject to temporary and short-term disturbance before reinstatement.
- 6.7.78 A small proportion of the Study Area contained reptiles, with many of these habitats to be retained through avoidance. Losses of habitat of value to reptiles are very small in the context of the available habitat, with losses of grassland basking and foraging habitat very limited and temporary, as areas of suitable habitat would be significantly increased long-term. Potential sheltering and hibernation habitat loss, including hedgerow, scrub and woodland, is similarly very low and would be increased long-term through enhancement. As such, reptile habitat losses assessed to be **Not Significant** in relation to the scale of the Proposed Development.
- 6.7.79 With the embedded mitigation measures in Section 6.6 implemented, the effects of construction on reptiles would be Negative, short-term, of Low magnitude and **Not Significant**.

Badger

- 6.7.80 Badger is a widespread species within rural areas of the UK. Badgers and their setts are protected under the Protection of Badgers Act, 1992, which is in place to address impacts from badger baiting, and as a legal deterrent against persecution.
- 6.7.81 For the purposes of avoiding potential for acts of persecution, data has been anonymised within this assessment, with the location of any badger signs or sett locations excluded from this assessment and in relation to badgers is noted within a confidential appendix, **ES Volume 3, Appendix 6.3: Confidential Badger Survey Report [EN0110020/APP/6.20.1]**. The confidential appendix also provides the location of specific mitigation for badgers where required.
- 6.7.82 Badgers are a mobile species that can occasionally create setts in areas that have previously been assessed as absent of badgers. In the unlikely event that potentially disturbing works cannot be avoided within a 30m buffer zone of a badger sett and protective measures cannot be implemented to prevent disturbance, damage or destruction, either directly or indirectly to them, or to their setts; a mitigation licence would be required from Natural England to undertake the works with specific conditions to minimise any effects. Indirect impacts to badgers, include entrapment in trenches and excavation and pipework, lighting, vibration and noise during nighttime hours.
- 6.7.83 Mitigation measures for mammals that also apply to badgers are detailed within the **oCEMP [EN0110020/APP/5.9]** and are referenced in Section 6.6.
- 6.7.84 In addition to reference within the **oCEMP [EN0110020/APP/5.9]**, specific measures to protect biodiversity from noise and vibration is advised within **ES Volume 2, Chapter 14: Noise and Vibration [EN0110020/APP/6.14.1]**.
- 6.7.85 With embedded mitigation measures in place, and as referenced in Section 6.6, outlined in the **oCEMP [EN0110020/APP/5.9]**, the effects of construction on badger would be Negative, short-term, of Low magnitude, local and **Not Significant** at the construction phase of the Proposed Development.

White Clawed Crayfish

- 6.7.86 A single desk study record of WCC approximately 2.5km from Site and within hydrologically connected habitat was identified. There are records of the invasive signal crayfish in the Study Area and they have been observed within the Site.
- 6.7.87 eDNA surveys on watercourses with hydrological connectivity to the known record of WCC on Watercourse W14 and W15 have been completed and confirmed the positive status of WCC in these watercourses.
- 6.7.88 The mitigation measures described in Section 6.6 are designed to protect freshwater habitats and the species they support and are expected to reduce the potential for LSEs on white clawed crayfish at the construction phase.
- 6.7.89 Surveys of Broad Bridge Dike (W15) will be required to map the presence/absence of WCC refuges (void spaces under substrate stones, and burrows in the watercourse banks), with the collected information used to inform micro siting a new watercourse access track crossing to avoid these features, should they be present.
- 6.7.90 With the protection measures detailed in Section 6.6 in place and as further detailed in the **oCEMP [EN0110020/APP/5.9]**, it is expected that there will be a Negative, short-term, low magnitude, local and **Not Significant** effect at the construction phase of the Proposed Development.

Migratory Fish

- 6.7.91 A multi-species fisheries eDNA assessment of watercourses for migratory fish and other species of interest that included but were not limited to (barbel *Barbus barbus*; brown trout *Salmo trutta*; bullhead *Cottus gobio*; and European eel *Anguilla anguilla*) undertaken on suitable watercourses at specific locations where there are potential effects to confirm their status.
- 6.7.92 Results from these surveys predominantly found that where fish species were identified during the eDNA survey, migratory fish were absent other than being recorded in two locations (SL4 and SL30). In these locations trenchless crossing is proposed to avoid obstructing the watercourse or streambed for migratory fish.
- 6.7.93 Whilst bullhead species is present in a range of watercourses, it is a non-migratory species and typically associated with dedicated locations on the bed of watercourses. Bullhead were recorded in two locations (SL16 and SL23) where trenchless crossing and a bridge crossing are proposed, which would with embedded mitigation in place, not interfere with their places of shelter in the watercourse. Where coarse fish have been recorded (SL16, SL23, and SL30) either a bridge crossing or trenchless crossings have been proposed.
- 6.7.94 On the Cable Corridor, where fish eDNA surveys are continuing from April 2026, a precautionary approach to fisheries is proposed where they will be avoided through trenchless crossing. This approach would be subject to review following survey results.
- 6.7.95 Whilst no eDNA results came back as positive for eels, with inconclusive results in Kearsley Brook/The Brook (SL2), Pinchmill Brook (SL12), and Anston Brook (SL21), it is assumed that this species is present at these locations, and there will not be any obstructions at watercourse crossings in those locations to comply with the Eels (England and Wales) Regulations 2009.

- 6.7.96 The mitigation measures described in Section 6.6 and detailed in the **oCEMP [EN0110020/APP/5.9]** are designed to protect freshwater habitats and the species they support, which will be sufficient to address disturbance or harm effects to fish during construction, such that effects are of short term duration, of Negligible magnitude, Local and **Not Significant**.

Priority Species - Brown Hare

- 6.7.97 Brown hare is a priority species that has been found throughout the Site, and through contiguous habitats is assumed to be present in the Cable Corridors. This species has the potential to be impacted in their range by temporary fencing constructed to facilitate secure areas for works. This could include safety and security fencing alongside trenchless crossing drilling machinery and cable laying machinery along the Cable Corridor.
- 6.7.98 Effects from disturbance and barriers through the installation of temporary fencing are unlikely to impact hares within the Site, with fencing primarily located to infrastructure build areas, conservation protection areas, and around compounds and lay down areas. These are in dispersed locations across the Proposed Development, which allows the free range of brown hare across the wider Site.
- 6.7.99 Working practice and fencing associated with the Cable Corridor should allow for free movement of brown hare and other animals. Specific advice can be provided by an ECoW to achieve this, with the ECoW role detailed further within the **oCEMP [EN0110020/APP/5.9]** and summarised within Section 6.6.
- 6.7.100 The construction of any ditches, foundations, or trenching has the potential to entrap brown hare and other mammals. Measures to mitigate for entrapment are included within the **oCEMP [EN0110020/APP/5.9]** and are referenced within Section 6.6.
- 6.7.101 With the measures referenced in Section 6.6 in place and detailed with the **oCEMP [EN0110020/APP/5.9]**, disturbance or harm effects to brown hare are short term, of Negligible magnitude and **Not Significant** and no further mitigation is required.

Birds

- 6.7.102 The measures outlined in the **oCEMP [EN0110020/APP/5.9]** to safeguard breeding birds would ensure that there is no impact on breeding IEFs due to damage to / loss of nests or eggs during either the construction or operation phase of the development. It would also ensure that construction does not cause disturbance to any Schedule 1-listed species. As such, on the assumption the **oCEMP [EN0110020/APP/5.9]** would be implemented in full, the potential effects from for direct harm (i.e. loss or damage of nests) to nesting birds is **Not Significant**, and is not considered further in this assessment, unless species-specific measures may be relevant.
- 6.7.103 Habitat loss and disturbance during construction have the potential to impact IEFs both directly and indirectly.
- 6.7.104 Breeding lapwing. Works associated with construction have the potential to cause disturbance to breeding lapwing. However, if a nest is found during pre-construction checks during the breeding season, a suitable buffer would be put in place and therefore any impact would be reduced and **Not Significant**. Such measures are detailed in the **oCEMP [EN0110020/APP/5.9]**.

- 6.7.105 Habitat lost during construction is likely to displace breeding lapwing. Due to the staggered nature of construction, on an individual field basis (and therefore number of lapwing affected at any one time) this would be short-term, of Low magnitude and **Not Significant**, but the presence of panels is likely to result in a long-term effect that is assessed further in paragraph 6.7.153.
- 6.7.106 Breeding skylark: If a nest is found during pre-construction checks during the breeding season, a suitable buffer would be put in place to protect it from damage as per the **oCEMP [EN0110020/APP/5.9]**. Skylark nests / young can be difficult to find due to the species' ecology, and recommended embedded mitigation is used to minimise the opportunity for harm to nest, eggs or young. If construction is planned in the breeding season, it is recommended that skylark breeding habitat, including arable crops and grassland, is cut or cleared prior to the breeding season and maintained at a height of no more than 15cm to prevent birds from returning to nest. If the field is cropland, then it can be harvested as per standard agricultural practice and then maintained in a condition that is unfavourable for nesting skylark. This would reduce the potential risk of loss or harm of active nests, which would be an offence under the Wildlife and Countryside Act 1981. This would also reduce the risk of potential delays to the construction programme, if skylark were to nest within areas with planned works. Skylark are expected to be more tolerant of disturbance than lapwing, but if a nest is found during pre-construction checks during the breeding season, a suitable buffer would be put in place and therefore any impact would be reduced and **Not Significant**. Such measures are detailed in the **oCEMP [EN0110020/APP/5.9]**.
- 6.7.107 Habitat lost during construction is likely to displace skylark territories. Due to the staggered nature of construction, on an individual field basis (and therefore number of skylark territories affected at any one time) this would be short-term, of Low magnitude and **Not Significant**, but the presence of panels is likely to result in a long-term effect that is assessed further in paragraph 6.7.105.
- 6.7.108 Barn owl: Due to the embedded mitigation measures outlined in the **oCEMP [EN0110020/APP/5.9]**, there would be a short-term, Negligible magnitude and **Not Significant** impact on breeding barn owl due to disturbance. Pre-construction checks of suitable nesting features would be carried out and, if a nest is located, a suitable buffer would be put in place depending on the situation, planned works and likely habituation to disturbance, in accordance with Shawyer (2011)⁷⁷. The buffer may change in response to stage of breeding and bird behaviour but would be in place until the nesting attempt reaches a natural conclusion. The impact on habitat loss would be short-term, of Negligible magnitude and **Not Significant**.
- 6.7.109 Hobby: are a summer migrant that nest in trees, typically using old nests built by other species such as carrion crow (*Corvus corone*) and magpie (*Pica pica*). Prior to any works habitat suitability would be reviewed and pre-construction checks completed to identify territory occupancy. If a territory is identified further surveys would be completed to identify a nest site and a suitable buffer would be put in place to avoid or reduce disturbance. Such measures are included in the **oCEMP [EN0110020/APP/5.9]**. Prevailing guidance recommends a minimum buffer zone of 200-450 m⁷⁸. A watching brief may be required. The buffer may change in response to stage of breeding and bird behaviour but would be in place until the nesting attempt reaches a natural conclusion. The impact from disturbance would be short-term, of Negligible magnitude and **Not Significant**. As an aerial hunter, changing habitats within Order Limits are not expected to impact hobby; however, any longer-term changes and enhancements that increase abundance of prey species (such as invertebrates and small birds) may be beneficial.

Operation and Maintenance

- 6.7.110 IEFs are scoped out of further assessment within the Cable Corridor, with only IEFs considered within the Site. This is based on the assumption that LSEs are restricted to a short duration during the construction phase and would not be impacted by maintenance activity in the operation phase for the Cable Corridor.
- 6.7.111 New habitats would be created within the Site, and existing habitats would be enhanced for biodiversity and secured through **oLEMP [EN0110020/APP/5.13]** and managed and maintained for at least 30 years. The operational and maintenance phase of the development is up to 60 years. This net gain in biodiversity condition and area provides long term temporal benefits to the habitats within the Order Limits.
- 6.7.112 During the operation and maintenance phase of the Proposed Development, habitat enhancement and creation would mature, and soils would recover as a result of the reduction or cessation of fertiliser and insecticide inputs. It is expected that biodiversity at all levels of the ecosystem would benefit, with the abundance and richness of flora and fauna expanding over time. This would provide a Beneficial, long term, and of a Low to Medium magnitude which would be **Significant** for a range of species, habitats, and designations within the Proposed Development and within the respective Aols.
- 6.7.113 Where additional effects other than the above have been identified, these have been presented for each relevant IEF in the following sections to identify whether these are likely to be significant or not.

Designated Sites

- 6.7.114 The design layout of the masterplan in **ES Volume 3, Figure 5.1: Illustrative Masterplan [EN0110020/APP/6.19]** shows that the indicative location options for siting the BESS are not hydrologically linked to designated sites, so there is no pathway for fire control products that would be used in an emergency to control BESS fires to be able to cause an impact on hydrologically linked designated sites during operation and maintenance.
- 6.7.115 However, general measures to address the potential for aquatic pollution are included in the **Outline Operational Environmental Management Plan (oOEMP) [EN0110020/APP/5.19]**, with containment measures identified within an **outline Battery Safety Management Plan (oBSMP) [EN0110020/APP/5.15]**. Implementation of these management plans would remove this pathway for potential significant effects.

Brampton Common LWS

- 6.7.116 Operation and Maintenance effects on Brampton Common LWS may include dust on habitats and potential introduction of INNS although the risk of such effect is considered very low due to minimal activities during operation. Mitigation measures set out in the **oOEMP [EN0110020/APP/5.10]** will minimise pollution effects so that they are **Not Significant**.
- 6.7.117 It is recognised that skylark territories would be temporarily displaced from the LWS at construction, but that it is assumed that this can be offset with offsite compensation areas, and sensitive management of land as part of the enhancement proposals within the LWS and the population maintained in the medium to long-term during operation. Further information can be found in the **oLEMP [EN0110020/APP/5.13]**.

- 6.7.118 Hedgerow loss during construction would be compensated for by improving the quality of existing hedgerows within the LWS (e.g. gapping up or addition of trees, use of optimum management practices) or the planting of new connecting hedgerows with the Site.
- 6.7.119 Consultation with RMBC and other stakeholders has commenced to seek an agreement on mitigation and enhancement proposals for the LWS, and a strategy will be developed with the aim of achieving long-term biodiversity benefits for the Site.
- 6.7.120 The Framework for Rotherham's Local Wildlife Sites⁷⁹ sets out a list of the roles of LWS in the region. This has been used as a framework for assessing the potential effects of the Proposed Development on Brampton Common LWS, by reviewing the current status of the LWS against the stated roles, and how these may change as a result of the Proposed Development. This review is presented in **Table 6-12**.

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Table 6-12: Review of Brampton Common LWS in relation to the stated “Role of Local Wildlife Sites in Rotherham”

Stated Role	Current Status	Proposed Improvement
1 - Local Wildlife Sites provide wildlife refuges for most of the UK's fauna and flora and through their connecting and buffering qualities, they complement other site networks	LWS does not abut any other designations and is isolated from the wider landscape to the west by major road infrastructure such as the M1 and M18. Hedgerows provide some connectivity within the landscape but other habitats are isolated	Improve habitat connectivity in the landscape through habitat enhancement both within, and outside the LWS. Several “mitigation” fields lie adjacent to and around the LWS and can be used to increase available habitat and strengthen wider habitat connectivity. Plant new hedgerow networks within the LWS where hedgerows may have been present historically and promote hedgerow planting beyond the LWS's limits. Strengthen habitat connectivity features through the addition of tree planting within hedgerows and thicken hedgerows through additional hedgerow species planting.
2 - Local Wildlife Sites have a significant role to play in meeting overall national biodiversity targets and achieving the objectives of local and countywide conservation strategies, Biodiversity Action Plans and environmental sustainability	Habitats within the LWS have not been managed to benefit the features it was designated for and biodiversity value is low. Some management appears to harm designated features (e.g. mowing in relation to skylark breeding attempts), and designated features only present in low (below average) populations in the context of the wider Order Limits.	Improve and manage habitats for at least 30 years including improvements for designated features within, and adjacent to the LWS. Manage hedgerows sensitively for wildlife through reducing the extent of hedgerow cutting on a 3 yearly rotational basis to ensure hedgerows have sections that are at least 2m in height (or 3m with trees). This provides: • Increased fruit and nut cropping within hedgerows to benefit wildlife (e.g. birds) • Allows hedgerows to thicken and increase cover from predators for small bird species, passerines, and mammals • Increased cover for shelter over winter for wildlife (e.g. birds, hedgehogs, badgers) • Improved nesting opportunities; and • Strengthened landscape features used by commuting or foraging wildlife and connectivity to the wider landscape.

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Stated Role	Current Status	Proposed Improvement
		Improve the quality of hedgerows within the designation that do not meet the criteria of native species rich hedgerows (H1) for which the site is designated by ensuring the following: • Ensure hedgerow lengths are planted up and extended to 50m or more • The hedgerows are planted with at least 10 or more species of native trees/and or shrubs • Planting up of hedgerows in the footprint of some pre-enclosure act hedgerow locations, where hedgerows are currently now absent. Any works involving cutting of hedgerows to take place outside of the breeding bird season in line with The Management of Hedgerows (England) Regulations 2024. Manage grassland habitats sensitively for breeding Skylark.
3 - Local Wildlife Sites contribute to and represent local character and distinctiveness	Habitats and interests have changed significantly over last 20 years and are not considered be particularly important to local character.	Ensure that an agreed site specific LWS Management Plan (to be appended to the final LEMP, as required in Schedule 2 of the Draft DCO) is produced and conservation practices enacted to meet the plan's objectives in reinstating a favourable condition to the hedgerow and grassland habitats present and enable the support of breeding skylark populations. This action will help provide visual character and distinctiveness at the local level for the LWS beyond that currently present.
4 - Local Wildlife Sites contribute to the quality of life and the well-being of the community, with many sites providing opportunities for research and education,	Access to LWS is limited to two footpaths.	Assess potential for community benefits by increasing access for the local population, particularly for school age

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Stated Role	Current Status	Proposed Improvement
as well as affording local people the opportunity of contact with nature		children and vulnerable adults, to include upgraded and maintained access points and defined footpath routes. Focal point areas where there are enhanced habitats for outdoor learning and provision of seating and benches should be explored.
5 - Designation enables the prioritisation of advice, practical assistance and financial support for landowners and managers. Local Wildlife Site notification provides landowners/managers with information on the wildlife value of their land to assist them in making choices on management. In prioritising allocation of grants, such as payments through the Environmental Stewardship Higher Level Scheme, agencies will be able to target grants towards Local Wildlife Sites. Other bodies will be able to channel resources to provide advice and practical assistance with management. Practical links may be made with Community Strategies, such as local group help with conservation management of appropriate sites	It is understood that LPA does not offer this advice unless requested and there is no financial support available.	Working alongside landowners to improve habitats, the planting, design and access of space for community use could be led through local community involvement, with the support of conservation charities.
6 - Ecological survey undertaken to identify potential Local Wildlife Sites and to monitor existing Local Wildlife Sites contributes towards the local authority's Local Plan requirements under section 5 of the Town and Country Planning	It is understood that no surveys or monitoring have been undertaken at the site.	Data collected during baseline surveys will be made available to the LPA and local records centre. The surveys provide an opportunity to help focus improvements that will benefit the features for which the LWS is designated. Operational monitoring will be conducted to better understand habitat improvements and biodiversity within

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Stated Role	Current Status	Proposed Improvement
Regulations 2004 ⁷ and Key Principle 1 of PPS98 which requires local authority plans to be based on adequate and up to date information about 6 Hossell, J.E., Briggs, B. and Hepburn, I. R.2000. Climate Change and UK Conservation: A review of the impact of climate change on UK species and habitat conservation policy. DETR 7 The Town and Country Planning (Local Development) (England) Regulations 2004. HMSO. 8 OPDM 2005. Planning Policy Statement 9: Biological and Geological Conservation. 7 the local resources	Status and importance of LWS is not based on up-to-date information.	the site, with data shared with local record centres to build a temporal dataset that can be used to identify and understand biodiversity trends.
7 - The process of site evaluation, in preparation for Local Wildlife Site designation, can help to identify gaps in knowledge about the conservation resource of an area or site that can in turn inform further survey, research or monitoring	Details of original evaluation are not available; however, it is believed to have been based on current selection criteria and guidelines or earlier iterations ⁷⁹	The surveys to-date and proposed site specific LWS management plan (to be appended to the LEMP, as required in Schedule 2 of the Draft DCO) and monitoring offer an opportunity to identify current status and provide a mechanism for enhancement of the LWS to better meet the stated aims.

- 6.7.121 The proposed improvements for Brampton Common LWS listed within **Table 6-12** are being consulted on with the LPA and LWS partners on a management approach that will support the features for which the site was designated and in line with emerging aims of the LNRS. Where there are points of agreement a memorandum of understanding (MoU) will be produced. Whilst this is the preferred approach to ensure the longer-term viability of the LWS, in the absence of agreement, a LWS Management Plan drawing on the proposed improvements detailed in **Table 6-12** and appended to the **oLEMP [EN0110020/APP/5.13]** will be put into place for the duration of the Proposed Development and secured through the DCO.
- 6.7.122 Once the LWS habitat enhancements are established and the habitats are functional as species-rich hedgerows and grasslands suitable for breeding skylark, there will be a medium magnitude, local **Significant Beneficial** effect on the LWS in the medium to long-term, secured through the management and monitoring plan for the Proposed Development and the BNG commitments.

Axle Lane LWS

- 6.7.123 Hedgerow loss during construction would be compensated for by improving the quality of existing hedgerows within the LWS (e.g. gapping up or addition of trees, use of optimum management practices) or the planting of new connecting hedgerows with the Site. Further information on hedgerow creation can be found in the **oLEMP [EN0110020/APP/5.13]**.
- 6.7.124 Once the LWS habitat enhancements are established and the habitats are functional as species-rich hedgerows, there will be a low magnitude, local, and **Neutral** effect on the LWS in the medium to long-term.

Whiston Meadows LWS

- 6.7.125 Permanent hedgerow loss (if any) incurred as a result of the Proposed Development during construction of the visibility splays would be compensated for by the planting of new connecting hedgerows within the Site. Further information on hedgerow creation can be found in the **oLEMP [EN0110020/APP/5.13]**.
- 6.7.126 Once the LWS habitat enhancements are established and the habitats are functional as species-rich hedgerows, there will be a Neutral, low magnitude, local, and **Not Significant** effect on the LWS in the medium to long-term.

Priority Habitats

Native and Important Hedgerows

- 6.7.127 Compensation planting and the creation of a network of new connected and enhanced hedgerows to achieve at least a 10% biodiversity gain for linear features throughout the Order Limits, will provide a Beneficial effect that is long term, of Medium Magnitude, and **Significant**.

Wet Woodland

- 6.7.128 Wet woodland along Anston Brook will be enhanced to compensate for construction effects, with measure described in the **oLEMP [EN0110020/APP/5.13]** for example additional planting of appropriate woodland species, management of INNS. Once the enhancements are established and

monitored, there will be a Beneficial, medium magnitude, local **Significant** effect on this habitat in the medium to long-term, secured through the LEMP.

Species

Bats

- 6.7.129 Bats are crepuscular and nocturnal species that require dark areas to forage within and dark corridors to commute along. Lighting for security of the proposed BESS, substation infrastructure and to perimeter fencing has the potential to illuminate adjacent roost features and disturb roosts, and their commuting and foraging habitats.
- 6.7.130 Lighting controls proposed in Section 6.6 will also be applicable to bats and will follow best practice as specified by the Bat Conservation Trust (BCT).³⁷
- 6.7.131 The avoidance of perimeter fence lighting and controls to security lighting within the proposed BESS and Substation locations as specified within the **Outline Design Parameters [EN0110020/APP/7.3]** would have a Very Low Adverse effect, that is long term, and **Not Significant** to bats.
- 6.7.132 Creation of new grassland, hedgerow and woodland habitats, and enhancement proposals to existing hedgerow habitats are proposed in the **oLEMP [EN0110020/APP/5.13]**. The maturing of newly created or enhanced connecting habitats during the operation and maintenance phase such as created and enhanced hedgerows, and small woodland blocks would lead to strengthening of foraging and commuting habitat for bats, and as trees mature, there is the potential that in time they would exhibit potential roost features (e.g. splits and holes) that would benefit roosting bats. As referenced in Section 6.7 and detailed in the **oLEMP [EN0110020/APP/5.13]**, the addition of 75 bat boxes on some retained trees with negligible bat roost potential within the Site will provide roosting opportunities for bats beyond that currently available.
- 6.7.133 These effects of habitat creation would be Beneficial, long term, on a district scale, moderate magnitude of scale, at the district level and likely **Significant**.

Reptiles

- 6.7.134 The maturing of connecting habitats during the operation and maintenance period such as grassland, created and enhanced hedgerows, and small woodland blocks would lead to strengthening of foraging and sheltering habitat for reptiles, with opportunities for the creation of microclimates within the habitats that provide a range of temperature conditions for basking reptiles.
- 6.7.135 The creation of brash or log piles from arisings are proposed, which will provide sheltering opportunities for reptiles and other species across the Site. Information on habitat creation and enhancement for reptiles is included within the **oLEMP [EN0110020/APP/5.13]**.
- 6.7.136 These effects of habitat creation and enhancement would be moderately Beneficial, long term, on a local scale, and likely **Significant**. Information on habitat creation and features to provide biodiversity benefits for reptiles are included in the **oLEMP [EN0110020/APP/5.13]**.

Badger

- 6.7.137 Badger requires large areas to forage within, socialise, and to commute between setts, which given the extensive areas of perimeter fencing have the potential to restrict badgers current range from that presently available to them.
- 6.7.138 Badgers are predominantly a nocturnal species and have the potential to be disturbed by any light spill from perimeter security lighting mounted on the fencing, however, this will be substituted with an infra-red security system as referenced in the **Outline Design Parameters [EN0110020/APP/7.3]**. Additional security lighting would be installed within the perimeter of BESS and substation areas, but as specified in the **Outline Design Parameters [EN0110020/APP/7.3]**, lighting in these locations will be fitted in such a way to avoid light spill within the surrounding environment.
- 6.7.139 The maturing of connecting habitats during the operation period such as grassland, created and enhanced hedgerows, and small woodland blocks would replace arable habitat and thus provide a Beneficial, long-term, Low magnitude effect for commuting, foraging and sheltering badger outside of the solar PV array perimeter fencing. The effects of habitat creation would be moderately Beneficial, long term, on a local scale, and **Significant**.
- 6.7.140 The provision of mammal gates referenced in Section 6.6 within the perimeter fencing and detailed within the **oLEMP [EN0110020/APP/5.13]** reduces the Adverse effects of fragmentation of habitats caused by the barrier of perimeter fencing to a Neutral effect, that is long term, and **Not Significant** to badger.
- 6.7.141 The avoidance of perimeter fence lighting and controls to security lighting within the proposed BESS and Substation locations referenced in Section 6.6 and the **Outline Design Parameters [EN0110020/APP/7.3]** means disturbance would be of negligible magnitude, have a Very Low Adverse effect, that is long term, and **Not Significant** to badger.

Otter

- 6.7.142 Otters are predominantly a nocturnal species and have the potential to be disturbed by artificial lighting. However, the Proposed Development will not use lighting on the perimeter fencing with security provided by means of infra-red cameras as referenced in the **Outline Design Parameters [EN0110020/APP/7.3]**. Lighting would be installed within the perimeter of BESS and substation areas, but as specified in the **Outline Design Parameters [EN0110020/APP/7.3]**, lighting in these locations will be manually operated or activated through PIR motion sensors, and will be fitted in such a way to avoid light spill within the surrounding environment.
- 6.7.143 The avoidance of perimeter fence lighting and controls to security lighting within the proposed BESS and Substation locations referenced in Section 6.6 and the **Outline Design Parameters [EN0110020/APP/7.3]** means disturbance would have a Very Low Adverse effect, that is long term, and **Not Significant** to otter.
- 6.7.144 The provision of mammal gates referenced in Section 6.6 within the perimeter fencing and detailed within the **oLEMP [EN0110020/APP/5.13]** reduces the Adverse effects of fragmentation of habitats caused by the barrier of perimeter fencing to a Neutral effect, that is long term, local and **Not Significant** to otter.
- 6.7.145 With the cessation of arable farming throughout the Site, there will be a reduction in pesticide and fertiliser input to the land and potential for run off non-target

discharges to watercourses. Where there is a reduction in pollutant inputs to watercourses, water quality would expect to recover and fisheries would expect to improve in watercourses across the Site, with an expected wider geographical availability of foraging opportunities for otters. The reduction in agricultural inputs is expected to provide a Beneficial, long term, of medium magnitude, and **Significant** effect at the local level to foraging otter across the whole Site.

- 6.7.146 Encroachment of the riparian zone is reduced with increased field margins and cessation of arable farming activities, which ensures habitat creation within the riparian zone and adjacent wildflower planting beyond the fence perimeter provide an additional habitat buffer from disturbance and provides additional foraging and commuting routes for otter. Extensive grassland corridors between valuable habitats are proposed for creation throughout the Proposed Development that would replace arable habitat and thus provide a Beneficial, long-term, medium magnitude and local **Significant** effect to otter across the whole Site.

Priority Species – Brown Hare

- 6.7.147 Brown hare require large open areas available in their range and grassland areas for their 'forms'.
- 6.7.148 Extensive grassland habitat blocks and corridors between valuable habitats are proposed for creation throughout the Proposed Development that would replace arable habitat and thus provide a Beneficial, long-term, medium magnitude and local **Significant** effect to brown hare across the whole Site.
- 6.7.149 Perimeter fencing would be installed throughout the Order Limits, around the solar PV array and around supporting infrastructure. It would be constructed of wire mesh and wooden posts and would be designed to be stock proof, with a minimum height of 2m.
- 6.7.150 The provision of mammal gates within the perimeter fencing referenced in Section 6.6, and the **oLEMP [EN0110020/APP/5.13]**, ensures connectivity of habitats across the Site resulting in a Neutral effect, that is long term, and **Not Significant**.

Birds

Breeding Bird Assemblage

- 6.7.151 Habitat change as a result of the Proposed Development would include the cessation of intensive farming and the creation of new habitats. These would include those targeted toward specific features (as below) as well as creation of diverse grassland, hedgerow enhancement, and tree planting. Changing the current agricultural use would benefit birds both directly, and indirectly through improvements in plant and invertebrate communities, through the reduction or cessation of fertiliser/insecticide use and increase in habitat heterogeneity. Overall, well-managed habitats in solar developments have been shown to be beneficial and increase both the abundance and richness of breeding bird assemblage^{80,81,82}.
- 6.7.152 Furthermore, as per the **oLEMP [EN0110020/APP/5.13]**, there is a commitment to create and manage agricultural field margins with a seed mix that provides enhanced foraging opportunities to increase winter survival and ultimately benefit the breeding populations. These features will also provide foraging and nesting resource in the breeding season. As well as habitat enhancements, installation of nest boxes are proposed for cavity-nesting species of conservation importance:

kestrel, tawny owl, and starling. As such, long term habitat change during operation phase would have a Beneficial effect of Low to Medium magnitude, which would be **Significant Beneficial** for many species. Many species within the wintering bird assemblage, although not assessed specifically (as per **Table 6-11**), are also likely to benefit from the measures which would improve foraging resources in the winter.

Breeding Lapwing

- 6.7.153 The relationship between lapwing and solar is not well studied but, due to their preference for open habitats and avoidance of features that offer perching places for avian predators (e.g. crows, that predate nests), it is assumed that they would not nest in fields that are predominantly solar. Up to 31 pairs were identified during the BBS, of which 20 were within the solar PV array. Based on these results, up to 20 pairs may be displaced during construction and would not recolonise the fields with solar during the operation phase, which would result in long-term displacement effect which may be **Significant** at a local scale.
- 6.7.154 To reduce these effects, compensatory habitat would be created close to fields that would be lost. Crop rotation means the suitability of individual fields varies between years, and therefore there is expected to be interannual fluctuations in breeding lapwing distribution in the area, but currently many breeding pairs are roughly grouped into several sub-populations. As per the **oLEMP [EN0110020/APP/5.13]**, habitat creation to provide lapwing nesting habitat includes recreation of historic wetland grassland habitat in the south of Brampton Common LWS, and provision of two lapwing plots in arable fields adjacent to the Site. With creation of the compensation proposed, long-term displacement of lapwing would be reduced and therefore of Very Low magnitude and **Not Significant**.

Breeding Skylark

- 6.7.155 Evidence for skylark use of solar sites is mixed. A study by Montag *et al.* (2016)⁸³ suggests that whilst skylark do not nest underneath the solar PV arrays, they can nest in solar farms and also utilise them for foraging when breeding nearby. A 2025 study found that skylark were present on transects in arable farmland and mixed habitat solar farms (containing more complex habitat as a result of infrequent cutting or grazing of the grass around the solar PV modules), but not in simple habitat solar farms (intensively managed, with the grass around solar PV modules cut or grazed). Behavioural observations in reports produced by Clarkson & Woods in 2019⁸⁴ and 2020⁸⁵ show skylark to be holding territory within solar developments; however, there is no robust, published evidence that they do nest within solar farms between panels.
- 6.7.156 Up to 205 territories were identified during the BBS (including an estimate of territories in fields with limited access), of which at least 119 were within the solar PV array. As a precaution it is assumed that most or all skylark nesting within the proposed solar PV array would be displaced during construction and would not recolonise fields with solar during the operation and maintenance phase, which would result in long-term displacement effect which may be **Significant** at a local scale. This assumption and consequent mitigation measures are subject to revision as more evidence on the propensity of skylarks to nest within solar sites emerges through surveys of this Site or studies of other solar farms.

6.7.157 As solar sites can offer good foraging resource for skylark it is likely that territories adjacent to or partially overlapping with the Site (especially in suboptimal habitats, such as winter-sown arable) may benefit through improved foraging and breeding productivity which may partially offset some adverse impacts. To further reduce the effects of any long-term displacement of birds, compensatory species-rich grassland habitat will be created in fields not intended for solar. Furthermore, as per the **oLEMP [EN0110020/APP/5.13]**, 100 skylark plots will be created off site, in arable fields close to the Site, further reducing the potential losses to the local population. As a result, habitat enhancements reduce long-term displacement of skylark which would be significantly reduced and be of Low magnitude, Local and **Not Significant**.

Barn Owl

6.7.158 The **oCEMP [EN0110020/APP/5.19]** includes measures to safeguard nesting barn owl during any routine or necessary maintenance throughout the operation phase.

6.7.159 Solar farms have the potential to benefit barn owls as the array of ground-mounted panels are typically at the height from which they perch-hunt⁸⁶. Providing that the solar farm is managed to allow grassland to establish between and beneath the panels, this species would not be adversely impacted through loss of foraging habitat during operation and should benefit from the habitats created. Ideally the grass around some of the arrays should be allowed to develop into rough tussocky grassland. As a further enhancement, a minimum of five barn owl boxes would be installed and maintained according to best practice guidance⁸⁷ to increase the availability of nesting locations and help to increase the local barn owl population. With these enhancements, long-term beneficial effects on barn owl would be of Medium magnitude and **Significant Beneficial**.

Hobby

6.7.160 As an aerial hunter, this species is not reliant on the terrestrial habitats present within the Site to breed or forage. It is therefore highly unlikely to be directly impacted by habitat loss, displacement due to infrastructure or disturbance during operation. Habitat enhancements around solar farms can result in an increase in invertebrates which may in-turn result in an increase in prey items for hobby to feed on offering a long-term benefit, but this is likely to be of Low magnitude and likely **Not Significant**.

Decommissioning

6.7.161 The decommissioning phase of the Proposed Development is assumed to require similar embedded mitigation measures to the Construction phase, given much of the decommissioning would involve the removal of the Proposed Development infrastructure. Mitigation measures would be subject to a Decommissioning Environmental Management Plan (DEMP) to be produced at the time and activities would be managed in line with best practices and are not expected to result in any adverse environmental impacts. An **Outline Decommissioning Environmental Management Plan [EN0110020/APP/5.11]** is submitted with the Application.

6.7.162 On this basis it is expected that effects from decommissioning activities would not be greater than those identified at construction, with remaining impacts of decommissioning on designated sites, habitats, flora and fauna anticipated to be short term, and to be broadly similar to those of construction.

- 6.7.163 The level of impact will depend on the species, habitats, and designations present at the time of decommissioning, and their prevailing conservation status and legal protections. This cannot be reliably predicted at this stage, so potential effects to IEFs during decommissioning are not assessed.
- 6.7.164 It is recommended that surveys are completed to update the baseline condition, and that results are reviewed and that prevailing good practice measures are adhered to, such that it is possible to maintain any potential effects to a level that is of low magnitude and **Not Significant**.
- 6.7.165 The management and monitoring of habitats are expected to be in force for a minimum of 30 years in compliance with the statutory net gain requirements of the Environment Act 2021; however, this may extend through from the operation and maintenance phase to the decommissioning phase of the Proposed Development dependent on the prevailing legislation at that time. It is not possible to assess habitats created beyond decommissioning as land would be returned to the respective landowners.

6.8 Additional Mitigation and Residual Effects

Additional Mitigation

- 6.8.1 The only IEFs with significant adverse effects are Brampton Common LWS, native hedgerows and wet woodland at construction. The embedded mitigation measures delivered through the **oCEMP [EN011020/APP/5.9]** will minimise the effects at construction as far as practicable. Mitigation/compensation measures described in the **oLEMP [EN0110020/APP/5.13]** (see Operation and Maintenance), will ultimately provide a long-term beneficial effect on these IEFs as per Sections 6.7.122, 6.7.127 and 6.7.128.

Residual Effects

- 6.8.2 A summary of the potential effects is presented in **Table 6-13**.
- 6.8.3 In addition to residual effects identified, species licensing may be required for legal compliance in relation to some protected species features, such as bats and otter. Based on the information available, licensing requirements (if any) are expected to be minimal as avoidance, micro-sitting and mitigation will prevent potential disturbance and/or other legislative breaches. Pre-construction surveys for mobile species will be required to confirm this, as it is possible the presence and distribution will change between submission and construction.

Table 6-13: Summary of Impact Assessment

Receptor	Mitigation Measures	Description of the Effect	Direct / Indirect	Duration	Geographical Scale	Nature of the Effect	Significant / Not Significant	Securing Mechanism
Construction								
Designated Sites – Crabtree Woods SSSI, Anston Stones Wood SSSI, Lindrick Golf Course SSSI, Roches Abbey Woodlands SSSI, and Sprotborough Gorge SSSI	oCEMP	Hydrologically linked aquatic pollution on designation feature	Indirect	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Designated Sites – Crabtree Woods SSSI, Edlington Wood SSSI, Anston Stones Wood SSSI, Lindrick Golf Course SSSI, Roches Abbey Woodlands SSSI, and Sprotborough Gorge SSSI	oCEMP	Air pollution from transport on designations	Indirect	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Designated Sites - SSSIs	oCEMP	Air pollution spreading from Site to designations	Indirect	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Designated Sites – Firsby Reservoir LNR	oCEMP	Lighting, Noise, Dust and Pollution to aquatic habitats within designation	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Designated Sites – Brampton Common LWS	oCEMP, Design Principles	Habitat Loss to LWS	Direct	Short Term	Local	Low	Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Designated Sites – Axle Lane LWS	oCEMP	Habitat Loss to LWS and IEF effects	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Designated Sites – Whiston Meadows LWS	oCEMP	Habitat Loss to the LWS	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Designated Sites - Chesterfield Canal LWS	oCEMP	Hydrologically linked aquatic pollution on designation feature	Direct	Short Term	Local	Negligible	Not significant	oCEMP [EN0110020/APP/5.9]
Designated Sites – Terrestrial Pollution on LNRs and LWSs (Firsby Reservoir LNR, Anston Stone Wood LNR, Harthill Reservoir Candidate LWS, Killamarsh Pond LWS, Pebley Reservoir LWS, Pebley Oaks Lane Proposed LWS, LWS036, LWS043, LWS029, LWS005, LWS081, LWS004, LWS016, LWS027, LWS009, LWS030, LWS098, LWS104, and LWS042)	oCEMP	Lighting, Noise, Dust and Pollution to aquatic habitats within designation	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]

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Receptor	Mitigation Measures	Description of the Effect	Direct / Indirect	Duration	Geographical Scale	Nature of the Effect	Significant / Not Significant	Securing Mechanism
Designated Sites – Aquatic Pollution on LNRs and LWSs (Firsby Reservoir LNR, Anston Stone Wood LNR, Harthill Reservoir Candidate LWS, Killamarsh Pond LWS, Pebley Reservoir LWS, Wickersley Wood LWS, LWS036, LWS043, LWS029, LWS005, LWS081, LWS004, LWS016)	oCEMP	Hydrologically linked aquatic pollution on designation feature	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Ancient Woodland	oCEMP, Design Principles	Disturbance of habitats	Direct/Indirect	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Ancient Woodland	oCEMP, Design Principles	Harm to habitats	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Veteran Trees	oCEMP, Design Principles	Harm	Direct	Short Term	Local	Very Low	Not Significant	oCEMP [EN0110020/APP/5.9]
Priority Habitats – Native Hedgerows	oCEMP, oLEMP	Habitat Loss	Direct	Medium Term	Local	Low	Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Priority Habitats – Important Hedgerows	oCEMP, oLEMP	Habitat Loss	Direct	Medium Term	Local	Low	Significant	oCEMP [EN0110020/APP/5.19] and oLEMP [EN0110020/APP/5.13]
Priority Habitats – Wet Woodland	oCEMP	Disturbance and harm to habitats	Direct	Medium Term	Local	Low	Significant	oCEMP [EN0110020/APP/5.9]
Priority Habitats – Arable Field Margins	oCEMP	Disturbance and degradation of habitats	Direct	Short Term	Local	Low	Not Significant	oCEMP [EN0110020/APP/5.9]
Protected Species - Bats	oCEMP, oLEMP	Disturbance and Harm	Direct/Indirect	Long Term	Local	Low	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Protected Species - GCN	oCEMP, oLEMP	Disturbance to habitats and harm	Direct/Indirect	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Protected Species – Otter and water vole	oCEMP, oLEMP	Disturbance to habitats and harm	Direct/Indirect	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Protected Species - Reptiles	oCEMP, oLEMP, RAMs	Disturbance and Habitat Loss	Direct	Short Term	Local	Low	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]

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Receptor	Mitigation Measures	Description of the Effect	Direct / Indirect	Duration	Geographical Scale	Nature of the Effect	Significant / Not Significant	Securing Mechanism
Protected Species - Badger	oCEMP, oLEMP	Disturbance and Harm	Direct/Indirect	Short Term	Local	Low	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Protected Species – White clawed crayfish	oCEMP, oLEMP	Disturbance to habitats and harm	Direct/Indirect	Short Term	Local	Low	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Protected/Priority Species – Migratory Fish	oCEMP, oLEMP	Disturbance to habitats and harm	Direct/Indirect	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9] and oLEMP [EN0110020/APP/5.13]
Priority Species – Brown hare	oCEMP	Disturbance and Harm	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Breeding bird assemblage	oCEMP	Direct harm	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Breeding lapwing	oCEMP	Habitat Loss	Direct	Short Term	Local	Low	Not Significant	oLEMP [EN0110020/APP/5.13]
Breeding lapwing	oCEMP	Disturbance	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Breeding skylark	oCEMP	Habitat Loss	Direct	Short Term	Local	Low	Not Significant	oLEMP [EN0110020/APP/5.13]
Breeding skylark	oCEMP	Disturbance	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Barn owl	oCEMP	Disturbance	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Barn owl	oCEMP	Habitat Loss	Direct	Short Term	Local	Negligible	Not Significant	oLEMP [EN0110020/APP/5.13]
Hobby	oCEMP	Disturbance	Direct	Short Term	Local	Negligible	Not Significant	oCEMP [EN0110020/APP/5.9]
Operation and Maintenance								
Designated Sites – Brampton Common LWS	OEMP and LEMP	Enhancement	Direct	Long Term	Local	Moderate - Beneficial	Significant	oOEMP [EN0110020/APP/5.10] oLEMP [EN0110020/APP/5.13]
Designated Sites – Axle Lane LWS	OEMP and LEMP	Habitat Enhancement	Direct	Medium/Long Term	Local	Low	Neutral	oLEMP [EN0110020/APP/5.13]
Designated Sites – Whiston Meadows LWS	OEMP and LEMP	Habitat Enhancement	Direct	Medium/Long Term	Local	Low	Neutral	oLEMP [EN0110020/APP/5.13]
Priority Habitats - Native Hedgerows	OEMP and LEMP	Habitat Enhancement	Direct	Long Term	Local	Moderate - Beneficial	Significant	oOEMP [EN0110020/APP/5.10] oLEMP [EN0110020/APP/5.13]
Priority Habitats – Important Hedgerows	OEMP and LEMP	Habitat Enhancement/ Compensation	Direct	Long Term	Local	Moderate - Beneficial	Significant	oOEMP [EN0110020/APP/5.10] oLEMP [EN0110020/APP/5.13]
Priority Habitats – Wet Woodland	OEMP and LEMP	Habitat Enhancement	Direct	Long Term	Local	Moderate - Beneficial	Significant	oOEMP [EN0110020/APP/5.10] oLEMP [EN0110020/APP/5.13]
Protected Species - Bat	OEMP	Lighting Disturbance	Indirect	Long Term	Negligible	Very low	Not Significant	oOEMP [EN0110020/APP/5.10]
Protected Species - Bat	OEMP	Habitat Enhancement	Direct	Long Term	District	Moderate - Beneficial	Significant	oLEMP [EN0110020/APP/5.13]
Protected Species - Reptile	OEMP	Habitat Enhancement	Direct	Long Term	Local	Moderate - Beneficial	Significant	oLEMP [EN0110020/APP/5.13]

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Receptor	Mitigation Measures	Description of the Effect	Direct / Indirect	Duration	Geographical Scale	Nature of the Effect	Significant / Not Significant	Securing Mechanism
Protected Species - Badger	OEMP	Fencing Displacement	Direct	Long Term	Negligible	Neutral	Not Significant	oOEMP [EN0110020/APP/5.10]
Protected Species - Badger	OEMP	Lighting Disturbance	Indirect	Long Term	Negligible	Very low	Not Significant	oOEMP [EN0110020/APP/5.10]
Protected Species - Badger	OEMP	Habitat Enhancement	Direct	Long Term	Local	Moderate - Beneficial	Significant	oLEMP [EN0110020/APP/5.13]
Protected Species - Otter	OEMP	Lighting Disturbance	Indirect	Long Term	Local	Very Low	Not Significant	oOEMP [EN0110020/APP/5.10]
Protected Species - Otter	OEMP	Fencing Displacement	Direct	Long Term	Local	Neutral	Not Significant	oOEMP [EN0110020/APP/5.10]
Protected Species - Otter	OEMP	Reduction in agricultural aquatic pollutants	Indirect	Long Term	Medium	Moderate - Beneficial	Significant	oOEMP [EN0110020/APP/5.10]
Protected Species - Otter	OEMP	Habitat Enhancement	Direct	Long Term	Medium	Moderate - Beneficial	Significant	oOEMP [EN0110020/APP/5.10]
Priority species – Brown hare	OEMP	Habitat Enhancement	Direct	Long Term	Medium	Moderate - Beneficial	Significant	oLEMP [EN0110020/APP/5.13]
Priority species – Brown hare	OEMP	Fencing Displacement	Direct	Long Term	Negligible	Neutral	Not Significant	oOEMP [EN0110020/APP/5.10]
Breeding bird assemblage	OEMP	Habitat Enhancement	Direct	Long Term	Local	Moderate - Beneficial	Significant	oLEMP [EN0110020/APP/5.13]
Breeding lapwing	OEMP	Displacement	Direct	Long Term	Local	Neutral	Not Significant	oLEMP [EN0110020/APP/5.13]
Breeding lapwing	OEMP	Compensatory Habitat	Direct	Long Term	Local	Very Low	Not Significant	oLEMP [EN0110020/APP/5.13]
Breeding skylark	OEMP	Displacement	Direct	Long Term	Local	Low/Neutral	Not Significant	oLEMP [EN0110020/APP/5.13]
Breeding skylark	OEMP	Compensatory Habitat	Direct	Long Term	Local	Low	Not Significant	oLEMP [EN0110020/APP/5.13]
Barn owl	OEMP	Habitat Enhancement	Direct	Long Term	Negligible	Moderate - Beneficial	Significant	oLEMP [EN0110020/APP/5.13]
Barn owl & Hobby	OEMP	Disturbance	Direct	Long Term	Negligible	Negligible	Not Significant	oOEMP [EN0110020/APP/5.10]
Hobby	OEMP	Habitat enhancement	Direct	Long Term	Negligible	Moderate - Beneficial	Significant	oLEMP [EN0110020/APP/5.13]
Decommissioning								
Receptors and effects expected to be similar to, or less than, at the Construction phase. Impacts to be identified and mitigated through the embedded mitigation measure of production of a DEMP prior to decommissioning. An outline Decommissioning Plan [EN0110020/APP/5.11] has been submitted alongside this Application.								

6.9 Cumulative Effects

- 6.9.1 This Section assesses the potential cumulative Biodiversity and Nature Conservation effects of the Proposed Development. The methodology of this assessment is presented in **Volume 1, Chapter 2: EIA Methodology** [EN0110020/APP/6.2.1].

Intra-Cumulative Effects

- 6.9.2 Intra- cumulative impacts can be defined as those that occur where a single receptor is affected by more than one source of effect arising from different aspects of the Proposed Development. Intra-cumulative effects are identified alongside noise, air quality, and traffic effects, and are considered within the biodiversity assessment in this Chapter in Section 6.7. No further intra cumulative effects in relation to biodiversity have been identified beyond those in Section 6.7.

Inter-Cumulative Effects

- 6.9.3 Inter-project effects refer to the impacts that arise from other existing and, or approved developments within reasonable proximity of the Proposed Development, which individually might not be Significant, but when considered together could create a Significant cumulative effect on a shared receptor.
- 6.9.4 **Table 6-14** summarises nearby developments considered, summarising the assessment for each and identifying potential for cumulative effects.

Table 6-14 Developments Considered for the Assessment of Potential Cumulative Biodiversity Effect

Address	Project / Planning Reference	Description of Other Existing and / or Approved Development	Relevant Planning Authority	Distance to Proposed Development	Status of Project	Assessment of Potential Cumulative Effects
Land off Moat Lane Wickersley	RB2024/0063 (Appeal ref. APP/P4415/W/25/3363208)	Erection of battery storage facility and associated works.	Rotherham Metropolitan Borough Council	Within - Cable Route C.	Approved at Appeal	The development is small (2.30 ha) and their impact assessment does not assess any individual biodiversity, protected species or habitat features at a population scale as the assessment assumes best practice mitigation will remove potential for effects. BNG ensures a gain in biodiversity units. No potential for cumulative effects.
Land off Moat Lane Wickersley	RB2024/0321 (Appeal ref. APP/P4415/W/25/3365059)	Erection of battery storage facility and associated works.	Rotherham Metropolitan Borough Council	Within Cable Route C.	Approved at Appeal	The development is small (1.86 ha) and impact assessment does not assess any individual biodiversity, protected species or habitat features at a population scale as the assessment assumes best practice mitigation will remove potential for effects. BNG ensures a gain in biodiversity units. No potential for cumulative effects.
Land off Carr Lane Ulley	RB2025/0029	Proposed ground-mounted solar PV arrays, supporting energy infrastructure (including battery storage (BESS), access improvements and ancillary development including, landscaping and biodiversity enhancements and continued shared agricultural use	Rotherham Metropolitan Borough Council	Within - Whitestone 2.	Awaiting Decision	A 31-hectare site comprising a solar and BESS development across two fields that are adjacent to the Order Limits, with the proposed access track through the Order Limits. The Ecological Impact Assessment considers all features to be of Local, Site or Negligible value as they are absent, or comprised of small numbers of widespread species and concludes that that with best practice mitigation, effects are negligible. The conclusions are questioned by the LPA, and there is expected be a small loss of some bird species which is not recognised in the assessment (e.g. breeding skylark). As such, there is potential for cumulative effects; however, such effects will be local and potentially offset by benefits to the wider breeding bird assemblage and biodiversity offered by the habitat enhancements and gain in biodiversity units through BNG, and Not Significant.
Land at Hard Lane Kiveton Park	RB2025/0240	Proposed Battery Energy Storage Scheme (BESS)	Rotherham Metropolitan Borough Council	Adjacent to Whitestone 3, land parcel west of Hard Lane.	Awaiting Decision	A site of approximately 3.8 ha with an assessment presented in a Preliminary Ecological Appraisal. The assessment considers the site of low ecological value and assumes best practice mitigation (Reasonable Avoidance Measures) will be used to avoid effects on protected features. BNG would provide enhancements within the site. No potential for cumulative effects.
Land at Cumwell Lane Hellaby	RB2025/0599	Outline Application for residential development including details of appearance, landscaping, layout and scale	Rotherham Metropolitan Borough Council	0.35km east of Cable Route B.	Awaiting Decision	The amended Ecological Impact Assessment (dated October 2025) considers several features of Local importance, such as bat, badger, and nesting birds. The assessment assumes best practice mitigation (Reasonable Avoidance Measures) will be used to

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Address	Project / Planning Reference	Description of Other Existing and / or Approved Development	Relevant Planning Authority	Distance to Proposed Development	Status of Project	Assessment of Potential Cumulative Effects
						avoid effects on protected features. No potential for cumulative effects.
Ended Land to north west of Worry Goose Lane Whiston	RB2024/0104	Reserved matters application (details of internal access, landscaping, layout, scale, & appearance) for the erection of 450 dwellinghouses (reserved by outline permission RB2019/0552)	Rotherham Metropolitan Borough Council	0.76km north of Cable Route C	Awaiting Decision	The Ecology Report (dated March 2023) considers habitats, bats, badger and nesting birds. The assessment assumes best practice mitigation (Reasonable Avoidance Measures) will be used to avoid effects on protected features. There are proposals for green infrastructure, that is separated from the Order Limits. No potential for cumulative effects.
Land off Morthen Lane Morthen	RB2025/0714	Construction, operation, and subsequent decommissioning of a renewable energy park, comprising ground mounted solar photovoltaic (PV) together with associated infrastructure including inverters, substation compound, cabling, access tracks, fencing, and landscaping	Rotherham Metropolitan Borough Council	Within Cable Route C	Awaiting Decision	An approximately 103-hectare site comprising a solar and BESS development, part of which falls partly within the Order Limits. The Ecological Impact Assessment considers Skylark, Habitats, Bats, Birds and GCN, and concludes that that with best practice mitigation and compensation effects are negligible or positive. The conclusions are questioned by the LPA, for example, requesting further Skylark mitigation. Given the location and scale of the development there is potential for Cumulative Effects; however, if the requests of the LPA are met, then these will be negligible or beneficial, and Not Significant .
Land east of Moor Lane South Bramley	RB2025/0979	Outline application for residential development of up to 349 dwellings including details of the access	Rotherham Metropolitan Borough Council	0.4km West of Cable Route B	Awaiting Decision	A 13.6-hectare site comprising a residential development, which falls outside of the Order Limits and comprises predominantly arable land surrounded to the north, west and south by existing or in progress development. The ecological appraisal considered bats, birds, hedgerows, and nearby LWS. Important hedgerow is being retained and there is a <i>Circa</i> 800% increase in hedgerow units for BNG, with Skylark plots proposed for offsite BNG area compensation to mitigate loss of 8 breeding territories. Green areas are proposed to avoid recreational pressure on local LWSs. Trees with bat roost potential are being retained and lighting controls proposed. Conditions for bats, badgers, other mammals, and nesting/breeding birds have been proposed by the LPA to safeguard species and provide retained connectivity for foraging, enhancements for sheltering or breeding species. With planning conditions and BNG offsite compensation met, there is no potential for Cumulative Effects .
Land North and South of Stainton Lane Maltby	RB2025/1009	Proposed development of a solar park, battery energy storage system	Rotherham Metropolitan	3.6km from Cable Corridor.	Awaiting Decision	A 17.8 hectare BESS and solar site to the east of the M18 and separated from the Order Limits beyond that. Most of the site comprised OMH habitat, which

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Address	Project / Planning Reference	Description of Other Existing and / or Approved Development	Relevant Planning Authority	Distance to Proposed Development	Status of Project	Assessment of Potential Cumulative Effects
		('BESS'), underground cable route and associated infrastructure	Borough Council			is not a habitat found in the Order Limits. The Environmental Impact Assessment considered: ancient woodland; habitats (including open water, OMH, scrub, hedgerows); breeding birds; invertebrates; bats; badgers; and amphibians. Residual impacts to open water, scrub, breeding birds and invertebrates were recorded at construction. Residual impacts at operation are neutral or beneficial for biodiversity. Given the developments location beyond the Order Limits and separation by the M18, and the scale of the development, there is no potential for Cumulative Effects .
Land west of St Albans Way Wickersley	RB2025/1161	Outline application for residential development of up to 136 dwellings including details of access	Rotherham Metropolitan Borough Council	Within 1.25km of Whitestone 2.	Awaiting Decision	A <i>circa</i> 6-hectare site comprising a residential development, which falls outside of the Order Limits and comprises predominantly arable land surrounded to the north and east by existing development. The preliminary ecological appraisal considered bats, birds, badger, white-clawed crayfish, water vole, and a nearby LWS. Green areas are proposed to avoid recreational pressure on local LWS. Trees with bat roost potential are being retained and lighting controls proposed. CEMP and BEMP proposed by the LPA to safeguard species and provide retained connectivity for foraging, enhancements for sheltering or breeding species. With LPA conditions in place, and given location and scale of the development, there are no cumulative effects .
Land south of West Bawtry Road Whiston	RB2025/1420	Outline planning application for the construction of up to 170 dwellings with associated landscaping, open space, drainage infrastructure and associated works (all matters reserved except access from Long Lane)	Rotherham Metropolitan Borough Council	Adjacent to Cable Route C and within 0.1km of - Whitestone 2.	Awaiting Decision	The site is in an area of 10.17ha, with a residential development proposed. Its comprised mostly of cropland with small areas of mixed scrub, modified grass land margins, and sealed surface. Some trees and native hedgerow to the perimeter. Whiston brook (and LWS) runs parallel to southern boundary at 10m offsite. The PEA report focussed on bats, badger, breeding birds, otter, water vole, and white clawed crayfish. Breeding bird and otter/wv surveys have been recommended; however, mitigation measures are proposed to reduce other effects on biodiversity to negligible. Proposals for greenspace adjacent to the north of Whiston Meadows LWS providing a beneficial effect with respect to this designated site and in combination with the Proposed Development. Given the location of the proposal and proposals for greenspace creation, there is the potential for overall beneficial Cumulative Effects that is Not Significant .

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Address	Project / Planning Reference	Description of Other Existing and / or Approved Development	Relevant Planning Authority	Distance to Proposed Development	Status of Project	Assessment of Potential Cumulative Effects
Land at Long Lane Whiston	RB2025/1468	Erection of a new 400kV Gas Insulated Switchgear (GIS) substation including gantries, internal access roads, a GIS building, parking, drainage, emergency diesel generator, lighting and CCTV, permanent access road from Long Lane, earthworks, landscaping and biodiversity enhancement, and fencing and the permanent realignment of Whiston Footpath 10	Rotherham Metropolitan Borough Council	Within Cable Corridor CRE	Awaiting Decision	The location of the substation is within an 18ha area of predominantly arable land, which is also part of the Order Limits (Cable Corridor CRE). Hedgerow habitats and woodland are proposed to be cleared to secure site access. Very small sections of hedgerow and modified grassland (not features of the LWS) in Whiston Meadows LWS will need to be removed for visibility splays. These are permanent losses at construction, and hedgerow loss overall is significant within the Order Limits in this phase. Proposals for the site include newly created hedgerows, woodland, grassland and ponds within an existing arable footprint. This greenspace creation provides a beneficial cumulative effect and offsets habitat losses occurring in the Whiston Meadows LWS that is beneficial significant. The development of the substation is expected to be completed prior to the Proposed Development. Cumulative effects are both negative and beneficial, and overall are Not Significant .
Best Meats UK Ltd Houghton Road North Anston Trading Estate North Anston	RB2025/1648	Erection of new sub station	Rotherham Metropolitan Borough Council	0.12km north of Whitestone 2.	Granted conditionally	New substation proposed within an existing car park footprint of 10.45 ha. The site has very limited biodiversity value, with negligible effects on biodiversity features and no BNG net loss. No potential for cumulative effects.
Land east of Cumwell Lane Hellaby	RB2025/1223	Outline application for residential development with main points of access, all other matters reserved	Rotherham Metropolitan Borough Council	0.26km east of Cable Route A.	Awaiting Decision	A residential development of up to 106 properties on a 3.61ha site, which had been cleared prior to biodiversity surveys. Historical imagery suggests agricultural use previously, with a mixture of scrub and grassland bounded by hedgerows and mature trees present. LPA response indicates desk study required, GCN need further assessment for presence/absence in an offsite pond, hedgerow surveys need completion, and BNG will need to be achieved through an offsite approach; however, given the scale and location of the development, there is no potential for cumulative effects.
Land at Long Lane Whiston	RB2025/1674	Installation of 2 replacement terminal single poles (application under Overhead Lines (Exemption) (England and Wales) Regulations 2009)	Rotherham Metropolitan Borough Council	Within Whitestone 2.	No objections	Re-development of two single electricity poles, given the very small scale and limited construction period of the development, the site will have negligible effects on biodiversity features. No potential for cumulative effects.

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Land North And South Of Stainton Lane Stainton Rotherham S66 7RB	25/01554/FULM	Proposed development of a solar park, battery energy storage system, underground cable route and associated infrastructure.	City of Doncaster Council	3.6km from the Cable Corridor.	Awaiting Decision	The site is approximately 24ha, which comprises of a main solar array on waste and derelict land. Areas of open mosaic habitat are located towards the southern areas of the site, as well as towards the east. Highly ephemeral waterbodies are found towards the centre of the site. Small areas of grassland and dense scrub present. Site is bordered on the west and south by native hedgerow. An ecology report identified negative impacts on bats during construction with foraging habitat of lower value lost, however, residual impacts thought to be neutral as no significant habitat will be lost. Amphibians were reported at risk during construction, although this is offset with precautionary working methods and mitigation measures. Construction expected to negatively impact invertebrates due to short term habitat loss. Long term management expected to deliver positive outcomes post construction. Birds will be impacted during construction, but overall scheme is expected to provide overall benefits for many species via habitat enhancement. Ground nesting birds like skylark likely to lose breeding habitat. Cumulative effects are potentially possible; however, given the scale and location of the development, effects are Not Significant.
Land Off Moor Lane Micklebring Rotherham S66 7RN	22/00840/SCRE	Request for an EIA screening opinion for the Proposed Mere Flats Solar Energy Supply Project	City of Doncaster Council	Adjacent to Cable Route B.	Decided - Not EIA	The site is proposed to produce up to 49.9MW of electricity within a 63-hectare area that is predominantly arable. The LPA screening opinion states: <i>'The site is not deemed to be a sensitive area per se in terms of ecological habitat, and existing vegetation and field boundaries, which are proposed to remain means that the proposal could be assessed as any other planning application...'</i> The LPA response also states that trees and hedgerows need to be considered in assessments, and that a BNG assessment needs to be included. The site is separated from the Order Limits by the M18 and local infrastructure, however, given the scale of the proposal, there is the potential for Cumulative Effects; however, this is Not Significant.
Land South East Of Old Road Conisbrough Doncaster DN12 3LR	24/01404/FULM	Proposed residential development with public open space, access, landscaping and associated infrastructure.	City of Doncaster Council	Adjacent to Whitestone 1	Decided - Granted conditionally subject to Section 106 Agreement	A residential development of <i>circa</i> 8.9ha within existing arable habitat. The site is adjacent to the Proposed Development Order Limits and the Ecological Impact Assessment report was focussed on a search for incidental evidence of faunal species with a focus on: amphibians, bats, birds, reptiles and

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Address	Project / Planning Reference	Description of Other Existing and / or Approved Development	Relevant Planning Authority	Distance to Proposed Development	Status of Project	Assessment of Potential Cumulative Effects
						priority species such as hedgehog. No further ecology surveys beyond the UKHab survey and desk study, as negligible effects on biodiversity. No potential for cumulative effects.
Land Off Bilham Lane Hooton Pagnell Doncaster DN5 7BW	25/02389/FULM	Installation and operation of a ground mounted solar photovoltaic array, co-located battery energy storage system (BESS) together with associated infrastructure; internal access arrangements; security fencing; CCTV; Landscaping and Biodiversity net gain	City of Doncaster Council	Within 9.5km of Whitestone 1.	Awaiting Decision	The site is 92.5 ha of mainly arable farmland with mature hedgerows, tree corridors, a pond near the southern boundary and a small area of broadleaved woodland. LWSs, hedgerows and woodland, water bodies, bats, breeding birds, GCN, and reptiles were the focus of the assessment. Biodiversity features are being retained with protective measures and enhanced, with compensation proposed for skylark and ground nesting birds. Given the separation of the site from the Order Limits, and limited effects on biodiversity, there is no potential for cumulative effects.
Land South West Of Upperthorpe Road Killamarsh	24/00308/MRM	Erection of 315 no. dwellings, including details of internal access, layout, scale, appearance and landscaping (Major Development) (Affecting a public right of way) (Amended Plans)	North East Derbyshire District Council	1.2km from Whitestone 3.	Approved	Planning portal access restricted.
Norwood Cottage Farm Cinder Lane Killamarsh Sheffield S21 2AT	25/00377/EIA	Environmental Impact Assessment Screening Opinion Request for a proposed Enercon E82 (3MW) Wind Turbine	North East Derbyshire District Council	0.2km from Whitestone 3.	Decided - Not EIA	A single turbine development. Delegated officers screening opinion response was that not an EIA and; <i>'...cumulative impact is not significant or of such a scale to warrant concern...'</i> No other biodiversity comments other than ecological enhancements would be required. No potential for cumulative effects.
Speetley Equestrian Centre Worksop Road Barlborough S43 4TA	25/00405/FUL	Change of use of site to encompass equine clinic and equestrian centre use and extension of existing building to form an equine clinic and a new vehicular access	Bolsover District Council	Within 1.9km of Whitestone 3.	Granted conditionally	Re-development of an existing building and site with negligible effects on biodiversity features. No potential for cumulative effects.
Common Farm, Bookers Lane, Dinnington	RB2022/1203	Installation and operation of a solar energy park and associated infrastructure.	Rotherham Metropolitan Borough Council	Adjacent to Whitestone 2.	Approved	The site is proposed for a solar energy park adjacent to the Order Limits and Brampton Common LWS. An <i>Ornithological Technical Note</i> referenced lapwing mitigation areas proposed in the north, and the need to accommodate breeding skylark onsite. As Brampton Common LWS is designated for breeding skylark and proposals include for part of this designation to be included within the Order Limits, there is the potential for Cumulative Effects; however,

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						such effects will be local and potentially offset by benefits to the wider breeding bird assemblage and biodiversity offered by the habitat enhancements and gain in biodiversity units through BNG, and Not Significant .
Land off Oldcotes Road, Dinnington	RB2025/1612	EIA Screening Opinion for 800 dwellings	Rotherham Metropolitan Borough Council	2.6km northeast of Whitestone 2	Awaiting Decision	The site is in 27 hectares of predominantly arable land, with a woodland copse. A screening opinion from the LPA, proposes a PEA, ponds within 500m, bat and badger desk study, breeding bird surveys – skylark and lapwing, bat surveys, arboriculture surveys, hedgerow surveys to be completed, with enhancements to include 800 bat or bird boxes. Skylark mitigation is recommended to be followed in the event of their presence. Given the location and scale of the development there is potential for cumulative effects; however, if the requests of the LPA are met, then these will be negligible or beneficial, and Not Significant .
Land off Shrogswood Road Whiston	RB2022/0017	Outline application for the erection of up to 217 dwellinghouses including details of access	Rotherham Metropolitan Borough Council	1.6km north of Cable Route C	Granted conditionally	The site is of 8.83 hectares for a residential development, which falls outside of the Order Limits and comprises of arable land. Bats and badgers were assessed, with no badger setts within 30m. A bat survey report identified that marginal habitats to a streamlined boundary offered moderate value to foraging bats, with lighting restrictions recommended. The LPA has conditioned a CEMP to include lighting restrictions, dust and air quality controls and other measures. Marginal habitats are being retained along the watercourse and predominantly on the perimeter, except for access. Overall, with conditions met, there is no potential for cumulative effects .
Land north of Tickhill Road Maltby	RB2022/1638	Outline planning application, with all matters reserved except means of access, comprising up to 185 dwellings, vehicle and pedestrian access, parking, public open space, landscaping and associated works	Rotherham Metropolitan Borough Council	4.16km east of Cable Route B	Granted conditionally	The site is of 15.9 hectares for a residential development, which falls outside of the Order Limits and comprises predominantly allotment land and mixed habitats surrounded to the west by existing development. The ecological appraisal considered loss of habitat and disturbance to breeding birds at construction and operation. Tree assessment, timing restriction for habitat removal to avoid nesting birds, BEMP for enhancements and BNG, to be secured through LPA condition. Site separated by distance from the Order Limits and located with major infrastructure and development between the site and the Order Limits. Overall, no potential for cumulative effects .

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Maltby Colliery/Stainton Tip and Pit Yard Tickhill Road Maltby	RB2024/1700	Reclamation of quarry and creation of development platforms for employment use	Rotherham Metropolitan Borough Council	4.15km East of Cable Route B	Awaiting Decision	A range of surveys were completed to inform the assessment, which is presented in an ES chapter. All species features are considered of local importance, and the assessment concludes that with best practice mitigation, effects are avoided. The restoration will result in a long-term negligible or positive effect for all features, except for <i>Brownfield and Inland Rock LBAP Priority Habitat</i> which will be minor negative. Overall, no potential for cumulative effects.
Land to the South of Barnsley Road, to the East and West of Marr Grange Lane, Marr	23/02634/FULM	"Installation of ground mounted photovoltaic farm with associated infrastructure, engineering works, access, and landscaping."	City of Doncaster Council	6.72km north of Whitestone 1	Refused (pending appeal application)	Refused. No potential for cumulative effects
Sites at Worrygoose Lane, Moorhouse Lane, Little Common Lane, Royds Moor Hill, Alma Row, Whiston	RB2025/0534	Proposed Flood Alleviation Scheme	Rotherham Metropolitan Borough Council	0.4km north of Cable Route D1 and 0.6km northwest of Cable Route C.	Granted conditionally	A Preliminary Ecological Appraisal was carried out as well as detailed surveys for protected species. The assessment assumes best practice mitigation (Reasonable Avoidance Measures) will be used to avoid effects on protected features and/or losses will be fully addressed through compensation. BNG would provide enhancements within the site. No potential for cumulative effects.
Land East of Grand Lane, Maltby	RB2025/0434	Application to vary condition 02 (approved plans) imposed by the original application ref. 2016/1492	Rotherham Metropolitan Borough Council	3.4km East of Cable Route B	Approved	Minor change to an existing application. Original application relatively small scale and built / under construction, and therefore part of the existing baseline. No potential for cumulative effects.
Unit 1, Hellaby Industrial Estate Sandbeck Way Hellaby	RB2026/0041	Change of use from storage/warehouse use (Use Class B8) to Padel courts with ancillary café/bar, gym, studio and sauna/steam and ice bath room (Use Class E(d)) with external storage containers to side elevation to form toilets and changing facilities	Rotherham Metropolitan Borough Council	0.34km east of Cable Route B	Awaiting Decision	Re-development of an existing building within an industrial estate with negligible effects on biodiversity features. No potential for cumulative effects.
Rowena House Old Road Conisbrough Doncaster DN12 3LX"	25/02346/FULM	Redevelopment of Rowena House to provide a new 65 bedroom two storey care home.	City of Doncaster Council	0.75km north of W1.	Awaiting Decision	A small-scale urban development within the town of Conisbrough. No potential for cumulative effects.
Land South Of Springfield Farm At The Corner Of	26/00020/FUL	New leisure resort (sui generis) incorporating Water Park, adventure	Bolsover District Council	3.1km south-east of W3.	Awaiting Decision	A site of approximately 19.3 ha comprising of an agricultural

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Gapsick Lane And Worksop Road Whitwell Common		park, hotel, conferencing facilities, restaurants and staff accommodation with associated access, parking and landscaping. Application accompanied by an Environmental Statement.				field with associated field margins, hedgerows and scattered trees. A Preliminary Ecological Appraisal was carried out and found the Site to be primarily of low value, recommending best practice mitigation (Reasonable Avoidance Measures) to avoid effects on protected species and habitat compensation to fully address effects of habitat loss on some features (e.g. farmland birds). Detailed surveys were not completed and proposed BNG would provide an increase of 82 % habitat units and 51 % hedgerow units. No potential for cumulative effects.
Aldi Muglet Lane Maltby	RB2026/0162	Application to determine whether Prior Notification is required for the installation of Solar Photovoltaics (PV) on roof of store	Rotherham Metropolitan Borough Council	4km east of Cable Route B.	Awaiting Decision	Rooftop solar with negligible effects on biodiversity features. No potential for cumulative effects.
Aldi, 81 Park Hill Swallownest	RB2026/0196	Prior Notification for the installation of Solar Photovoltaics (PV) equipment	Rotherham Metropolitan Borough Council	2km southwest of W2.	Awaiting Decision	Rooftop solar with negligible effects on biodiversity features. No potential for cumulative effects.
Unit 1 Nobel Way Business Park Nobel Way Dinnington	RB2026/0267	Prior Notification for the installation of other Solar Photovoltaics (PV) equipment	Rotherham Metropolitan Borough Council	1.3km north of W2.	Awaiting Decision	Rooftop solar with negligible effects on biodiversity features. No potential for cumulative effects.
land north of Woodall Services Killamarsh Lane Woodall	RB2026/0228	Erection of new substation, associated infrastructure including access, parking, landscaping and temporary construction access	Rotherham Metropolitan Borough Council	Adjacent to RLB for W3	Proposed to be delegated	A Preliminary Ecological Appraisal was carried out and found the Site to be primarily of low value, recommending best practice mitigation (Reasonable Avoidance Measures) to avoid effects on protected features. Detailed surveys were not completed and proposed BNG would provide an increase of 32 % habitat units and 1065 % hedgerow units. No potential for cumulative effects.
land at Green Lane Thurgroft	RB2022/1767	Battery energy storage facility and associated works	Rotherham Metropolitan Borough Council	0.2km south of Cable Route C	Granted conditionally	A site of approximately 0.9 ha located adjacent to an existing substation. A Preliminary Ecological Appraisal was carried out and found the Site to be of low value, recommending best practice mitigation (Reasonable Avoidance Measures) to avoid effects on protected features. Detailed surveys were not completed and proposed BNG would provide an increase of 39 % habitat units. No potential for cumulative effects.
Brampton Stables Penny Hill Lane Ulley	RB2025/1478	Conversion of existing stable block to form 2 No. dwellings with demolition of walls to entrance and	Rotherham Metropolitan Borough Council	Land to the east of M1 Junction 32 and adjacent to/surrounded by W2.	Awaiting Decision	A small-scale development that did not assess effects on biodiversity. Surveys for roosting bats and breeding birds found no evidence of presence and low suitability. No potential for cumulative effects.

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		erection of bin store and 2.4m high fencing adjacent to highway				
Cepac Ltd Meadows Road Manvers	RB2026/0447	Erection of substation and switch room	Rotherham Metropolitan Borough Council	6.80km northwest of W1.	Awaiting Decision	A small-scale development proposed on developed land and mixed scrub of lower ecological value as identified by the supporting documents submitted with their application. Offsite BNG is being sought, with recommending best practice mitigation proposed to avoid effects on protected features. Detailed surveys were not completed. Given the above details and the separation distance to the Proposed Development, there is No potential for cumulative effects .
Carlton Park Hotel, 102 Moorgate Road Moorgate	RB/2026/0495	Prior Notification for the Installation of Solar Photovoltaics (PV) equipment	Rotherham Metropolitan Borough Council	1.99km north of CRE	Awaiting Decision	This application is for the installation of solar panels on an existing hotel. Given the scale of this project and the distance from Site it is not expected to give rise to any cumulative effects. No potential for cumulative effects
Land South of Mansfield Road Swallownest	RB/2026/0526	Erection of 189 residential dwellings, public open space, pumping station and associated works	Rotherham Metropolitan Borough Council	1.61km southwest of W2	Awaiting Decision	This application is for residential development on c. 13ha site. A Preliminary Ecological Appraisal has been carried which has recommend planning conditions to include production of a Biodiversity Management Plan, CEMP and BNG Assessment. Given the distance between the project and Proposed Development, and assuming adherence to best practice measures through planning conditions it is not expected to give rise to any cumulative effects. No potential for cumulative effects

6.10 Summary

Statement of Significance

Construction

- 6.10.1 Construction effects on nationally important designated sites are negligible and **Not Significant**.
- 6.10.2 At the construction phase, site clearance, access establishment and associated works will affect the structure and function of Brampton Common LWS resulting in a low magnitude, local, adverse **Significant** effect in the short-term.
- 6.10.3 Loss of native hedgerows (including Important Hedgerows), Priority Habitats are considered of low magnitude, local, adverse **Significant** effect in the medium-term.
- 6.10.4 Loss of a small area of wet woodland, a Priority Habitat during construction is considered a low magnitude, local, adverse **Significant** effect in the medium-term.
- 6.10.5 Construction effects on protected species including breeding birds are of negligible to low magnitude and **Not Significant**.

Operation

- 6.10.6 There is no pathway for potential significant effects on nationally important designated sites at operation.
- 6.10.7 There will be a medium magnitude, local **Significant Beneficial** effect on Brampton Common LWS in the medium to long-term, secured through the LEMP for the management and monitoring of the LWS and the BNG commitments.
- 6.10.8 Enhancement of the Priority Habitats native hedgerows and wet woodland will result in a moderate **Significant Beneficial** effect in the long term.
- 6.10.9 Habitat enhancements will result in a **Significant Beneficial** effect on bats, otter, badger, reptiles, brown hare, breeding bird assemblage, barn owl and hobby.
- 6.10.10 No significant effects at operation on skylark and lapwing.
- 6.10.11 A Biodiversity Net Gain above 10% will be achieved for habitat area, hedgerows and watercourses.

Decommissioning

- 6.10.12 Receptors are expected to be similar to and effects at decommissioning similar, or less than, at the Construction phase.

Cumulative

- 6.10.13 No adverse ecological effects are assessed as adverse cumulatively with other developments.

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