



**WHITESTONE**  
solar farm

# **WHITESTONE SOLAR FARM**

## **Draft Environmental Statement**

**Volume 1, Chapter 6: Biodiversity and Nature Conservation**

EN0110020

September 2025

[whitestonesolarfarm.co.uk](http://whitestonesolarfarm.co.uk)

## DRAFT ENVIRONMENTAL STATEMENT

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Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
Rev01	First Draft	ERM	TLT, Pershing, DWD, AECOM		
Rev02	Final	ERM	TLT, DWD, Pershing, AECOM	Whitestone Net Zero Ltd	15/09/2025

Approval for issue		
Whitestone Net Zero Ltd	JT	15 September 2025

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**Prepared by:**

**ERM**

**Prepared for:**

**Whitestone Net Zero Ltd**

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## Contents

<b>6</b>	<b>BIODIVERSITY AND NATURE CONSERVATION.....</b>	<b>1</b>
6.1	Introduction .....	1
6.2	Legislation, Policy and Guidance .....	2
6.3	Consultation .....	7
6.4	Ecological Receptors Scoped Out .....	15
6.5	Assessment Methodology .....	16
6.6	Baseline Conditions .....	33
6.7	Mitigation Measures .....	51
6.8	Assessment of Likely Significant Effects .....	64
6.9	Summary of Preliminary Assessment .....	79

## Tables

Table 6.1:	EIA Scoping Opinion Responses .....	8
Table 6.2:	Summary of Other Consultation .....	13
Table 6.3:	Ecological Receptors Scoped Out of the EIA.....	15
Table 6.4:	Extent of Study Areas (desk based) for Ecological Features .....	18
Table 6.5:	Survey Scope and Surveys Completed to Date (Site) .....	21
Table 6.6:	Magnitude of the Environmental Change .....	30
Table 6.7:	Nationally Designated Sites within 5 km of the Proposed Order Limits.....	34
Table 6.8:	Local Designated Sites within 2 km of the Proposed Order Limits.....	35
Table 6.9:	Desk Based UKHab Assessment of the Cable Corridor Options .....	37
Table 6.10:	Scoping of Important Ecological Features .....	46
Table 6.11:	Summary of Preliminary Assessment .....	80

### Figures (See Volume 2, Figures)

Figure Number	Figure Title
6.1	Local Designated Sites
6.2	International and National Designated Sites
6.3	Land Parcel Reference - Whitestone 1
6.4	Land Parcel Reference (Whitestone 2 North)
6.5	Land Parcel Reference (Whitestone 2 West)
6.6	Land Parcel Reference (Whitestone 2 East)
6.7	Land Parcel Reference (Whitestone 3)
6.2.1a - 6.2.1j	UK Habitat Classification - The Site
6.2.2a - 6.2.2c	UK Habitat Classification - The Cable Corridor Options
6.2.3	Priority Habitats
6.3.1 - 6.3.3	Confidential Badger Survey Results
6.8.1 - 6.8.3	GCN - HIS and eDNA Assessment
6.8.4a - 6.8.4c	GCN - HIS and eDNA Assessment - Cable Corridor Options
6.9.1	Reptile Mat Locations - WS1-WS3

## DRAFT ENVIRONMENTAL STATEMENT

6.9.2	Reptile Sighting Locations - WS1-WS3
6.10.1	Bat GLTA Results
6.10.2	Bat Acoustic Static Monitoring Locations
6.10.3	Bat Spring Transect Survey Routes

### Appendices (See Volume 3, Appendices)

Appendix Number	Appendix Title
6.1	Legislation, Policy and Guidance
6.2	Interim UK Habitat Survey Report
6.3	Interim Confidential Badger Survey Report
6.4	Interim Baseline Biodiversity Net Gain Report
6.5	Wintering Bird Survey Report
6.6	Breeding Bird Survey Report
6.7	Confidential Ornithology Report
6.8	Interim Great Crested Newt Report
6.9	Interim Reptile Survey Report
6.10	Interim Bat Survey Report

### Glossary

Term	Meaning
<i>Cable Corridor Options</i>	Corridors 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 ES</i>	Draft Environmental Statement which presents the preliminary environmental information relating to the Proposed Development. The Draft ES has been prepared to present information for statutory consultation in accordance with current EIA regulation.
<i>Proposed Order Limits</i>	Total area comprising the Site and Cable Corridor Options.
<i>The Applicant</i>	Whitestone Net Zero Ltd
<i>The Application</i>	The Application to be 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

**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>Draft ES</i>	Draft Environmental Statement
<i>DMRB</i>	Design Manual for Roads and Bridges
<i>DRDB</i>	Derbyshire Red Data Book
<i>EclA</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>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
<i>ILP</i>	Institute of Lighting Professionals
<i>INNS</i>	Invasive Non-Native Species
<i>IUCN</i>	International Union for Conservation of Nature

## DRAFT ENVIRONMENTAL STATEMENT

Acronym	Meaning
<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>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 and Environmental Management Plan
<i>oLBMP</i>	outline Landscape and Biodiversity 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
<i>WCA</i>	Wildlife and Countryside Act 1981 (as amended)
<i>WCC</i>	White-clawed crayfish
<i>ZoI</i>	Zone of Influence

**Units**

<b>Units</b>	<b>Meaning</b>
<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 Draft Environmental Statement (Draft ES) presents the findings of a preliminary assessment of the Likely Significant Effects (LSE) on Biodiversity and Nature Conservation as a result of the Proposed Development.
- 6.1.2 The preliminary assessment is based on ecology surveys completed up to the 6 June 2025, with the exception of great crested newt (GCN) and birds where surveys up to and beyond this date are included in the preliminary assessment. The results of further surveys completed after this date for all features will be used to update the assessment and inform the Environmental Statement (ES) at submission of the Application.
- 6.1.3 The structure and approach within this chapter differs to that described within **Volume 1, Chapter 2: EIA Methodology**, as it aligns with guidance on Ecological Impact Assessment (EclA) produced by the Chartered Institute of Ecology and Environmental Management (CIEEM)<sup>1</sup>.
- 6.1.4 The chapter begins with a description of the preliminary assessment methods used, followed by an overview of the relevant baseline conditions, future baseline conditions, and sensitive receptors. It then evaluates the LSEs of the Proposed Development during its construction, operation and maintenance, and decommissioning phases. Throughout the design process, LSE on ecology receptors have been considered. Details on alternatives and design iterations are found in **Volume 1, Chapter 4: Alternatives and Design Iterations**.
- 6.1.5 Details of the cumulative effects assessment are provided separately in **Volume 1, Chapter 17: Cumulative Effects**.
- 6.1.6 This chapter is supported by the following figures, located in **Volume 2: Figures**:
- **Figure 3.1: Proposed Order Limits**
  - **Figure 3.3: Environmental Designations – W1;**
  - **Figure 3.4: Environmental Designations – W2;**
  - **Figure 3.5: Environmental Designations – W3;**
  - **Figure 6.1: Local Designated Sites;** and
  - **Figure 6.2: International and National Designated Sites;**
  - **Figure 6.3: Interim Confidential Badger Survey Report;**
  - **Figure 6.4: Interim Baseline Biodiversity Net Gain Report;**
  - **Figure 6.5: Wintering Bird Survey Report;**
  - **Figure 6.6: Breeding Bird Survey Report;**

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<sup>1</sup> CIEEM. (n.d.). CIEEM. [Online]. Available at: <https://cieem.net/>. (Accessed: July 2025)

- **Figure 6.7: Confidential Ornithology Report;**
- **Figure 6.8: Interim Great Crested Newt Report;**
- **Figure 6.9: Interim Reptile Survey Report;** and
- **Figure 6.10: Interim Bat Survey Report.**

6.1.7 This chapter is supported by the following appendices and their associated figures, located in **Volume 3: Appendices**:

- **Appendix 6.1: Legislation, Policy and Guidance;**
- **Appendix 6.2: Interim UKHabitat Baseline Report;**
- **Appendix 6.3: Interim Confidential Badger Survey Report;**
- **Appendix 6.4: Interim Baseline Biodiversity Net Gain Report;**
- **Appendix 6.5: Wintering Bird Survey Report;**
- **Appendix 6.6: Breeding Bird Survey Report;**
- **Appendix 6.7: Confidential Ornithology Report;**
- **Appendix 6.8: Interim Great Crested Newt Report;**
- **Appendix 6.9: Interim Reptile Survey Report;** and
- **Appendix 6.10: Interim Bat Survey Report.**

## 6.2 Legislation, Policy and Guidance

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

### Legislation

6.2.2 Legislation that has been considered includes:

- Biodiversity Gain Requirements (Irreplaceable Habitats) Regulations 2024<sup>2</sup>;
- The Environment Act 2021<sup>3</sup>;
- The Conservation of Habitats and Species Regulations 2017 (as amended)<sup>4</sup>;
- Infrastructure Planning (Environmental Impact Assessment) Regulations 2017<sup>5</sup>;

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<sup>2</sup> UK Government (2024) The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024 [online]. Available at: The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024 (Accessed: July 2025)

<sup>3</sup> Environment Act 2021. [Online] Available at: Environment Act 2021. (Accessed: July 2025)

<sup>4</sup> HM Government (2017) The Conservation of Habitats and Species Regulations 2017 (as amended). [Online] Available at: The Conservation of Habitats and Species Regulations 2017. (Accessed: July 2025)

<sup>5</sup> UK Government (2017) The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 [Online]. Available at: The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (Accessed: July 2025)

- Directive 2009/147/EC on the Conservation of Wild Birds ('Bird Directive')<sup>6</sup>;
- The Eels (England and Wales) Regulations 2009<sup>7</sup>;
- The Natural Environment and Rural Communities (NERC) Act 2006<sup>8</sup>;
- Hedgerow Regulations 1997<sup>9</sup>;
- Directive 92/43/EEC on Conservation of Natural Habitats and of Wild Fauna and Flora ('Habitats Directive') (1992)<sup>10</sup>;
- Protection of Badgers Act 1992<sup>11</sup>;
- The Wildlife and Countryside Act 1981 (as amended)<sup>12</sup>;
- The Salmon and Freshwater Fisheries Act 1975<sup>13</sup>; and
- The Management of Hedgerows (England) Regulations 2024<sup>14</sup>.

## Policy

### National Policy

6.2.3 National policy that has been considered includes:

- UK Biodiversity Framework (2024)<sup>15</sup>;
- National Planning Policy Framework (NPPF) (December 2024)<sup>16</sup>;
- Overarching National Policy Statement for Energy (EN-1), 2023 (designated in January 2024)<sup>17</sup>;

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<sup>6</sup> European Parliament (2009) The Birds Directive. [Online] Available at: The Birds Directive - European Commission. (Accessed: July 2025)

<sup>7</sup> UK Government (2009) The Eels (England and Wales) Regulations 2009 [Online]. Available at: The Eels (England and Wales) Regulations 2009 (Accessed: July 2025)

<sup>8</sup> HM Government (2006) Natural Environment and Rural Communities Act 2006. [Online] Available at: Natural Environment and Rural Communities Act 2006. (Accessed: July 2025)

<sup>9</sup> HM Government (1997) Hedgerow Regulations 1997. [Online] Available at: The Hedgerows Regulations 1997. (Accessed: July 2025)

<sup>10</sup> European Parliament (1992) The Habitats Directive. [Online] Available at: eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31992L0043&from=EN. (Accessed: July 2025)

<sup>11</sup> Protection of Badgers Act 1992. [Online] Available at: ukpga\_19920051\_en.pdf. (Accessed: July 2025)

<sup>12</sup> HM Government (1981) The Wildlife and Countryside Act 1981 (as amended). [Online] Available at: Wildlife and Countryside Act 1981. (Accessed: July 2025)

<sup>13</sup> UK Government (1975) Salmon and Freshwater Fisheries Act 1975 (as amended) [Online]. Available at: Salmon and Freshwater Fisheries Act 1975 (Accessed: July 2025)

<sup>14</sup> The Management of Hedgerows (England) Regulations 2024 (Accessed: Sept 2025)

<sup>15</sup> Four Countries' Biodiversity Group (2010) UK Post-2010 Biodiversity Framework [Online] Available at: UK Biodiversity Framework. (Accessed: July 2025)

<sup>16</sup> Department for Levelling Up, Housing & Communities. National Planning Policy Framework (2023). [Online] Available at: [https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF\\_December\\_2024.pdf](https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf). (Accessed: July 2025)

<sup>17</sup> Department for Energy Security & Net Zero. Overarching National Policy Statement for Energy (2023). [Online] Available at: <https://assets.publishing.service.gov.uk/media/65bbfbc709fe1000f637052/overarching-nps-for-energy-en1.pdf>. (Accessed: July 2025)

- NPS for Renewable Energy Infrastructure (EN-3), 2023 (designated in January 2024)<sup>18</sup>; and
- NPS for Electricity Networks Infrastructure (EN-5) 2023, (designated in January 2024)<sup>19</sup>.

### Local Policy

6.2.4 Local policy that has been considered includes:

- Rotherham Metropolitan Borough Council (RMBC) Local Plan<sup>20</sup>;
- Policy NE 1: Biodiversity. Dinnington St Johns Neighbourhood Plan<sup>21</sup>;
- Policy GS1: Biodiversity and Green Infrastructure. Wickersley Neighbourhood Plan<sup>22</sup>;
- Policy M9: Nature Conservation. Maltby Neighbourhood Plan<sup>23</sup>;
- Sheffield Local Biodiversity Action Plan (LBAP)<sup>24</sup>;
- Rotherham LBAP<sup>25</sup>;
- South Yorkshire Local Nature Recovery Strategy (LNRS)<sup>26</sup>;
- Northeast Derbyshire District Council (NEDDC) Local Plan<sup>27</sup>; and

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<sup>18</sup> Department for Energy Security and Net Zero. National Policy Statement for renewable energy infrastructure (EN-3) (2023). [Online] Available at: <https://assets.publishing.service.gov.uk/media/65a7889996a5ec000d731aba/nps-renewable-energy-infrastructure-en3.pdf>. (Accessed: July 2025)

<sup>19</sup> Department for Energy Security and Net Zero (2023) National Policy Statement for Electricity Networks Infrastructure (EN-5)[Online] Available at <https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5> (Accessed: July 2025)

<sup>20</sup> Rotherham Metropolitan Borough Council, Core Strategy Plan (2014). [Online] Available at: <https://www.rotherham.gov.uk/downloads/file/307/adopted-rotherham-core-strategy> (Accessed: July 2025)

<sup>21</sup> Dinnington St John's Neighbourhood Plan 2016 – 2028. [Online] Available at: <https://www.rotherham.gov.uk/downloads/file/2356/dinnington-st-johns-neighbourhood-plan>. (Accessed: July 2025)

<sup>22</sup> Wickersley Neighbourhood Plan 2021 – 2028. [Online] Available at: <https://www.rotherham.gov.uk/downloads/file/2838/wickersley-ndp-adoption-version-final>. (Accessed: July 2025)

<sup>23</sup> Maltby neighbourhood plan (2024). [Online] Available at: <https://www.rotherham.gov.uk/downloads/download/556/maltby-neighbourhood-plan>. (Accessed: July 2025)

<sup>24</sup> Sheffield Local Biodiversity Action Plan (2002). [Online] Available at: [https://www.wildsheffield.com/wildlife/a-living-landscape/sheffield-local-biodiversity-action-plan/?gad\\_source=1&gclid=EAlaIqobChMI6N7R8b2QigMVwppQBh1ABBM2EAAYASAAEgKbOvD\\_BwE](https://www.wildsheffield.com/wildlife/a-living-landscape/sheffield-local-biodiversity-action-plan/?gad_source=1&gclid=EAlaIqobChMI6N7R8b2QigMVwppQBh1ABBM2EAAYASAAEgKbOvD_BwE) (Accessed: July 2025)

<sup>25</sup> Rotherham Local Biodiversity Action Plan (2012). [Online] Available at: <https://www.wildsheffield.com/wildlife/a-living-landscape/rotherham-local-biodiversity-action-plans/?srsltid=AfmBOooufSlshzexV2n7TamMGOPhMHBuDZqz-cx9FPW9OoMladGW1NRZ> (Accessed: July 2025)

<sup>26</sup> Developing South Yorkshire Local Nature Recovery Strategy (LNRS) [Online] Available at: <https://www.southyorkshire-ca.gov.uk/explore-local-nature-recovery-strategy> (Accessed: July 2025)

<sup>27</sup> North East Derbyshire District Council (2021) North East Derbyshire Local Plan 2014 – 2034 Adopted [online]. Available at: [Adopted NED Local Plan 2014 - 2034 \(.pdf | 13.78mb\)](#) (Accessed: July 2025)

- NEEDC Neighbourhood Plans, specifically Killamarsh<sup>28</sup>.

### Guidance

6.2.5 Guidance that has been considered includes:

- Bird Survey & Assessment Steering Group. (2025). Bird Survey Guidelines for Assessing Ecological Impacts<sup>29</sup>;
- CIEEM (2024). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine<sup>30</sup>;
- Yorkshire Wildlife Trust (2024). State of Yorkshire's Nature: What we know about nature and wildlife in Yorkshire.<sup>31</sup>;
- Bat Conservation Trust (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4<sup>th</sup> Edition)<sup>32</sup>;
- BCT/ILP (2023). Bats and Artificial Lighting at Night: Guidance Note GN08/23<sup>33</sup>;
- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a Guide to Impact Assessment, Mitigation and Compensation for Developments Affecting Bats<sup>34</sup>;
- UKHab Ltd (2023). UK Habitat Classification Version 2.0<sup>35</sup>;
- Stanbury, *et al.* (2021). Birds of Conservation Concern (BoCC): the population Status of Birds in the United Kingdom<sup>36</sup>;

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<sup>28</sup> North East Derbyshire District Council (not dated). Killamarsh Neighbourhood Plan (in preparation) [Online] Available at: <https://www.ne-derbyshire.gov.uk/planning-and-local-plan/planning-policy-and-local-plan/neighbourhood-planning/killamarsh> (Accessed: July 2025)

<sup>29</sup> Bird Survey & Assessment Steering Group. (2025). Bird Survey Guidelines for assessing ecological impacts. [Online] Available at: <https://birdsurveyguidelines.org> (Accessed: July 2025)

<sup>30</sup> CIEEM (2024) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester. [Online] Available at: [EclA-Guidelines-v1.3-Sept-2024.pdf](https://www.cieem.net/resource/uk-bat-mitigation-guidelines-2023/) (Accessed: July 2025)

<sup>31</sup> State of Yorkshire's Nature (2024). [Online] Available at: <https://www.ywt.org.uk/StateofNature#soyn>. (Accessed: July 2025)

<sup>32</sup> Bat Conservation Trust (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4<sup>th</sup> Edition) [Online] Available at: <https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-4th-edition> (Accessed: July 2025)

<sup>33</sup> Bats and Artificial Lighting at Night' ILP Guidance Note. [Online] Available at: <https://www.bats.org.uk/news/2023/08/bats-and-artificial-lighting-at-night-ilp-guidance-note-update-released>. (Accessed: July 2025)

<sup>34</sup> Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. [Online] Available at: <https://cieem.net/resource/uk-bat-mitigation-guidelines-2023/> (Accessed: July 2025)

<sup>35</sup> UKHab Ltd (2023). UK Habitat Classification Version 2.0. [Online] Available at: <https://www.ukhab.org> (Accessed: July 2025)

<sup>36</sup> Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and Win, I. (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114, 723–747 (Accessed: August 2025)

- Dean, *et al.* (2016). The Water Vole Mitigation Handbook: Mammal Society Mitigation Guidance Series<sup>37</sup>;
- British Standards (2012). 'Trees in Relation to Design, Demolition and Construction – Recommendations' (BS 5837)<sup>38</sup>;
- Department for Environment, Food and Rural Affairs (DEFRA) (2007). Hedgerow Survey Handbook: A Standard Procedure for Local Surveys in the UK, 2<sup>nd</sup> Edition<sup>39</sup>;
- WildCRU (2011). The Water Vole Conservation Handbook (3<sup>rd</sup> Edition)<sup>40</sup>;
- Chanin P (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10<sup>41</sup>;
- Langton *et al.* (2001). GCN Conservation Handbook. Froglife<sup>42</sup>
- English Nature (2001). GCN Mitigation Guidelines<sup>43</sup>;
- Oldham *et al.* (2000). Evaluating the Suitability of Habitat for the GCN (*Triturus cristatus*). Herpetological Journal 10(4), pp143-155.<sup>44</sup>
- Froglife (1999). Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10<sup>45</sup>;
- Harris *et al.* (1989). Surveying Badgers, Mammal Society<sup>46</sup>; and
- Modular River Physical (MoRPh) River Condition Assessment Methodology<sup>47</sup>.

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<sup>37</sup> Dean. M., Andrews, A., Gow. D., and Strachan, R. (2016) The Water Vole Mitigation Handbook: Mammal Society Mitigation Guidance Series. Mammal Society. [Online] Available at: [https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer\\_public/1e/30/1e3072bf-0ffe-4df2-8ee2-e1af6f66755e/d93 - water vole mitigation handbook81824175\\_1.pdf](https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer_public/1e/30/1e3072bf-0ffe-4df2-8ee2-e1af6f66755e/d93 - water vole mitigation handbook81824175_1.pdf) (Accessed: July 2025)

<sup>38</sup> British Standards (2012). 'Trees in Relation to Design, Demolition and Construction – Recommendations' (BS 5837) (Accessed: July 2025)

<sup>39</sup> Defra (2007) Hedgerow Survey Handbook. A standard procedure for local surveys in the UK. 2nd Edition. [Online] Available at: [https://www.hedgelink.org.uk/cms/cms\\_content/files/89\\_hedgerow-survey-handbook.pdf](https://www.hedgelink.org.uk/cms/cms_content/files/89_hedgerow-survey-handbook.pdf) (Accessed: July 2025)

<sup>40</sup> Wildcru (2011) The Water Vole Conservation Handbook (3rd Edition). [Online] Available at: [https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer\\_public/6a/8f/6a8fa262-ca19-4703-a096-82bb3cc20878/d92 - water vole conservation handbook81831419\\_1.pdf](https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer_public/6a/8f/6a8fa262-ca19-4703-a096-82bb3cc20878/d92 - water vole conservation handbook81831419_1.pdf) (Accessed: July 2025)

<sup>41</sup> Chanin P (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough. (Accessed: July 2025)

<sup>42</sup> [https://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook\\_compressed.pdf](https://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf) (Accessed July 2025)

<sup>43</sup> English Nature (2001) Great crested newt mitigation guidelines. [Online] Available at: [https://mokrady.wbs.cz/literatura\\_ke\\_stazeni/great\\_crested\\_newt\\_mitigation\\_guidelines.pdf](https://mokrady.wbs.cz/literatura_ke_stazeni/great_crested_newt_mitigation_guidelines.pdf) (Accessed: July 2025)

<sup>44</sup> Great Crested Newt Habitat Suitability Index. [Online] Available at: <https://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/file> (Accessed July 2025)

<sup>45</sup> Froglife (1999) Froglife Advice Sheet 10: Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. [Online] Available at: [https://www.wildcare.co.uk/media/wysiwyg/pdfs/froglife\\_advice\\_sheet\\_10\\_-\\_reptile\\_surveys.pdf](https://www.wildcare.co.uk/media/wysiwyg/pdfs/froglife_advice_sheet_10_-_reptile_surveys.pdf) (Accessed: July 2025)

<sup>46</sup> Harris S, Cresswell P and Jeffries D (1989) Surveying Badgers, Mammal Society. (Accessed: July 2025)

<sup>47</sup> MoRPh River Condition Assessment methodology (2016) [Online] Available at: <https://modularriversurvey.org/morph-rivers/> (Accessed: July 2025)

- 6.2.6 More detailed information regarding the above legislation, policy and guidance can be found in **Volume 3, Appendix 6.1: Legislation, Policy and Guidance**.

### 6.3 Consultation

- 6.3.1 This section provides a summary of the consultation undertaken to date regarding 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 (**Volume 3, Appendix 2.1: EIA Scoping Report**), 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 LSEs of the Proposed Development on Biodiversity and Nature Conservation.
- 6.3.3 A Scoping Opinion was received from the Planning Inspectorate on 3 June 2025 (**Volume 3, Appendix 2.2: EIA Scoping Opinion**).
- 6.3.4 Table 6.1 **Table 6.1** summarises how this Chapter of the Draft 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 Responses

Consultee	Issue Raised	How this is addressed	Where addressed in the Draft ES
The Planning Inspectorate	<p><b>ID 3.1.1: Protected Species – White Clawed Crayfish, Hazel Dormouse (All Phases)</b></p> <p><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. Scoping out of protected species (hazel dormouse and white-clawed crayfish) within the cable corridors.”</i></p>	<ul style="list-style-type: none"> <li>Hazel dormouse is referenced within the Scoping Opinion response; however, this species is geographically absent from South Yorkshire, with no records found within a 2 km data search. Intention to scope out this species from the assessment will be advised to Natural England following consultation.</li> <li>Consultation has taken place with the Environment Agency, and it has been agreed to include white-clawed crayfish in the assessment and to undertake field surveys within the Study Area where it is not possible to scope out effects on this species. A preliminary assessment is provided in this chapter, which will be updated within the ES.</li> <li>Further consultation with the Environment Agency will confirm the assessment methodology, approach and seek agreement on presenting evidence;</li> <li>Where applicable, the desk study will be expanded to cover the Cable Corridor Options in the Study Area and assessed in the ES.</li> </ul>	Section 6.4, Section 6.5 and Section 6.6 of this chapter
The Planning Inspectorate	<p><b>ID 3.1.2: International Statutory Designated Sites (All Phases)</b></p> <p><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></p>	<ul style="list-style-type: none"> <li>As advised in the Planning Inspectorate ‘Advice on Habitat Regulations Assessments’<sup>48</sup> a brief statement confirming that there are no pathways that could lead to effects on a European site from the Proposed Development will be included within a TA to support the ES. During a meeting on 30 July 2025 Natural England confirmed this approach was acceptable and would provide written comment in response to the statement.</li> <li>Natural England will be consulted on the wording of this statement.</li> </ul>	Consultation is in progress, and as a result, this is not addressed in the Draft ES, however, it will be addressed in the ES.
The Planning Inspectorate	<p><b>ID 3.1.3: Protected Habitats – Ancient Woodland (All Phases):</b></p> <p><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 an study area for the cable corridors has not been provided. Moreover, the Inspectorate notes that Scoping Report Figure 3.5 identifies ancient</i></p>	<ul style="list-style-type: none"> <li>The Draft ES includes an assessment of the potential effects of the Proposed Development on ancient woodland, veteran trees and other irreplaceable habitats.</li> <li>Avoidance measures have been included within the embedded mitigation.</li> </ul>	Section 6.8 of this chapter

<sup>48</sup> [Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments - GOV.UK](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/101222/nationally-significant-infrastructure-projects-advice-on-habitats-regulations-assessments.pdf)

DRAFT ENVIRONMENTAL STATEMENT

Consultee	Issue Raised	How this is addressed	Where addressed in the Draft ES
	<p>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 located within an appropriate Zone of Influence (Zoi) relating to the entire Site Boundary or provide evidence to demonstrate the absence of LSE including agreement with relevant consultation bodies.”</p>		
<p>The Planning Inspectorate</p>	<p><b>ID 3.1.4: National/Local Statutory Designated Sites:</b>                      ”Scoping Report Table 7.1 identifies designated sites located within the Area of Influence (Aoi) 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.”</p>	<ul style="list-style-type: none"> <li>Designated sites (international, national and local) in the Study Area of the Proposed Development have been presented in this Draft ES.</li> <li>Details of the designated sites for inclusion in the assessment have been discussed with Natural England (meeting 30 July 2025).</li> </ul>	<p>Section 6.5 of this chapter</p>
<p>The Planning Inspectorate</p>	<p><b>ID 3.1.5: Assessment of Fish and Aquatic Ecology:</b>                      ”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.”</p>	<ul style="list-style-type: none"> <li>Within the Study Area including Cable Corridor Options, where impacts to these features are not envisaged, trenched installation techniques will be used, and where sensitive features within aquatic habitats may be affected, these will be avoided through the use of trenchless crossing methods to a depth able to demonstrate no LSE (at least 5 m beneath main watercourses and at least 1.5 m below minor watercourses).</li> <li>An Assessment of effects on fish and aquatic ecology to be provided in the ES.</li> <li>Baseline information and aquatic surveys have been presented to the Environment Agency and consultation is ongoing.</li> </ul>	<p>Section 6.5 of this chapter</p>
<p>The Planning Inspectorate</p>	<p><b>ID 3.1.6: Confidential Annexes:</b>                      ”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.”</p>	<ul style="list-style-type: none"> <li>The badger survey has been provided as a confidential Technical Appendix (see <b>Volume 3, Appendix 6.3: Confidential Badger Survey Report</b>) and location data has been anonymised throughout this chapter.</li> </ul>	<p><b>Volume 3, Appendix 6.3: Confidential Badger Survey</b></p>
<p>Environment Agency</p>	<p>”There has been no assessment of fish and aquatic ecology at all within this scoping report and none is proposed. Table 7.3 does not include any reference to fish or aquatic ecology (beyond otters and waternoles) 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. 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</p>	<ul style="list-style-type: none"> <li>Within the Study Area including Cable Corridor Options, where impacts to these features are not envisaged, trenched installation techniques will be used, and where sensitive features within aquatic habitats may be affected, these will be avoided through the use of trenchless crossing methods to a depth able to demonstrate no LSE (at least 5 m beneath main watercourses and at least 1.5 m below minor watercourses).</li> <li>An Assessment of effects on fish and aquatic ecology to be provided in the ES.</li> <li>Baseline information and aquatic surveys have been presented to the Environment Agency and consultation is ongoing.</li> </ul>	<p>Section 6.5 to 6.8 of this chapter</p>

DRAFT ENVIRONMENTAL STATEMENT

Consultee	Issue Raised	How this is addressed	Where addressed in the Draft ES
	<p>vibration, and from watercourse crossings. This may also lead to a deterioration in WFD status.</p> <p>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):</p> <ul style="list-style-type: none"> <li>● impacts on fish from Electromagnetic fields where high voltage cables pass underwater watercourses</li> <li>● impacts from noise and vibration associated with construction</li> <li>● impacts from pollution and increased sedimentation</li> <li>● impacts from open cut crossing of watercourses and potential loss or damage to habitat</li> <li>● Impacts from light pollution on watercourses and aquatic ecology”</li> </ul>		
<p>Environment Agency</p>	<p>“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. 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.</p> <p>Both pieces of legislation should be listed as relevant in the biodiversity chapter of the ES and their impacts addressed within the assessment.”</p>	<ul style="list-style-type: none"> <li>● Reference to this legislation has been added within the draft ES</li> </ul>	<p><b>See Section 6.2</b></p>
<p>Environment Agency</p>	<p>“Environmental legislation does not list some recent (2024) legislation pertaining to BNG.</p> <p>Risk of not complying with current legislation, by not considering new environmental definitions such as ‘irreplaceable habitat’, along with related offences to said habitats.</p> <p>Please include the following legislation, policy and guidance: Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024, for completeness.”</p>	<ul style="list-style-type: none"> <li>● Reference to this legislation has been added within the draft ES</li> </ul>	<p><b>See Section 6.2</b></p>
<p>Natural England</p>	<p>“The development site is within or may impact on the following Site of Special Scientific Interest:</p> <ul style="list-style-type: none"> <li>● Crabtree Wood SSSI</li> <li>● Lindrick Golf Course SSSI</li> <li>● Anston Stones Wood SSSI</li> <li>● Sprotbrough Gorge SSSI</li> </ul> <p>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</p>	<ul style="list-style-type: none"> <li>● Designated sites (international, national and local) in the Study Area of the Proposed Development have been presented in this Draft ES.</li> <li>● Details of the designated sites for inclusion in the assessment have been discussed with Natural England (meeting 30 July 2025).</li> </ul>	<p>Mitigation Measures detailed in Section 6.7, assessment provided in Section 6.8 and summarised in Table 6.11: Summary of Preliminary Assessment</p>

DRAFT ENVIRONMENTAL STATEMENT

Consultee	Issue Raised	How this is addressed	Where addressed in the Draft ES
	<i>measures to avoid, minimise or reduce any adverse significant effects”</i>		
Natural England	<p><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></p>	<ul style="list-style-type: none"> <li>• Designated sites solely designated for their geological interest scoped out within this ES.</li> <li>• Designated sites (international, national and local) in the Study Area of the Proposed Development have been presented in this Draft ES.</li> <li>• Reference to the LNRS, mitigation, compensation, and enhancements for local sites provided within the ES.</li> <li>• Measures to be updated in the final ES, following consultation with conservation bodies and the development of final mitigation masterplan.</li> </ul>	Mitigation Measures detailed in Section 6.7, assessment provided in Section 6.8
Natural England	<p><i>Protected Species</i>  <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 separate protected species licence from Natural England or Defra may also be required”</i></p>	<ul style="list-style-type: none"> <li>• Information on protected species surveys, adherence to survey guidance, professional judgement on surveys and constraints, and licence requirements is provided within the draft ES.</li> </ul>	Baseline results provided in Section 6.6, mitigation measures detailed in Section 6.7, and assessment provided in Section 6.8.
Natural England	<p><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</i></p>	<ul style="list-style-type: none"> <li>• GCN Surveys within the Site have been completed of suitable waterbodies and no positive records of GCN have been recorded. Proportionate mitigation for GCN, including a precautionary Non-Licensed Method Statement (PNLMS) approach, the use of appropriate buffer distances, and avoidance measures has been referenced within the draft ES.</li> <li>• Should there be any requirement for DLL identified following consultation and completion of all assessments, this will be recorded within the ES.</li> </ul>	Baseline results provided in Section 6.6, mitigation measures detailed in Section 6.7, and assessment provided in Section 6.8

DRAFT ENVIRONMENTAL STATEMENT

Consultee	Issue Raised	How this is addressed	Where addressed in the Draft ES
	<p><i>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></p>		
<p>Natural England</p>	<p><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.</i>  <i>The ES should include details of:</i></p> <ul style="list-style-type: none"> <li>• Any historical data for the site affected by the proposal (e.g. from previous surveys)</li> <li>• Additional surveys carried out as part of this proposal</li> <li>• The habitats and species present</li> <li>• The status of these habitats and species (e.g. whether priority species or habitat)</li> <li>• The direct and indirect effects of the development upon those habitats and species</li> <li>• Full details of any mitigation or compensation measures 7</li> <li>• Opportunities for biodiversity net gain or other environmental enhancement"</li> </ul>	<ul style="list-style-type: none"> <li>• OMH has been identified within the Cable Corridor Options and is discussed within the draft ES. OMH will be addressed and assessed in the final ES where applicable.</li> </ul>	<p>Referenced in Section 6.8</p>
<p>Natural England</p>	<p><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></p>	<ul style="list-style-type: none"> <li>• The Draft ES includes an assessment of the potential effects of the Proposed Development on ancient woodland, veteran trees and other irreplaceable habitats.</li> <li>• Avoidance measures have been included within the embedded mitigation.</li> </ul>	<p>Mitigation Measures detailed in Section 6.7, assessment provided in Section 6.8 and summarised in <b>Table 6.11: Summary of Preliminary Assessment</b></p>

## Other Consultation

6.3.5 Table 6.2 **Table 6.2** summarises how this chapter of the Draft ES addresses key points from consultation undertaken outside of the EIA Scoping Opinion comments related to Biodiversity and Nature Conservation

**Table 6.2: Summary of Other Consultation**

Consultee	Date	Summary of Discussion	Where addressed in the Draft ES
Environment Agency	8 January 2025	Comments reported for individual teams within the Environment Agency on initial proposal information: <ul style="list-style-type: none"> <li>No known populations of WCC within 2 km – signal crayfish in the area; recommended speaking to local biological records centres to get records; and</li> <li>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.</li> </ul>	Section 6.5 and Section 6.6 of this chapter
Canal and Rivers Trust	13 January 2025	Impact on Biodiversity, Ecology and Habitats. Requirement for biodiversity studies to inform assessment of impacts on protected species. <ul style="list-style-type: none"> <li>Request for suite of biodiversity studies to inform assessment of impacts on protected species;</li> <li>Ensure assessment of impacts focused on fish and invertebrates from sediment movement from HDD vibration is scoped in; and</li> <li>Impacts from artificial lighting are considered in the assessment, with a focus on light sensitive species such as bats.</li> </ul>	Section 6.5 and Section 6.6 of this chapter
Yorkshire Wildlife Trust	29 January 2025	Impact on Biodiversity, Ecology and Habitats. Requirement for biodiversity studies to inform assessment of impacts on protected species and habitats. <ul style="list-style-type: none"> <li>Impacts through direct loss of habitats;</li> <li>Seek to include habitat creation and enhancement opportunities for wildlife;</li> <li>Indirect impacts of drainage or runoff or fragmentation of habitats;</li> <li>Impacts to habitats through damage or disturbance during construction/decommissioning;</li> <li>Disturbance or displacement of species;</li> <li>Impacts through loss of habitat to ground nesting birds;</li> <li>Impacts from perimeter fencing to wildlife movement;</li> <li>Cumulative affects with similar schemes; and</li> <li>Impacts (positive) from reduction in the effects of climate change.</li> </ul>	Section 6.5, Section 6.8 and Section 6.9 of this chapter. Cumulative affects with similar schemes have been discussed in <b>Volume 1, Chapter 17: Cumulative Effects.</b>
Environment Agency	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 <b>Volume 3, Appendix 6.1: Legislation Policy and Guidance.</b>
Environment Agency	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: <ul style="list-style-type: none"> <li>Direct harm to fish and aquatic species;</li> <li>Harm to their habitat through sedimentation;</li> <li>Impacts from pollution and increased sedimentation;</li> <li>Electromagnetic fields;</li> <li>Light pollution;</li> <li>Construction noise and vibration; and</li> <li>Watercourse crossings.</li> </ul>	Section 6.5 and Section 6.6 of this chapter
Environment Agency	9 July 2025	Review of scoping comments provided by the Environment Agency, and how and where they will be addressed in the ES. <ul style="list-style-type: none"> <li>Scope and approach to aquatic surveys (to be discussed further with the Environment Agency's; and</li> <li>Update on design refinement and potential watercourse crossings.</li> </ul>	Key scoping comments raised discussed in <b>Table 6.3</b> , and aquatic surveys discussed in Sections 6.6 and Section 6.7 of this chapter.
Yorkshire Wildlife Trust	15 July 2025	Introduction to the scheme and current understanding of the ecological baseline of the Proposed Order Limits. <ul style="list-style-type: none"> <li>Discussion regarding Brampton Common LWS, and any information that could be provided regarding its management;</li> <li>Information on the LNRS; and</li> <li>Potential enhancement opportunities for the LWS, and the wider Proposed Order Limits.</li> </ul>	Key scoping comments raised discussed in <b>Table 6.3</b> , and aquatic surveys discussed in Section 6.6 and Section 6.7 of this chapter.

**DRAFT ENVIRONMENTAL STATEMENT**

<b>Consultee</b>	<b>Date</b>	<b>Summary of Discussion</b>	<b>Where addressed in the Draft ES</b>
<i>Natural England</i>	30 July 2025	<p>Introduced our current understanding of, and survey findings to inform, the ecological baseline of the Proposed Order Limits.</p> <ul style="list-style-type: none"><li>• Confirmation to scope out International Designated Sites due to distance and no potential effects or effects pathways from the Proposed Development;</li><li>• Description of nearby Nationally Designated Sites and Locally Designated Sites;</li><li>• Proposed ecology survey approach for the Cable Corridor Options; and</li><li>• Intention of the Proposed Development in terms of Biodiversity Net Gain (BNG).</li></ul>	Section 6.4, Section 6.5 and Section 6.6 of this chapter

## 6.4 Ecological Receptors Scoped Out

6.4.1 Table 6.3 provides a summary of issues scoped out of this topic.

**Table 6.3: Ecological Receptors Scoped Out of the EIA**

Potential Effect / Topic	Proposal for Assessment within EIA	Development Phase	Rationale
European Designated Sites/Habitat Regulations Assessment	Scoped out	All phases	At over 15 km from the Site, there is no pathway and/or distal for there to be an LSE on International Designated sites, and the Site is sufficiently separated by distance and/or there are no pathways to National Designated sites for there to be an LSE.
National Designated Sites: <ul style="list-style-type: none"> <li>Ashfield Brickpits;</li> <li>New Edlington Brickpits; and</li> <li>Wood Lee Common</li> </ul>	Scoped out	All phases	Designated for their geological interest features only.
Protected Species - Hazel dormouse	Scoped out	All phases	Scoped out as no records of hazel dormouse returned during the desk study (see Section 6.6).

## 6.5 Assessment Methodology

- 6.5.1 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.

### Basis of the Assessment

- 6.5.2 **Volume 1, Chapter 5: The Proposed Development** presents a summary of the currently available design information for the Proposed Development which has been used to inform this assessment. This preliminary assessment is based on baseline surveys and design information available at the time of writing this chapter. The assessment will be developed and refined following statutory consultation, and as design information progresses. The final assessment will be presented within the ES.
- 6.5.3 On completion of all surveys, together with proposals for biodiversity enhancement, the assessment will be updated as a quantitative assessment in the ES.
- 6.5.4 Biodiversity enhancements detailed in the ES will be based on the assumption that at least 10% BNG will be achieved within the Proposed Development. Delivery of mitigation for the purposes of BNG will be within the Proposed Order Limits. Where applicable, the BNG will seek to align with LNRS and will seek to provide species specific benefits.
- 6.5.5 Ecological receptors could be affected by the construction, operation and maintenance and decommissioning of the Proposed Development, the descriptions of which are provided in **Volume 1, Chapter 5: The Proposed Development Description**.
- 6.5.6 The assessment of habitat losses is based on **Volume 3, Appendix 5.1: Indicative Operation Masterplan** and using 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. The use of worst-case parameters aligns with the 'Rochdale Envelope' approach, which is defined under **Section 5.2 of Volume 1, Chapter 5: The Proposed Development**.
- 6.5.7 Mitigation measures for ecological receptors are detailed in Section 6.7 of this chapter. On completion of the surveys, assessments, and consultation within the Proposed Order Limits, confirmed mitigation measures and detailed enhancement measures will be included within an Outline Construction and Environmental Management Plan (oCEMP) and Outline Landscape and Biodiversity Management Plan (oLBMP) to be submitted with the DCO Application, and after taking into account the residual effects, reported in the ES.
- 6.5.8 Habitat creation would occur within the Proposed Order Limits as identified within **Volume 3, Appendix 5.1: Indicative Operation Masterplan**; however, as these are to be finalised and confirmed in quantity and habitat type, they are excluded from the current BNG baseline assessment and will be included within the ES.

Information on the baseline BNG assessment is found in **Volume 3, Appendix 6.4: Interim Baseline BNG Report**.

- 6.5.9 The construction method for installation of the export Cable Corridor Options would typically be open cut trench and trenchless methods. For the open cut trenching method, the typical working width corridor of up to 75 m is anticipated (see **Volume 1, Chapter 5: The Proposed Development**), and the disturbance to habitats would be limited to within this corridor. The affected land along the Cable Corridor Options 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 Options.
- 6.5.10 With reference to information provided in relevant Draft ES Chapters and with reference to **Volume 3, Appendix 5.1: Indicative Operation Masterplan** and **Volume 3, Appendix 5.2: Indicative Construction Masterplan**, the following assumptions and understandings have been made about the Proposed Development's design and construction methods:
- Temporary primary construction compounds are confined to areas 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 may include land take of habitats of biodiversity value where allowance for suitable visibility splays and sufficient working width for vehicle movements are required;
  - Where access tracks cross watercourses, habitat either side of it of biodiversity value may be permanently lost, and riparian habitats and watercourse channel would be disturbed, damaged or lost;
  - Access to the Site would use major trunk roads to facilitate vehicular movements as close to the Proposed Order Limits as possible;
  - Some areas of the Proposed Development's associated infrastructure during construction may affect areas of biodiversity through disturbance and land take;
  - Access tracks would use gate entrances, but these may need to be widened to facilitate vehicular access leading to land take of grassland verge, hedgerows, woodland and trees;
  - Proposed access tracks would follow those currently on-site, but new access tracks would be required and existing ones would be upgraded, which may require upgrade to enable vehicular access (e.g. increase width and weight limits); and
  - Small areas of woodland would be lost within the Proposed Order Limits as part of cable laying and where access tracks are proposed.
- 6.5.11 It should be noted that this assessment also relies on input from other chapters of this Draft ES, including:
- **Chapter 5: The Proposed Development;**
  - **Chapter 10: Water Resources and Flood Risk;**
  - **Chapter 12: Air Quality;**
  - **Chapter 13: Traffic and Transport;** and
  - **Chapter 14, Noise and Vibration.**

## Study Areas

- 6.5.12 The Study Area 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 Aol 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*”<sup>30</sup>.
- 6.5.13 The Aol is established based on several considerations including the known ecological features within the Proposed Development and surrounding area, the nature of the Proposed Development during the construction, operation and maintenance, and decommissioning phases and potential cumulative effects<sup>30</sup>.
- 6.5.14 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 6.4**. 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 6.4: Extent of Study Areas (desk based) for Ecological Features**

Ecological Feature	Study Area	Reasoning
International Designated Sites	Proposed Order Limits, plus <ul style="list-style-type: none"> <li>● 10 km buffer on ecological features;</li> <li>● 20 km buffer on geese; and</li> <li>● 30 km buffer on bats</li> </ul>	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 Proposed Order Limits.
National Statutory Designated Sites	Proposed Order Limits, plus 5 km 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	Proposed Order Limits, plus 2 km 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.
Protected and Priority Species	Proposed Order Limits, plus 2 km buffer	Records of species beyond this distance are unlikely to be significantly associated with the habitats found within the Proposed Order Limits.
Priority Habitats (inc. ancient woodland and Veteran Trees)	Proposed Order Limits, plus 1 km buffer	Priority Habitats are unlikely to be affected by the Proposed Development beyond this distance.

Ecological Feature	Study Area	Reasoning
Ponds	Proposed Order Limits, plus 250 m buffer	Ponds are unlikely to be affected beyond this distance by the Proposed Development, with consideration to distance associated with the GCN assessment.
Watercourses	Proposed Order Limits, plus 200 m buffer	Excluding hydrological links, watercourses are unlikely to be affected by the Proposed Development beyond this distance with respect to other holt disturbance.

6.5.15 The survey methodologies, along with extent of Survey Areas for each ecological feature, based on species-specific guidance are set out in **Table 6.5**.

## Data Sources for Existing Baseline

### Data Collection Methods

6.5.16 Existing Biodiversity and Nature Conservation conditions within the Study Areas have been defined and identified using several approaches and sources.

6.5.17 The approaches for the desk-based assessment included a biodiversity data request of and provided by Derbyshire Biological Records Centre (DBRC) and Rotherham Biological Records Centre (RBRC). Other data sources for the desk-based assessment included:

- Defra’s Multi-Agency Geographic Information for the Countryside (MAGIC) mapping database;
- Ordnance Survey (OS) Online Mapping;
- Centre for Ecology and Hydrology (CEH) Hedgerow Database; and
- The Woodland Trusts Ancient Tree Inventory (ATI).

6.5.18 The approaches for each existing baseline assessment are in line with the relevant legislation, policy and guidance outlined in Section 6.2 and detailed in **Volume 3, Appendix 6.1: Legislation, Policy and Guidance**. Full methodologies to the above are found within Technical Appendices 6.2 to 6.10.

6.5.19 Baseline surveys within the Site and corresponding Survey Areas are in the process of being completed by September 2025 within the Site and anticipated to be completed of the Cable Corridor Options and included in the ES. Survey methods on the Cable Corridor Options and the corresponding Survey Areas are detailed further in paragraphs 0 to 6.5.35.

6.5.20 Furthermore, following the Scoping Opinion from the Planning Inspectorate (the Inspectorate), the Environment Agency and other consultees, further aquatic baseline assessments will also be completed within the relevant Survey Areas, with the methodologies agreed upon in advance with the EA. The assessment methodology and the results will be included in Technical Appendices to support the ES.

6.5.21 The survey scope and surveys completed to date covering the Site and highlighted Survey Areas are summarised below in **Table 6.5**Table 6.5.

**Table 6.5: 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 LPs, following UKHab classification methodology. Condition assessments completed as per the Statutory Biodiversity Metric. Survey 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. Survey Area covering the Site and 30 m outside of it.	All high suitability habitats were surveyed in December 2024. Surveys within addition LPs within the Site are ongoing. Results will be included in the ES.
Winter Bird Survey	<p>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.</p> <p>Target species are defined as:</p> <ul style="list-style-type: none"> <li>All waders and wildfowl (excluding feral / domestic birds, mallard, Canada goose and greylag goose);</li> <li>Species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);</li> <li>Species listed on Annex I of the European Union Birds Directive</li> <li>Birds of Conservation Concern red list species (Stanbury et al., 2021); and</li> <li>Species of Principal Importance listed on the NERC) Act 2006.</li> </ul> <p>Survey Areas specified for each bird species are highlighted in the <b>Volume 3, Appendix 6.5: Wintering Bird Survey Report</b>.</p>	Completed between October 2024 and March 2025 within the Site.
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. Survey Areas specified for each bird species are highlighted in the <b>Volume 3, Appendix 6.6: Breeding Bird Survey Report</b> .	Completed between April and June 2025 within the Site and adjacent fields, 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. Survey Areas specified for each bird species are highlighted in the <b>Volume 3, Appendix 6.7: Confidential Ornithology Report</b> .	Checks of features potentially suitable for nesting barn owl were completed within the Site between May and July 2025
GCN HSI and eDNA Assessment	<p>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 being scoped out of further survey from the Study Area, 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.</p> <p>Assessment of accessible waterbodies both within the Site and within a 250 m 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 &amp; Gibson, 2003), the <i>Great Crested Newt Conservation Handbook</i> (Langton, Beckett &amp; Foster, 2001), and Oldham <i>et al</i> (2000). Survey Area covering the Site and 250 m outside of it.</p>	<p>GCN HSI assessments were undertaken of 12 ponds within the Site and within a 250 m buffer of the Site (i.e. the Survey Area), where accessible.</p> <p>Great crested newt eDNA surveys of nine suitable ponds were undertaken within the eDNA season (15 April to 30 June 2025).</p> <p>Access to 19 ponds outside Site but within the Study Area could not be confirmed following access requests and no further survey assessments commenced.</p>
Reptile Surveys	Deployment of artificial refugia in suitable habitat (e.g. grassland banks, or field margins), in April to May 2025 and September 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. Survey Area covering the Site.	Reptile surveys within the Site commenced in April 2025, before a cessation at the end of May, when on average 3 or 4 surveys had been completed across the Site. The remaining reptile surveys will recommence in suitable temperatures and weather conditions in September 2025 and results included in the ES.

**DRAFT ENVIRONMENTAL STATEMENT**

Survey Type	Methodology	Survey Status
Otter and Water Vole Surveys	<p>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.</p> <p>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 will be completed for water vole based on suitable watercourse habitats being identified.</p> <p>The surveys seek to follow the Water Vole Field Signs and Habitat Assessment guidance, and The Water Vole Mitigation Handbook by The Mammal Society. Survey Area covering the Site and 200 m outside of it for otters and 10 m outside of it for water vole.</p>	<p>Surveys within the Site started in April 2025 and are ongoing. Where suitable habitats have been identified during the first survey visit, second survey visits will be completed of watercourses before the end of September 2025 when water vole populations are still elevated and distribution of this species is maximised. Results will be included in the ES.</p>
River Condition Assessments/MoRPh	<p>Modular river physical surveys to be completed on all suitable watercourses. Once completed, the results of the MoRPh surveys will help inform, and be incorporated into, the statutory BNG assessment for the Proposed Development. The MoRPh assessment follows best practice guidance. Survey Area covering the Site and minimum 10 m outside of it.</p>	<p>Surveys within the Site are ongoing. Surveys started in May 2025 and are due to be completed in September 2025. Findings will be detailed in an updated Technical Appendix and addressed in the ES.</p>
Hedgerow Surveys	<p>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. Survey Area covering the Site.</p>	<p>Surveys within the Site are ongoing. Surveys started in May 2025 and are due to be completed in September 2025. Findings will be detailed in an updated Technical Appendix and addressed in the ES.</p>
Bat Surveys – GLTA	<p>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 to be completed during an optimal period. Follows Bat Conservation Trust Good Practice Guidelines. Survey Area covering the Site.</p>	<p>Completed in Whitestone 1 (W1) and Whitestone 2 (W2) in Winter 2024 to early spring 2025. Whitestone 3 (W3) to be completed in Autumn 2025. Findings will be detailed in an updated Technical Appendix and addressed in the ES.</p>
Bat Surveys – Preliminary Roost Assessment	<p>Daytime building inspections of a building 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. Survey Area covering the Site.</p>	<p>Surveys are scheduled for Summer 2025, with findings to be detailed in an updated Technical Appendix and addressed in the ES.</p>
Bat Surveys – Remote Monitoring	<p>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 is proposed. Remote monitoring follows Bat Conservation Trust Good Practice Survey Guidelines. Survey Area covering the Site.</p>	<p>Surveys within the Site are ongoing. Bat Survey data is based on data collected and analysed in April and May 2025. Further collection and analysis of data for the remote monitoring surveys and will continue monthly from June through to September 2025. Results will be included in the ES.</p>
Bat Surveys – Night-time Walkover Surveys (Transects)	<p>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 will be varied to ensure surveyors arrive at the same habitats at different times to ensure a suitably representative sample of bat activity and species is recorded in each location.</p> <p>Surveys will commence with vantage point (VP) surveys at strategically chosen locations to best capture bat emergences at sunset. Survey Area covering the Site.</p>	<p>Surveys within the Site are ongoing. Surveys have been completed for the spring nighttime walkover/transect survey at the time of writing, with nighttime walkover/transect surveys to be completed in Summer and Autumn 2025. Results will be updated in the Technical Appendix and assessed in the ES.</p>
Aquatic Ecology Assessments	<p>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 will be completed.</p>	<p>To be completed in autumn 2025. Findings will be detailed in a Technical Appendix and addressed in the ES.</p>

DRAFT ENVIRONMENTAL STATEMENT

Survey Type	Methodology	Survey Status
	<p>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>) will be completed in locations where there is a requirement for a reduced depth trenchless crossing (&lt;2.5 m) or, where widening of existing crossings or culverting or a cut across wet ditches or watercourses cannot be ruled out. Survey Area covering the Site.</p> <p>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 Proposed Order Limits, an eDNA assessment of watercourses that have hydrological connectivity to an off-site White Clawed Crayfish record will also be completed of accessible watercourse locations between the record and the Site (less than 2.5 km).</p> <p>The above approach is to be confirmed following consultation with EA.</p>	

## Cable Corridor Options

- 6.5.22 At this stage in the design process, the exact cable route is not defined therefore Cable Corridor Options have been identified within which the cables would run. These corridors serve as boundaries for environmental surveys, which will inform the ultimate routing of the cables. The Cable Corridor Options detailed in this Draft ES are therefore wider than would be required for the laying of the cables. These corridors will be refined as part of the design, consultation and EIA process and will be assessed within the ES.
- 6.5.23 A desk based UKHab assessment of Cable Corridor Options (**Volume 3, Appendix 6.2: UK Habitat Survey Report**) was undertaken in to prioritise areas for assessment, and site-based Extended UK Habitat Classification (UKHab) Survey strategy. Based on the findings of the desk-based assessment, the following targeted survey scope for the Cable Corridor Options is proposed:
- A UKHab and condition assessment of all accessible land of habitat value within the Cable Corridor Options and where relevant up to 30 m beyond the approximate 75 m corridor width, to collect baseline habitat inventory and condition assessment information. The survey will pay close attention to any potential Habitats of Principal Importance or local priorities, including hedgerows and broadleaved woodland. The UKHab standard and protocol will be employed in order to provide a baseline for Biodiversity Net Gain assessments. To be scheduled for completion by the end September 2025. Results will be included in the ES.
  - RCA/MoRPh modular river (physical) survey will be undertaken of all watercourses crossed by the Cable Corridor Options, primarily to inform BNG requirements. The ecological sensitivities of each watercourse will be considered when determining the appropriate cable installation method at each crossing point. Surveys will focus on 10-40 m sections of watercourse habitats of value, with the results informing the BNG assessment. Further baseline assessments will be conducted on a case by-case basis, as determined by the likelihood of impacts. Surveys to be completed before the end of winter 2025 in lower flows. Results will be included in the ES.
  - Hedgerow surveys will be undertaken following established guidelines of the hedgerows crossed by the Cable Corridor Options to determine their habitat value and whether they are classified as 'Important'. This will identify where permission will need to be sought from the LPA for impacts in locations where hedgerows are classified as important, and avoidance measures are not possible. This survey will also support completion of a Condition Assessment for the purposes of helping to inform the BNG assessment baseline. Surveys are to be completed by the end of the peak botanical growth season in September 2025. Results will be included in the ES.
  - A high-level qualitative assessment of habitat suitability for protected species/groups (e.g. bats, badgers, birds) will be undertaken at the same time as the hedgerow assessment to identify those which may be at risk from being impacted by the Cable Corridor Options proposals.
- 6.5.24 Targeted surveys will be completed along the Cable Corridor Options 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 to inform the assessment, these are also advised below.

### **Bats**

- 6.5.25 The Cable Corridor Options will result in predominantly temporary or minimal, but reversible impacts to foraging and commuting habitats for bats over the short term and in very restricted localities. As such, impacts to foraging and commuting bats are expected to be negligible.
- 6.5.26 Individual trees may need to be felled, pruned or disturbed during cable laying that may impact legally protected bat roosts. A GLTA of trees identifying no further constraints with regards to bats, FAR, PRF-I, and PRF-M status will be completed. Subject to the final design and results of the GLTA surveys, where avoidance of bat roosts is not possible, further surveys and assessments will be undertaken to confirm whether any licensing will be required and to support the ES. Surveys are anticipated to be completed by winter 2025.
- 6.5.27 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 is not planned to inform the ES.
- 6.5.28 Remote monitoring using static detectors is not proposed as it is assumed areas of woodland and hedgerow potentially used by foraging and commuting bats within the Cable Corridor Options will be retained via use of avoidance measures (e.g. micro siting cable, trenchless crossing). Preliminary Roost Assessments of buildings are not proposed as no structures have been identified within the Cable Corridor Options.

### **Great Crested Newt**

- 6.5.29 Ponds identified within 250 m of the Cable Corridor Options will have a HSI assessment completed to confirm their suitability for supporting GCN. HSI assessments are anticipated to be undertaken in autumn 2025, and the results of which will confirm whether these ponds and this species can be scoped out of further assessment. Results will be included in the ES. If after the application of avoidance measures (e.g. micro siting of Cable Corridor Options, fencing off habitats, use of trenchless crossings) cannot avoid impacts to GCN, then a District Level License (DLL) will be sought.

### **Otter and Water Vole**

- 6.5.30 Resting places of otters and water vole burrows are legally protected. Surveys will confirm the requirement for avoidance measures. An assessment for signs of otter and water vole (including resting places/holts) will be completed in suitable watercourse crossings up to 200 m and 10 m from the Cable Corridor Options, respectively. Habitats will initially be assessed for their suitability, and if suitable, a presence/absence survey will be undertaken. Where habitat is suitable, or signs of species are found, a second survey will be undertaken where possible. Subject to land access, surveys are anticipated to take place in autumn 2025. Results will be included in the ES.

### **Badger**

- 6.5.31 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 is therefore proposed of suitable habitats

to identify setts and signs of badgers within and up to 30 m of the Cable Corridor Options. The walkover survey will support the identification of mitigation measures and inform Whitestone Net Zero Ltd (the Applicant) of any potential licensing requirements. The survey is anticipated to be scheduled when habitat vegetation has died back between the autumn and winter of 2025, and as a result, the results will be presented in the ES.

### Reptiles

- 6.5.32 Given the temporary nature of works associated with the Cable Corridor Options 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 Corridor Options are proposed to inform the ES.

### Aquatic Assessments

- 6.5.33 A search of the Environment Agency's fisheries database and other sources will be completed to identify the presence of fisheries species and white clawed crayfish (*Austropotamobius pallipes*) highlighted in the Scoping Opinion. Where watercourses will be subject to an open cut or shallow trenchless crossing approach, a multi-species fisheries eDNA sample is proposed to be taken and analysed for the presence or absence of these ecological features. These assessments are anticipated to be completed in suitable flow conditions before winter 2025. Results will be included in the ES.

### Birds

- 6.5.34 The Cable Corridor Options 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 Corridor Options are not planned to inform the ES. Similarly, the potential effects and habitat value is comparable for breeding birds, however, nesting birds are subject to legal protection and precautionary mitigation will protect active nests and birds from harm. Precautionary 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 CEMP. As such, breeding bird surveys of the Cable Corridor Options are also not planned to inform the ES.
- 6.5.35 The above assessments and scope, and the need for further assessments, has initially been discussed and targeted strategy presented to Natural England, and consultation is currently ongoing. As a result, the agreed assessment scope will be detailed in the ES and its Technical Appendices.

### Data Sources for Future Baseline

- 6.5.36 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 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.

6.5.37 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 Options. This BNG baseline assessment may also be subject to future baseline changes noted above. Where changes to the future baseline are identified, the BNG baseline will need to be reviewed and amended where required to reflect these changes.

## Impact Assessment Method

### Identification of Important Ecological Features

- 6.5.38 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.
- 6.5.39 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.
- 6.5.40 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.
- 6.5.41 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.
- 6.5.42 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

- 6.5.43 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.
- 6.5.44 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 through all 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.
- 6.5.45 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.
- 6.5.46 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 have been applied. The Aol for each broad environmental change are specified below.
- Temporary or permanent land take and habitat degradation - Aol within the Proposed Order limits for habitats and sedentary species; mobile species may be affected beyond that if the land within the Proposed 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 Proposed Order Limits for habitats and sedentary species; mobile species may be affected beyond that if land within the Proposed 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 250 m 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 250 m 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 **Volume 1, Chapter 10: Water Resources and Flood Risk**;
- Accidental spread of invasive non-native species (INNS) due to construction activity - Aol for habitats and species is up to 250 m from the Proposed 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 250 m from the Proposed Order Limits and up to 500 m 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 up to 5 m from transmission cabling.

6.5.47 The avoidance of LSEs through design are implicitly considered when defining each Aol. Furthermore, when scoping ecological features in, or out, from further assessment, mitigation measures associated with good practice have been taken into account (for example dust suppression, appropriately scheduled vegetation removal etc.) (See Section 6.7 of this chapter).

### Temporal Scope

6.5.48 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 **Volume 1, Chapter 5: The Proposed Development**, with a summary relevant to biodiversity provided below:

- Construction: Years 1 to 3;
- Operation and Maintenance: Years 4 to 60; and
- Decommissioning: Years 61 to 62.

6.5.49 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

6.5.50 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’*.

6.5.51 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.

6.5.52 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

6.5.53 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 guidelines<sup>30</sup> and our professional experience and are summarised in **Table 6.6** Table 6.6 below.

**Table 6.6: Magnitude of the Environmental Change**

Magnitude	Criteria and Resultant Effect
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.
Medium	The change permanently (or over the long term) affects the conservation status of a habitat/species reducing or increasing the

Magnitude	Criteria and Resultant Effect
	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 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.
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.
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.

6.5.54 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.

6.5.55 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 CIEEM<sup>30</sup> 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”*.

6.5.56 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.

- 6.5.57 When considering designated sites, it is their integrity that is considered. This is defined by CIEEM<sup>30</sup> 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.”*
- 6.5.58 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.
- 6.5.59 Where likely significant adverse effects are identified, mitigation measures have been incorporated into the design where practicable. These are described in Section 6.7 of this chapter where they are specific to a particular effect, in the assessment of LSEs below.

### **Defining the Effect**

- 6.5.60 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.

### **Assumptions**

#### **Exclusions and Limitations**

- 6.5.61 This Draft ES is based on baseline and design information available at the time of writing this chapter. The assessment will be developed and refined following statutory consultation and as additional information becomes available, and the final assessment presented within the ES.
- 6.5.62 The baseline conditions are derived from several desk and field-based studies, some of which are complete and others still in progress.
- 6.5.63 Where the Proposed Development’s designs and details require further development, either assumptions have been made based on professional judgment and on a worst-case scenario basis, or, in the event that it is not possible to make complete assumptions, a full assessment has not been made.
- 6.5.64 This assessment is an iterative process and will be both expanded and clarified as survey data is collected, analysed and reported on, and designs are further developed. This process will be carried out in conjunction with relevant consultees and third parties as necessary to achieve the most robust assessment outcome.
- 6.5.65 The extent of the land to be included within the Site changed several times over the duration of survey visits, incorporating new areas and removing others. These areas were incorporated into the survey programme to ensure sufficient coverage.
- 6.5.66 Further individual survey and assessment limitations are included in each Technical Appendix.
- 6.5.67 In the absence of a completed Extended UKHab survey of the Cable Corridor Options, a desk-based study of the area has been completed, and a framework for appropriate survey to assess the Cable Corridor Options has been developed.
- 6.5.68 In the absence of a completed set of bat activity surveys within the Study Area, and full analysis of data from them, an assumption of the suitability for foraging

and commuting bats has been made. This is informed by preliminary analysis of the findings from surveys completed to date, and the habitat context. The assessments will be updated once surveys are completed for the ES.

- 6.5.69 Site access was constrained for some breeding bird survey visits (see **Volume 3, Appendix 6.6: Breeding Bird Survey Report**). 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 constrained.
- 6.5.70 In the absence of a completed reptile survey within the Study Area, an assumption of suitability for basking, foraging and sheltering reptiles has been made. This is informed by preliminary analysis of the findings from surveys completed to date, and the habitat context. The assessments will be updated once surveys are completed for the ES.
- 6.5.71 In the absence of completed GCN surveys within the whole of the Proposed Order Limits, an assumption of the suitability for GCN has been made. This is informed by preliminary analysis of the findings from surveys completed to date, and the habitat context. The assessments will be updated once surveys are completed for the ES.

## 6.6 Baseline Conditions

### Desk Study

#### Designated Sites

##### International Designated Sites

- 6.6.1 The nearest designated area of international importance is the South Pennine Moors Special Area of Conservation (SAC) / Special Protection Area (SPA). The South Pennine Moors SPA / SAC is located approximately 15.7 km southwest of the Proposed Order Limits. Additionally, no SPA or Ramsar sites that contained geese as part of the qualifying interest are present within 20 km of the Proposed Development and no SACs with bats as a qualifying feature are present within 30 km.
- 6.6.2 The Scoping Opinion has confirmed that these designated sites of international importance are scoped out of further assessment, and that there is no pathway for the qualifying interests of those designations to be affected by the Proposed Development. As a result, they are not considered further within the assessment. A brief statement confirming that there are no pathways that could lead to effects on a European site from the Proposed Development will be included within the DCO Application.

##### National Designated Sites

- 6.6.3 The nearest national designated site is Crabtree Wood Site of Special Scientific Interest (SSSI). 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 5 km of the Proposed Order Limits, 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.

- 6.6.4 There is the potential for air quality effects from the Proposed Development, for example, emissions from construction transport, on the features for which these sites are designated. Furthermore, there is the potential for hydrological links to designated sites that have open water as a designated feature.
- 6.6.5 A summary of the national designated sites within 5 km of the Proposed Order Limits that have not been previously scoped out can be found in **Table 6.7** (see also **Volume 2, Figure 6.2**).

**Table 6.7: Nationally Designated Sites within 5 km of the Proposed Order Limits**

Designated Site (SSSI)	Distance from Proposed Development	Designated features
Crabtree Wood	0.9 km southeast of W3	One of the two best base-rich flushes in Derbyshire
Anston Stones Wood	1.3 km 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	2.5 km southeast W2	Calcareous grassland, scrub, woodland, and two limestone quarries
Denaby Ings	2.75 km northeast W1	Macrophytes, open water, neutral grassland, whooper swan, and invertebrates
Ginny Spring	3.3 km east W3	Magnesium limestone and associated ground flora. Alder/birch flush.
Moss Valley	4.1 km west W3	Geological interest. Wet woodland and flora, invertebrates, white clawed crayfish, GCN, grass snake, and ornithological interests
Roche Abbey Woodlands	4.3 km east W2	Alder & Willow Carr. Ancient woodland and ground flora
Maltby Low Common	4.8 km east W2	Acid, neutral, calcareous grasslands and flora. Terrestrial Invertebrates

### Local Designated Sites

- 6.6.6 Brampton Common LWS lies 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 Proposed Order Limits near W1 (see **Volume 2, Figures 6.1 and 6.1.2**).
- 6.6.7 A summary of the local designated sites within 2 km of the Proposed Order Limits can be found in **Table 6.8** Table 6.8.

**Table 6.8: Local Designated Sites within 2 km of the Proposed Order Limits**

Designated Site	Distance & Direction from Study Area	Designated features
Brampton Common LWS	Within W2	Designated for ancient/species-rich hedgerow and breeding skylark
Firsby Reservoir LNR	Adjacent to the southwest W1	Standing open water
Ulley Country Park LWS CP	Adjacent to central W2	Designated for neutral grassland, acid grassland & wet grassland, lowland heath, acid woodland & wet woodland
Killamarsh Pond LWS	10 m north of W3	Standing open water
Anston Stones Wood LNR	60 m southeast of W2	Limestone woodland, calcareous grassland, scrub and wetland
Pebley Oaks Lane Proposed LWS	95 m south of W3	Mixed broadleaved woodland
High Moor LWS	250 m west of W3	Habitat mosaic
Pebley Reservoir LWS	330 m southeast of W3	Standing open water - lake
Park Brook Grasslands LWS	350 m southwest of W3	Unimproved acid grassland
High Moor Pond LWS	475 m west of W3	Lowland swamp
Hut Lane Meadows LWS	500 m west of W3	Unimproved neutral grassland
Comberwood Farm Pond pLWS	525 m southwest of W3	Not stated
Crabtree Wood LWS	550 m southeast of W3	Secondary broadleaved woodland
Nitticarhill Wood LWS	565 m southeast of W3	Ancient woodland – plantation broadleaved
Comberwood Farm Meadow LWS	600 m southwest of W3	Semi-improved neutral grassland

Designated Site	Distance & Direction from Study Area	Designated features
Hawke Wood Pond LWS	825 m south of W3	Reptile/amphibian assemblage – great crested newt
Crabtree Wood LNR	0.9 km southeast of W3	Standing open water, green corridor for wildlife movement
Norwood Triangle Complex LWS	960 m north of W3	Scrub
Chesterfield Canal LWS	985 m northwest of W3	Derbyshire Red Data Book (DRDB) species. Lowland swamp
Butcherlawn Pond LWS	1.0 km south of W3	Invertebrate assemblage - odonata
Catcliffe Flash LNR	1.1 km west of W2	Flowing river habitat
Car Plantation LWS	1.1 km southeast of W3	Secondary broadleaved woodland
Longrybank Wood LWS	1.2 km south of W3	Ancient woodland – plantation broadleaved
Thomson’s Holt Pond LWS	1.3 km south of W3	Standing open water - pond
Barlborough Hall South Pond pLWS	1.4 km south of W3	Not Stated
High Wood and Thompson’s Holt LWS	1.4 km southwest of W3	Ancient semi-natural oak woodland
Old Denaby Wetland LNR	2.0 km northwest of W1	River, oxbow and subsistence wetland wildlife

## Protected and Priority Species

- 6.6.8 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 on the Site. 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*).
- 6.6.9 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*).
- 6.6.10 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 Corridor Options

6.6.11 The habitats observed through analysis of aerial imagery along the Cable Corridor Options are contiguous to the Site and would also be likely to support or have the potential to support similar species. Habitat condition assessments will be undertaken on habitats which were identified as having ecological value and will further inform the scope of species surveys. Subject to confirmation through survey, the high-level interpretation of aerial imagery has identified the following broad habitat types in **Table 6.9** Table 6.9.

**Table 6.9: Desk Based UKHab Assessment of the Cable Corridor Options**

Habitat Type (UKHab code)	Area (ha) and percentage cover of Cable Corridor Options
Cropland (c1a, c1c, and c1c7)	386.7 ha, 72.6%
Grassland (g, g3c, g4)	83 ha, 15.5%
Urban (u1b, u1b5, u1b6, u1c, u1e, and u1f)	28.4 ha, 5.3%
Woodland and forest (w1, w1f7, w1g, w1h, w2c)	25.9 ha, 5%
Heathland and shrub (h3, h3h)	7 ha, 1.3%
Hedgerow (h2, h2a)	23.5 km
Wetland (f2)	1.4 ha, 0.3%
Rivers and lakes (r, r1g, r2, r2b)	0.2 ha, 0.04% and 4.9 km length
Sparsely vegetated land	0.2 ha, 0.03%

- 6.6.12 Whilst confirmation through a targeted ground based UKHab assessment will confirm the habitat types and biodiversity value, from the results of the desk-based assessment, habitats identified of negligible biodiversity value included cropland and urban habitat categories, which represented approximately 77.9% of the Cable Corridor Options.
- 6.6.13 Grassland habitats of different types offered low to moderate value to biodiversity and comprised a further 15.5% of the total Cable Corridor Options. Whilst hedgerow, woodland and forest habitat categories comprised a 23.5 km length and 6.6% area of moderate to high value.
- 6.6.14 Further detailed information on habitats is found in **Volume 3, Appendix 6.2: Interim UK Habitat Survey Report**.

### Baseline Survey Findings

- 6.6.15 Further information on the Baseline Surveys for species and habitats within the Site and Study Areas are found in **Technical Appendices 6.2 to 6.10**, as listed in Paragraph 6.1.7.
- 6.6.16 At the time of writing, no baseline surveys have been completed within the Cable Corridor Options, with further assessments to be completed and the results included in the Technical Appendices and summarised in the Draft ES sections below.

### Habitats – Site

- 6.6.17 As identified under the **Volume 3, Appendix 6.2 UK Habitat Survey Report**, 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 **Volume 2, Figure 6.2.3** and include:
- Native Hedgerows;
  - Wet Woodland (Deciduous woodland);
  - Arable Field Margins; and
  - Eutrophic Standing Waters.
- 6.6.18 A UKHab assessment and condition assessment has been completed of the Study Area, with full results provided in **Volume 3, Appendix 6.2 UK Habitat Survey Report** and summarised below.
- 6.6.19 The land surveyed was predominantly (approximately 45%) cereal (e.g. wheat, barley, and oat) and (approximately 18%) 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 2 m to 6 m 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 (approximately 12%) included set-aside, horticultural land, and other arable land.

- 6.6.20 Modified grassland comprised approximately 14.3% 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 1.51%) 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.
- 6.6.21 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.
- 6.6.22 Larger rivers and waterbodies (e.g. reservoirs) lie adjacent to, or in within the Site Limits. However, several smaller watercourses and ponds were also recorded within the Site.

### **Ancient Woodland and Veteran Trees**

- 6.6.23 There is no ancient woodland within the Site. Only small, fragmented areas of lowland mixed deciduous woodland and broadleaved deciduous woodland (approximately 1%) were recorded within the Site. Smaller areas of native scrub (approximately 0.5%) were found in scattered locations within the Site, and typically comprised blackthorn, hawthorn, and bramble species (*Rubus* sp.).

### **Hedgerows**

- 6.6.24 Hedgerow surveys are in the process of completion in locations where CEH hedgerow data and the results of the UKHab assessment, suggest that an Important Hedgerow may be present as defined by the Hedgerow Regulations 1997.
- 6.6.25 The location of the hedgerow surveys was further focussed within the Site where infrastructure has the potential to impact these hedgerows, including Brampton Common LWS, for which species rich hedgerows are a designation feature.
- 6.6.26 The infrastructure included track crossing points, tracks, road access points (visual splays and entrance enlargement requirements), and where gate entries are proposed.
- 6.6.27 The results of the hedgerow surveys will inform the requirement for either notification or permission from the LPA to remove hedgerows where avoidance measures cannot be applied.
- 6.6.28 On completion of the hedgerow surveys, a full assessment will be made and will be included in the ES.

### **River Condition Assessments/MoRPh**

- 6.6.29 River Condition Assessments/MoRPh assessments are in the process of being completed by MoRPh trained and registered surveyors within the Site where access is agreed and habitats are suitable for this assessment.

- 6.6.30 On completion of the River Condition Assessment/MoRPh assessments, a completed BNG assessment report will be produced as a Technical Appendix to be included in the ES.

### Species

#### Bats

- 6.6.31 Further information on the results for bat surveys is detailed in **Volume 3, Appendix 6.10: Interim Bat Survey Report**, with results shown on **Volume 2, Figure 6.10.1 to 6.10.3**. However, summary information on the bat surveys completed to date is outlined below.
- 6.6.32 Bat surveys are in the process of being completed where required by bat licensed surveyors within the Site.
- 6.6.33 GLTA have predominantly been completed in W1 and W2 where access has permitted amounting to 83% of all identified trees within the Site.
- 6.6.34 Bat call analysis has been completed on most transects for spring 2025 and remote monitoring for April and May 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, CR 1a, with 235 bat passes recorded.
- 6.6.35 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. During a bat transect survey within W1 the presence of hedgehog and barn owl were identified during the survey as incidental records.
- 6.6.36 At the time of writing, 115 trees have been surveyed using GLTA within W1, W2, W3. Of these 75 trees were categorised as FAR, 14 trees as not requiring further assessment and were scoped out, and 26 trees as containing PRFs.
- 6.6.37 On completion of the bat surveys and data analysis, a full assessment will be made and will be included in the ES. A preliminary assessment on foraging, commuting and roosting bats is included in this Draft ES.

#### Great Crested Newt

- 6.6.38 Further information on the results for GCN surveys are detailed in **Volume 3, Appendix 6.8: Interim Great Crested Newt Report**, with results shown on **Volume 2, Figures 6.8.1- 6.8.4: GCN – HSI and eDNA Assessment**. However, a summary of the GCN surveys is outlined below.
- 6.6.39 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 Sites refinement, they are now outside of the Site. Although they are outside of the Site, they remain within the Study Area for GCN, and therefore, a HSI assessment of these ponds was possible.

- 6.6.40 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.
- 6.6.41 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.
- 6.6.42 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.
- 6.6.43 Nineteen ponds were identified within the 250 m Study Area of the Site but could not be accessed, so the status of GCN presence or absence in these ponds remains unknown. However, given that no records of GCN have been recorded within the 250 m buffer in the Study Area 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.

### **Otter and Water Vole**

- 6.6.44 As of the 6<sup>th</sup> June, water vole and otter surveys had just started within the Study Area and have been continuing and will extend into the Cable Corridor Options, where habitats may be suitable.
- 6.6.45 Otter spraints and signs have been recorded within the Study Area, but no holts or resting places. 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.
- 6.6.46 Mink has been found within watercourses across the Study Area, 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.
- 6.6.47 Suitability for water vole has been found in places with macrophyte forage and sheltering opportunities on the bankside. 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.
- 6.6.48 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.
- 6.6.49 No evidence of water vole has been identified within the Study Area of the Site at the time of writing, with surveys ongoing.
- 6.6.50 On completion of the water vole and otter surveys, a Technical Appendix will be produced, and a full assessment will be made to be included in the ES.

### Reptiles

- 6.6.51 Further information on the results for reptile surveys are detailed in **Volume 3, Appendix 6.9: Interim Reptile Survey Report**, with results shown on **Volume 2, Figure 6.9.1** and **Figure 6.9.2**. A summary of the reptile surveys completed to date is outlined below.
- 6.6.52 A total of ten records of grass snake (*Natrix natrix*) have been recorded during surveys in W1, W2, and W3 during the surveys or as incidental records whilst completing other assessments. Additionally, three records of an unidentified snake species were recorded in W3. During the surveys, common toad (priority species) was recorded under a refugia in W2.
- 6.6.53 Consistently very low numbers of reptiles have been recorded per survey visit and only one species: grass snake having been recorded.

### Badger

- 6.6.54 Due to issues around persecution, evidence of badger setts and their field signs are excluded from the body of the Draft ES and have been reported in **Volume 3, Appendix 6.3 Interim Confidential Badger Survey Report** which is made available to appropriate stakeholders.

### Other Notable Species

- 6.6.55 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.
- 6.6.56 Common toad was recorded under artificial refugia in W2 during reptile surveys, with hedgehog recorded in W1 during bat transect surveys. Brown hare was observed during the bird surveys across the Site, where up to 14 brown hare were recorded at any one time.

### Invasive Non-Native Species

- 6.6.57 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 and will be reported in more detail within supporting Technical Appendices of the ES.
- 6.6.58 Within watercourses and riparian habitats associated with them, Himalayan balsam (*Impatiens glandulifera*) was recorded in a number of locations, with seeds spread through vectors such as mammal disturbance or through water flow after being washed along watercourses. Giant hogweed (*Heracleum mantegazzianum*) was recorded growing within hedgerows in a small number of locations, whilst Japanese knotweed (*Fallopia japonica*) was found in a discrete location in W1
- 6.6.59 During surveys, six incidental records of mink (*Neovison vison*) had been observed using riparian habitat, whilst two records of signal crayfish and their burrows were found within watercourses in W2.
- 6.6.60 Completion of all riparian and botanical assessments and recording of the associated distribution of invasive species will be recorded and assessed in the ES.

### Birds

6.6.61 An initial walkover by ornithology specialists was completed in June and July 2024. The visits sampled land throughout the Site, with the aim of reviewing habitat suitability for birds and collating records of species on the Site, to help inform the scope of more detailed surveys. A total of 53 species were recorded within, close to or overflying the Site. 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*).

### Wintering Bird Survey

6.6.62 A Wintering Bird Survey (WBS) was carried out between October 2024 and March 2025. A total of 32 target species (as defined in Table 6.5) were recorded. These species are detailed in **Volume 3, Appendix 6.5 Wintering Bird Survey Report** and summaries for select target species can be found below:

- 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;
- 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;
- 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

6.6.63 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

6.6.64 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 **Volume 3, Appendix 6.6: Breeding Bird Survey Report** and **Volume 3, Appendix 6.7: Confidential Ornithology Report**. A brief summary of target species and Schedule 1-listed species can be found below.

- Lapwing – a total of seven confirmed and 17 possible pairs were identified within the Site. An additional seven 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, five confirmed and 12 possible nesting pairs were located in fields within the proposed solar PV array. Fields with access restrictions were typically of low suitability for lapwing;
- 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;
- 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, 62 confirmed and 64 possible territories (126 total) were located in fields within the proposed solar PV array. As a precaution, a further 16 territories are included in the total (203 overall) to account for fields with limited access. Details of how this figure was estimated are included in **Volume 3, Appendix 6.6: Breeding Bird Survey Report**;
- Yellow wagtail – recorded in small numbers in W1, with a single territory confirmed and a further five possible territories identified;
- 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;
- 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;
- Cetti's warbler - There was a single singing male in W1 by Firsby Reservoir and two singing males along Ulley Brook, in W3; and
- Further details about the sensitivity of ornithological features identified during the BBS can be found in **Table 6.10**.

### Future Baseline Conditions

- 6.6.65 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.
- 6.6.66 The Study Area within the Proposed Order Limits and up to 30 m 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 Proposed Order Limits. The River Rother bisects the Cable Corridor Options from north to south within a small section of the northwest area of W2.
- 6.6.67 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.

- 6.6.68 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.
- 6.6.69 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 Proposed Order Limits during the lifetime of the Proposed Development.

### Features Scoped into Assessment of LSEs

- 6.6.70 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.
- 6.6.71 Information on IEFs is derived from evidence obtained during desk based and survey work completed to date and detailed in the Technical Appendices. Where further survey work is ongoing within the Site or the Cable Corridor Options revised data informing IEF status of these features will be revisited in the ES.
- 6.6.72 **Table 6.10** summarises all features that have been identified within the Study Area (that have not been previously scoped out) to determine which features are either 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 6.10: Scoping of Important Ecological Features**

Feature	Summary	Assessment scope and Potential effects
National Statutory Designated Sites – SSSI	<p>Crabtree Wood SSSI is 0.9 km, Anston Stones Wood SSSI is 1.3 km, and Sprotborough Gorge SSSI is 2.2 km from the Site and are the nearest national designated sites. The first two 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.</p> <p>Crabtree Wood SSSI contains a diverse assemblage of locally rare botanical species</p> <p>Anston Woods SSSI is described for botanical interest as having one of the finest remaining fragments of native ancient woodland in northern England.</p> <p>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.</p>	<p>The potential effect from dust pollution from construction deliveries and on-site construction works to habitats and botanical interests is possible.</p> <p>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. Therefore, there is no pathway for potential water pollution from fire response actions during the operation phase of the Proposed Development to open water designated SSSI’s.</p> <p>Therefore, Crabtree Woods, Anston Woods, and Sprotborough Gorge nationally designated sites will be assessed further as IEFs.</p> <p>All other national designated sites are separated by distance from the Site, and not within 250 m 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</p>
Local Designated Sites – LNR and LWS	<p>The six nearest locally designated sites are recorded as: Brampton Common LWS, Ulley Country Park LWS, Killamarsh Pond LWS, Pebley Oaks Lane pLWS, Firsby Reservoir LNR adjacent to the site, and Anston Stone Wood LNR at 60 m from the Site at its nearest location. Firsby Reservoir and Anston Stone Wood LNR are statutory designated under the National Parks and Access to the Countryside Act 1949 (as amended), with LWSs designated under local policy criteria thresholds. These local and 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.</p> <p>Brampton Common LWS is 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. 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.</p> <p>Ulley Country Park LWS is found adjacent to the Site and is designated for its grassland and woodland habitats. Broadleaved woodland is a NERC listed Habitat of Principal Importance that requires consideration to its conservation within the planning system, designated as a non-statutory site at the local level.</p> <p>Killamarsh Pond LWS is found 10 m from the Site and is designated for its standing open water and is a fishery. Standing open water is a NERC listed Habitat of Principal Importance that requires consideration to its conservation within the planning system, and the LWS is designated as a non-statutory site at the local level.</p> <p>Pebley Oaks Lane pLWS is found 95 m from the Site and is designated for its mixed broadleaved woodland – a NERC listed Habitat of Principal Importance as a proposed non-statutory designated site considered at the local level.</p> <p>Based on policy, legal and conservation status, these sites are of local importance.</p>	<p>Given that Firsby Reservoir is adjacent to 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, Firsby Reservoir LNR is assessed further as an IEF.</p> <p>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 temporary damage to habitats within hedgerows from cable laying and construction laydowns.</p> <p>Given that Ulley Country Park LWS is adjacent to the Site, there is 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.</p> <p>Given that Killamarsh Pond LWS is 10 m from the Site, there is 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.</p> <p>Therefore, Brampton Common LWS, Ulley Country Park LWS, and Killamarsh Pond LWS are assessed further for the presence of its IEFs.</p> <p>Whilst Anston Stone Wood and Pebley Oaks Lane are close to the Site, they are separated from it by over 50 m, a distance that is considered sufficient to avoid significant effects to woodland from direct damage, lighting, dust and pollution, and noise and vibration from construction. Therefore, Anston Stone Woods LNR and Pebley Oaks Lane LWS are not being assessed further.</p> <p>All other local statutory designated sites are separated by greater distance and are unlikely to be subject to the effects above.</p>
Habitats – Ancient woodland	<p>There are five ancient woodland blocks adjacent to the Site or within 50 m of it, including: an ancient woodland next to Firsby Brook and 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.</p>	<p>Given that ancient woodland is adjacent to the Proposed Order Limits, there is the potential for effects from construction directly to it and to any species it supports,</p>

DRAFT ENVIRONMENTAL STATEMENT

Feature	Summary	Assessment scope and Potential effects
	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 is of district importance.	including: lighting, dust and pollution, and noise and vibration. Therefore, ancient woodland is assessed further as an IEF.
Habitats – Ancient and veteran trees	There is one veteran oak tree on-site in the north of W1 (~1.3km east of Hooton Roberts). These 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 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, eutrophic standing waters and Open Mosaic Habitat (OMH) 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. The total distribution of these hedgerow types is unknown at present, with hedgerow surveys currently underway. These habitats are found in small, fragmented areas on-site across the Proposed 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 Proposed 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 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 regional importance.	Whilst no bat roosts have been identified to date (see <b>Volume 3, Appendix 6.10: Protected Species Bat Survey Report</b> ), potential bat roosting opportunities remain available to a range of bat species throughout the Study Area that have the potential to be impacted in the following ways: <ul style="list-style-type: none"> <li>● Disturbance to roosts from: lighting, noise and vibration;</li> <li>● Direct damage or roost loss from pruning or felling of trees, or damage caused by snagging machinery/vehicles; and</li> <li>● Foraging habitat loss within a bat species core sustenance zone that could lead to roost collapse.</li> </ul> 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	Connected habitats suitable for commuting and foraging bats remain available to a range of bat species throughout the Proposed Order Limits that have the potential to be impacted in the following ways: <ul style="list-style-type: none"> <li>● Potential effects of disturbance to commuting and foraging areas from: lighting, noise and vibration;</li> <li>● Direct loss of habitat connectivity from pruning or felling of trees, or removal of hedgerows, and other habitats; and</li> <li>● Foraging habitat loss within a bat species core sustenance zone.</li> </ul> Based on the above, these species will need to be assessed further as an IEF

DRAFT ENVIRONMENTAL STATEMENT

Feature	Summary	Assessment scope and Potential effects
	<p>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 regional importance.</p>	
Protected Species - GCN	<p>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, and due to a lack of access its distribution is unknown in the areas beyond the Site (see <b>Volume 3, Appendix 6.8: Interim Great Crested Newt Report</b>). The Applicant is continuing to seek access to ponds within the Cable Corridor Options to undergo further surveys. Based on currently restricted data, and based on its conservation value, GCN is of negligible value within the Site and currently indeterminate value within the Cable Corridor Options.</p>	<p>GCN are absent from the Site and where surveyed in the Study Area, despite evidence of suitable habitats present (see <b>Volume 3, Appendix 6.8: Interim Great Crested Newt Report</b>). GCN distribution is currently unknown within areas that have not been accessed for survey, including Cable Corridor Options, so there is the potential for disturbance, killing or injury to GCN within terrestrial habitats suitable for this species during construction and decommissioning. The presence and distribution of GCN is not determined within all the Proposed Order Limits at present. Based on surveys completed to date, and on the basis that GCN have the potential to be present within the Study Area and Cable Corridor Options where there is no access, this species will need to be assessed further as an IEF. This will be reviewed and updated in the ES where access to ponds and assessment confirms presence or absence of GCN and this species status as an IEF.</p>
Protected Species – Otter and water vole	<p>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. Water vole surveys are ongoing within the Site and mink have been observed within the Site. Its conservation and legal status are clear; however, results of the ongoing surveys will confirm the status of water vole. Otters are 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 are ongoing, with the results of the ongoing surveys confirming the status of otter.</p>	<p>The full presence and distribution of otter and water vole within the Study Area are not determined at present until completion of surveys; however, the presence of otter signs and suitable habitats for water vole being present, then these species will need to be assessed further as an IEF. The IEF status of these species will be reviewed and updated in the ES where surveys have been completed within the Study Area and where access confirms presence or absence of water vole and otter in the Cable Corridor Options.</p>
Protected Species - Reptiles	<p>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. Reptile surveys are still ongoing; however, a very low population of grass snake has been identified as present but sparsely distributed across the Site and would be expected in contiguous habitat across all the Proposed Order Limits. Based on current indicative data and conservation status, reptiles are of local importance.</p>	<p>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 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.</p>
Protected Species - Badgers	<p>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 30 m are recorded in <b>Volume 3, Appendix 6.3: Interim Confidential Badger Survey Report</b>. Based on policy, legal and conservation status, this species is of local importance.</p>	<p>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.</p>
Protected Species – White Clawed Crayfish	<p>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 2.5 km from Site and within hydrologically connected habitat was identified. Based on policy, legal and conservation status, WCC is of local importance.</p>	<p>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. The presence and distribution of white clawed crayfish within or adjacent to the Proposed Order Limits has not been determined at present. It is assumed that with the potential for effects that this species will need to be assessed further as a potential IEF. The IEF status of this species will be reviewed and updated in the ES where surveys have been undertaken within the Study Area and where access confirms presence or absence of WCC in the Order Limits.</p>

DRAFT ENVIRONMENTAL STATEMENT

Feature	Summary	Assessment scope and Potential effects
Protected Species – Migratory fish	<p>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. Targeted aquatic fisheries assessments are proposed to determine presence/absence of these species. It is understood from the Environment Agency that some of these species are present in the River Rother.</p> <p><b>Based on policy</b>, legal and conservation status, these species are likely to be of local importance where present.</p>	<p>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:</p> <ul style="list-style-type: none"> <li>• electromagnetic fields where high voltage cables pass underwater watercourses;</li> <li>• impacts from noise and vibration associated with construction;</li> <li>• impacts from pollution and increased sedimentation;</li> <li>• impacts from open cut crossing of watercourses and potential loss or damage to habitats; and</li> <li>• impacts from light pollution on watercourses and biodiversity.</li> </ul> <p>The presence and distribution of migratory and conservation listed fish species within or adjacent to the Proposed Order Limits has not been determined at present as surveys are to be progressed. It is assumed that with the potential for effects, that migratory fish species will need to be assessed further as a potential IEF. The IEF status of these species will be reviewed and updated in the ES where surveys have been undertaken within the Study Area and where access confirms presence or absence of migratory fish in the Order Limits.</p>
Priority Species	<p>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.</p>	<p>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.</p> <p>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.</p>
Birds – wintering assemblage	<p>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 <b>Volume 3, Appendix 6.5: Wintering Bird Survey</b>). 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.</p>	<p>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.</p>
Birds – breeding assemblage	<p>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 <b>Volume 3, Appendix 6.6: Breeding Bird Survey Report</b>). Based on policy and conservation status, the breeding bird assemblage is of local importance.</p> <p>Note: Target species and birds with increased legal protection are considered separately, below.</p>	<p>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<sup>49</sup>. 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 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.</p>
Birds – breeding lapwing	<p>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<sup>50</sup>. Potentially up to 24 lapwing pairs were recorded within the Site, with up to 17 in the solar PV array (see <b>Volume 3, Appendix 6.6: Breeding Bird Survey Report</b>). There are no regional population estimates available, but this is assumed to be important at a local level, Based on policy, conservation status, and presence in the Site, lapwing is of local importance.</p>	<p>Lapwing were located in open habitats within the Study Area (see <b>Volume 3, Appendix 6.6: Breeding Bird Survey Report</b>); therefore, have the potential to be displaced by Proposed Development. Therefore, lapwing is assessed further as an IEF.</p>

<sup>49</sup> Copping, J. P., Waite, C. E., Balmford, A., Bradbury, R. B., Field, R. H., Morris, I. and Finch, T. 2025. Solar farm management influences breeding bird responses in an arable-dominated landscape. Bird Study. (Accessed: July 2025)

<sup>50</sup> Lapwing [Online] Available at: <https://www.bto.org/learn/about-birds/birdfacts/lapwing> (Accessed: July 2025)

DRAFT ENVIRONMENTAL STATEMENT

Feature	Summary	Assessment scope and Potential effects
		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 203 territories were recorded within the Site, of which at least 126 were in the solar PV array (see <b>Volume 3, Appendix 6.6: Breeding Bird Survey Report</b> ). There are no regional population estimates available, but this is assumed to be important at a local level. Based on policy, conservation status, and presence in the Site, 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 seven possible territories recorded during the surveys, and habitat was generally limited (see <b>Volume 3, Appendix 6.6: Breeding Bird Survey Report</b> ). 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 <b>Volume 3, Appendix 6.6: Breeding Bird Survey Report</b> ); 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 <sup>51</sup> . To-date, a single breeding territory has been confirmed within the Site (see <b>Volume 3, Appendix 6.7: Confidential Ornithology Report</b> ). Based on current data and conservation status, barn owl is of Negligible importance.	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, mitigation is required to avoid such effects and 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 <sup>52</sup> 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 <b>Volume 3, Appendix 6.7: Confidential Ornithology Report</b> ). 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 <sup>53</sup> . As such, mitigation is required to avoid such effects, and 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 <sup>54</sup> 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 <b>Volume 3, Appendix 6.6: Breeding Bird Survey Report</b> ). 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 150 m away from the Site Boundary and therefore won't be subject to effects. The two territories in W2 are along Ulley Brook, along the Site boundary, Cetti's warbler is more tolerant of disturbance than two non-passerine species considered and not an IEF. However, further mitigation will be included in the CEMP to avoid disturbance.

<sup>51</sup> [Barn Owl | BTO](#) [accessed July 2025]

<sup>52</sup> British Birds (2023). Rare breeding birds in the UK in 2021. British Birds, Vol 116.

<sup>53</sup> [Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance | NatureScot](#) [accessed July 2025]

<sup>54</sup> <https://www.bto.org/learn/about-birds/birdfacts/cettis-warbler>

## 6.7 Mitigation Measures

- 6.7.1 The mitigation measures relevant to Biodiversity and Nature Conservation included here are design-based embedded mitigation measures and best practice working methods that would be adopted based on descriptions provided in **Volume 1, Chapter 4: Alternatives and Design Iterations** and **Volume 1, Chapter 5: The Proposed Development**. As such the Mitigation Measures section provides a high-level draft summary of measures that are 'embedded' within the Proposed Development's design (including the Proposed Order Limits). These embedded mitigation measures are considered in the preliminary assessment presented in the Draft ES.
- 6.7.2 A Commitments Register has been included within the submission (see **Volume 3, Appendix 2.3: Commitments Register**).
- 6.7.3 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 (EN-1) (defined in the Glossary and applied to biodiversity in paragraph 4.6.1) and Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (regulation 14(2)(c)), including measures to avoid, prevent, reduce and if possible, offset any identified significant adverse effects.
- 6.7.4 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.
- 6.7.5 The Proposed Development as described in **Volume 1, Chapter 5: The Proposed Development**, is at an early design stage and therefore the assessment assumes that the embedded design measures and general enhancement measures would be implemented and only where significant effects are already identified are further mitigation measures reported. On completion of the surveys and assessments within the Proposed Order Limits, further mitigation measures and detailed enhancement measures will be reported in the ES and the residual effects (taking these into account) reported.

## Construction Measures

### Protection of Existing Semi-Natural Habitats

- 6.7.6 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 outline CEMP (oCEMP) and outline CTMP (oCTMP) will be produced and submitted with the ES. These proposed plans will likely include measures for the protection of existing habitats, including but not be 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.
- 6.7.7 The Proposed Development design includes, where reasonably practicable, for the siting of BESS and Substation infrastructure within existing habitats of negligible and low value, such as arable land and modified grassland. 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.
- 6.7.8 Where available, existing farm track infrastructure and public highways would 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.
- 6.7.9 The application of protective buffers around habitats from the developed areas within the Proposed Order Limits to prevent adverse effects on habitat function and quality. These would include:
- Ancient and semi-natural woodland - 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)<sup>55</sup>.
  - 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 10 m from the top of each bank for rivers, streams and canals and 5 m from the top of the bank for ditches. This aligns with Natural England guidelines in the Statutory Metric to maintain the ecological function and habitat quality of priority watercourses<sup>56</sup>. Where trenchless crossings are proposed for Cable Crossing of watercourses, a depth of at least 5 m beneath the watercourse is proposed.
  - The Proposed Development also proposes a minimum 10 m protective buffer from ponds, and 5 m from the edge of hedgerows (beyond the 2 m mandated in legislation for the management of hedgerows)<sup>57</sup>.
  - 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

- 6.7.10 Use of existing crossings, tracks, access points, field entrances is proposed to limit the fragmentation of the existing habitats on-site where reasonably practicable.

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<sup>55</sup> Ancient woodland, ancient trees and veteran trees: advice for making planning decisions (2022). [Online] Available at: <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions#:~:text=Buffer%20zone%20recommendations,the%20diameter%20of%20the%20tree.> (Accessed Sept 2025)

<sup>56</sup> The Statutory Biodiversity Metric (2025). [Online] Available at: [https://assets.publishing.service.gov.uk/media/689c5ee17b2e384441636196/The\\_Statutory\\_Biodiversity\\_Metric\\_-\\_User\\_Guide\\_-\\_July\\_2025.pdf.](https://assets.publishing.service.gov.uk/media/689c5ee17b2e384441636196/The_Statutory_Biodiversity_Metric_-_User_Guide_-_July_2025.pdf) (Accessed Sept 2025)

<sup>57</sup> Hedgerow regulations now law – Farming (2024). [Online] Available at: <https://defrafarming.blog.gov.uk/2024/05/23/hedgerow-regulations-now-law/> (Accessed Sept 2025)

- 6.7.11 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.
- 6.7.12 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.).

### **Protection of Terrestrial and Freshwater Habitats from Pollution**

- 6.7.13 Measures at the construction phase that are proposed for addressing pollution and control measures in freshwater, which will be detailed within the oCEMP to support the ES, 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.

### **Species Protection**

#### **Reducing Noise and Vibration During Construction**

- 6.7.14 Measures at the construction phase that are proposed for vibration and noise are detailed in **Volume 1, Chapter 14: Noise and Vibration**. Measures that directly benefit Biodiversity and Nature Conservation include will be delivered through the oCEMP and oCTMP, and will include, but are not limited to:
- Use of lowest rated suitable equipment where reasonably practicable;
  - Restriction on timings of equipment use to daytime hours unless in exceptional circumstances which would be short term in duration;
  - Use of sound baffling near sensitive receptors (human and biodiversity) where necessary; and
  - Maintaining sufficient depth (>5 m) below watercourses and wet ditches, 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**

- 6.7.15 Lighting would 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.

- 6.7.16 As detailed in **Volume 1, Chapter 5: The Proposed Development**, 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 guidelines, 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**

- 6.7.17 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), these species and appropriate management measures to address them will be included within the oCEMP.
- 6.7.18 The oCEMP will consider the potential vectors of spread, such as through plant and machinery movement, personnel footfall, storage and movement of materials.
- 6.7.19 The measures taken would involve but not be limited to the cordoning off areas with INNS present to avoid them, wheel washing and the provision of a contractor briefing for construction staff.

### **Protection of Terrestrial and Freshwater Species**

- 6.7.20 Measures to protect terrestrial and aquatic species will be included in the oCEMP. This assessment provides an outline of proposed mitigation only, with full details to be included within the final 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 6.7.9
  - 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 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 'toolbox' talk would be delivered by a suitably experienced Ecological Clerk of Works (ECoW) to make contractors aware of protected and priority species and relevant legislation.

## Feature-Specific Safeguarding Measures

### Designated Sites

- 6.7.21 The timing, buffer inclusion, lighting and noise controls, aquatic pollution prevention, and dust suppression mitigation measures within this section, and proposed for detailing within an oCEMP supporting the ES provide general safeguarding measures for designated sites. Further measures will be included where applicable in the ES 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

- 6.7.22 Planning advice advises that a minimum avoidance buffer zone from ancient woodland is of at least 15 times larger than the diameter of the trunk of each tree in an ancient woodland edge. 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<sup>58</sup> is maintained and that buffer zones should consider the size of the development. On this basis, the offset buffer above is proposed between each ancient woodland block and construction areas. 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 include:

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

### Ancient/veteran trees

- 6.7.23 In line with similar requirements as ancient woodland, a minimum buffer of at least 15 times larger than the diameter of the trunk of each ancient or veteran tree is proposed to avoid direct impacts, with protective and avoidance measures detailed in the oCEMP provided with the ES to address direct and indirect impacts.

### Priority Habitats

#### Native Hedgerows

- 6.7.24 Lower value hedgerow habitats to be retained will be the focus of habitat enhancement measures in achieving net gain and other conservation objectives. The potential loss of small lengths of hedgerow would need to be compensated for by improving the quality of existing hedgerows or additional new hedgerow planting. This would include, but is not limited to, the following measures:
- Gapping up of hedgerows;

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<sup>58</sup> Ancient woodland, ancient trees and veteran trees: advice for making planning decisions. [Online] Available at: <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions#avoid-impacts-reduce-mitigate-impacts-and-compensate-as-a-last-resort>. (Accessed: July 2025)

- 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.

6.7.25 Hedgerow condition assessment will classify hedgerows and identify those of priority to maintain and retain (Good Condition) and focus works around those where a small loss is less significant (Poor Condition). Where practicable this approach would be followed through micro-siting of proposed track and access routes during scheme development.

### **Wet Woodland**

6.7.26 The impacts on this habitat are the same as those identified for ancient woodland. On this basis, a minimum buffer zone of at least 15 times larger than the diameter of trees in the treeline is proposed. 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. These measures are proposed to avoid direct impacts from construction, with mitigation measures detailed in the oCEMP.

### **Arable Field Margins**

6.7.27 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**

#### **Bats**

6.7.28 Where there is the presence of PRF's 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 to potential roosts where possible.

6.7.29 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, and the results of which will inform the final design. The pre-construction survey of these trees will confirm the presence/absence of roost features within the Proposed Order Limits.

6.7.30 If evidence of a bat roost is found at pre-construction, and if avoidance measures are not possible, a derogation licence would be obtained from Natural England.

6.7.31 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.

- 6.7.32 Mitigation would be put in place to provide fencing to buffer the habitats used by bats to ensure to ensure disturbance from machinery and personnel, equipment and material storage reduces 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.
- 6.7.33 The cessation of arable farming practices would reduce fertiliser and insecticide inputs to benefit invertebrate populations and therefore prey availability for foraging bats.
- 6.7.34 Information on the locating of bat boxes and habitat creation to benefit bats will be included in an oLBMP.

### **Great Crested Newt**

- 6.7.35 In line with the mitigation hierarchy, the design would seek to avoid ponds within the Site and Cable Corridor Options to minimise the risk of effects of construction on GCN. Avoidance can be achieved at ground level or below ground through trenchless crossing.
- 6.7.36 Other avoidance measures can be achieved following the selection of the agreed Cable Corridor Routes, where it is reasonably practicable to do so by selecting routes with fewer and more distal ponds.
- 6.7.37 Avoid terrestrial habitats within a minimum of 50 m of each pond where reasonably practicable and where the status of GCN presence/absence is unknown, as all habitats within this distance are considered 'core habitat' for GCN that could lead to the functional loss of the pond.
- 6.7.38 Where aquatic and terrestrial habitats remain suitable for GCN, but GCN have not been recorded during surveys, a Precautionary Non-Licensed Method Statement (PNLMS) is proposed to be followed.
- 6.7.39 The PNLMS will detail the approach required to avoid impacts to GCN, which 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, and the deployment of an ECoW will be proposed for construction works within the Site and Cable Corridor Routes.
- 6.7.40 The details of the PNLMS will be agreed with Natural England and submitted as an Appendix to the ES.
- 6.7.41 There is also still the potential that despite the absence of significant effects, a licence for GCN will need to be obtained where in the unlikely event where measures are in place, GCN are encountered. To address this scenario, a licensing strategy and mitigation details will be agreed in principle with Natural England prior to completion of the ES.

### **Otter and Water Vole**

- 6.7.42 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.

- 6.7.43 Where it is not possible to avoid or mitigate impacts to otter holts or their resting places (e.g. works within 200 m of these features), then a Natural England EPSM derogation license would be required.
- 6.7.44 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.
- 6.7.45 Additionally, watercourse 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.
- 6.7.46 Avoidance measures such as micro siting the cable route location or location of crossing points away from water vole burrows to avoid potential for impacts of killing and injury to water vole from construction activities is advised, to avoid the need for utilising a Natural England water vole (CL31) displacement license.
- 6.7.47 Should avoidance of water vole burrows not be possible, then works would need to take place following the conditions stipulated under a water vole (CL31) displacement licence.
- 6.7.48 Where a Natural England water vole displacement licence is utilised, a Water Vole Method Statement will need to be written and agreed. As part of water vole compensation measures for the displacement activities, it is proposed that mink control is undertaken given its presence on Site.

### **Reptiles**

- 6.7.49 The mitigation measures for reptiles within the Proposed 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 Options.
- 6.7.50 RAMs for reptiles will also be detailed within a method statement attached to the oCEMP and will apply to suitable habitat within the Proposed 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 100 mm, 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.
- 6.7.51 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.

### **Badgers**

- 6.7.52 Specific mitigation measures for badgers where required within the Proposed 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 30 m 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 sound barriers in fencing etc.).
- 6.7.53 Should badger setts be found within the Proposed Order Limits and 30 m of it, and it is not possible to avoid badger setts during construction, and works is likely to take place within 30 m of a badger sett entrance, then the requirement for a derogation license from Natural England would be needed. This may include the measures detailed above but details of the licence would be informed with agreement from Natural England.

### **Nesting Birds**

- 6.7.54 Measures to safeguard nesting birds will be included within the CEMP.
- 6.7.55 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 final CEMP.
- 6.7.56 Where reasonably practicable, construction works would take place outside of the main breeding-bird season (March to August inclusive).
- 6.7.57 Where works are required to commence in the breeding season, an area within the works should be surveyed ahead of any operations.
- 6.7.58 A 'toolbox' talk would be delivered by a suitably experienced ECoW to make contractors aware of ornithological sensitivities and relevant legislation.
- 6.7.59 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.
- 6.7.60 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.

- 6.7.61 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 15 cm 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

- 6.7.62 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.
- 6.7.63 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

### Operation Noise and Vibration

- 6.7.64 The main sources of noise and vibration during operation would be substation and BESS equipment. The design parameters for the Proposed Development have been established on the basis of locating potential sources of noise as far as reasonably practicable from noise sensitive receptors, such as habitats that support sensitive fauna. Design of the Proposed Development is ongoing, including embedded mitigation measures to reduce operational noise as far as practicable. Measures to address noise and vibration during operation will be outlined within an outline Operation Environmental Management Plan (oOEMP), with further details to be provided in **Volume 1, Chapter 14: Noise and Vibration**.

### Operation Lighting

- 6.7.65 Lighting around the Site would be absent, with Infra-Red security systems to be installed around the Site perimeter.
- 6.7.66 Security and operational lighting within the BESS and Substation areas would be motion controlled, with hoods or other features round the lighting to direct lighting away from sensitive features such as habitats that support crepuscular or nocturnal species. These are design features that will be secured under the DCO.

### Operation BNG Activities and Habitat Establishment

- 6.7.67 Further information on the baseline BNG is found within **Volume 3, Appendix 6.4: Interim Baseline Biodiversity Net Gain Report**.

- 6.7.68 Schedule 7A of the Town and Country Planning Act 1990 (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.
- 6.7.69 Habitat enhancements must be maintained for at least 30 years from the completion of the habitat creation or enhancement works. Such maintenance must be secured through a legal agreement such as a Section 106 agreement or conservation covenant. A Habitat Management and Monitoring Plan (HMMP) would be required to support the delivery of the final BNG commitments and set out the responsibilities for creating, enhancing, monitoring and reporting for the 30-year period.
- 6.7.70 As the requirements of BNG are expected to be extended to NSIPs in May 2026, statutory biodiversity net gain is expected to be achieved during the operation phase of the development, which would include the need to demonstrate that BNG has been achieved within linear habitats such as rivers, hedgerows, and habitat area such as woodland and grassland. Condition assessments of these habitats in combination with the creation of new habitats are expected to achieve at least a 10% net gain.
- 6.7.71 Areas of habitat creation and enhancement are identified in **Volume 3, Appendix 5.1: Indicative Operation Masterplan**. Whilst the masterplan design is at an early stage, it does indicate extensive areas where habitat creation and enhancement prescriptions can be applied within the Site as part of the Proposed Development. In developing the masterplan and oLBMP for the Proposed Development, the following broad principles are proposed that would apply to habitat compensation, creation and enhancement:
- Habitat creation and enhancement areas are indicative at this stage and, although not expected to change significantly, may be subject to some changes through iterations of the masterplan;
  - Any compensation for habitat losses, any creation, and any enhancements of habitats would be restricted to the Site, with the possible exception of habitat reinstatement within areas of the Cable Corridor Options;
  - 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 would focus on ensuring a minimum of 10% BNG is achievable, adhere to the broad objectives of the developing LNRS where feasible and would provide benefits for a range of protected, priority and common biodiversity features; and
  - The habitat creation would seek 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).
- 6.7.72 Whilst **Volume 3, Appendix 5.1: Indicative Operation Masterplan** provides indicative areas for habitats that can be created within the Proposed Development, at this stage it is unable to detail the proposed habitats. However, it is expected that broad habitat types would be created, which are likely to 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); and
  - Planting of trees and small woodland blocks.
- 6.7.73 Proposals for the inclusion of habitats as part of the mitigation will consider the requirements of a range of farmland birds, including skylark and lap wing.
- 6.7.74 It is expected that the carefully considered habitat creation and enhancement prescription measures proposed within the masterplan and secured with long term management mechanisms through the oLBMP, 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.
- 6.7.75 As part of achieving the statutory net gain within river habitat and given the prevalence of invasive species likely to restrict the potential for the required net gain to be achieved, the control or management of some these species, including Mink, Himalayan balsam, and signal crayfish would contribute to achieving the requisite net gain. Specific control measures would be included within the oLBMP and detailed at the pre-construction/operation phase.
- 6.7.76 Monitoring will be proposed of newly created habitats within the first 5 years of planting to ensure that individual plants within habitat types are thriving, with corrective actions and replacement as needed. Condition Assessment Monitoring is also required to demonstrate compliance with the statutory BNG gain to demonstrate that a proposed habitat value is achieved. Details of plant and habitat establishment approach will be included within the oLBMP and referenced within **Volume 1: Chapter 7: Landscape and Visual**. Details on the condition assessment monitoring of habitats is proposed to be included in the HMMP secured under the DCO.

### **Operation Maintaining Habitat Connectivity Across the Proposed Development**

- 6.7.77 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.
- 6.7.78 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 DMRB<sup>59</sup> documents. These detail the standard design of mammal ledge on the inside of watercourse crossings to allow otter full range for commuting and foraging.
- 6.7.79 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

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<sup>59</sup> Design Manual for Roads and Bridges (DMRB) (2020). [Online] Available at: <https://nationalhighways.co.uk/suppliers/design-standards-and-specifications/design-manual-for-roads-and-bridges-dmrb/>. (Accessed August 2025)

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 and other mammals**

- 6.7.80 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 and other mammal species.
- 6.7.81 Strategic locations 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 signs, with a higher frequency around suitable habitats and known locations of badger activity.
- 6.7.82 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 to where it is needed and would be motion activated only. The specification of this lighting will comply with best practice and in line with the Institute of Lighting Professionals (ILP) guidance<sup>60</sup>.
- 6.7.83 Ground level gates would be constructed that would also be suitable for brown hare, and as specified in Paragraphs 6.7.81.

### **Decommissioning**

- 6.7.84 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.
- 6.7.85 Mitigation measures will be included within a Decommissioning Environmental Management Plan (DEMP) to be produced near the end of the operation 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.
- 6.7.86 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.
- 6.7.87 It is assumed however, that basic protection measures for fauna would remain in place at the time of decommissioning to safeguard species as required.

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<sup>60</sup> Institute of Lighting Professionals (2021) *The Reduction of Obtrusive light*; [Online] Available at: <https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/>. (Accessed: September 2025)

## 6.8 Assessment of Likely Significant Effects

- 6.8.1 This section presents a preliminary assessment of LSEs on ecological features, based on available baseline information and taking account of the mitigation measures set out in Section 6.7. The preliminary assessments are more certain where the majority of baseline data was collected by 6th June 2025. Where the status of species is still to be confirmed, a precautionary approach to the preliminary assessment has been taken based on the project description, desk study findings and mitigation measures including species-specific measures, following best practice guidance.
- 6.8.2 Following completion of the baseline surveys, the status of all ecological features will be confirmed. The design will be reviewed in light of the findings and the mitigation hierarchy applied to avoid or minimise LSEs. Any necessary additional mitigation measures and residual effects will be reported in the ES.

### Construction

#### Designated Sites

- 6.8.3 Within 5 km of the Proposed Order Limits there are three nationally designated sites (SSSI's), and these have been identified as IEFs.
- 6.8.4 Air quality and dust emissions during the construction phase of the development are proposed to be subject to suppression and control as part of embedded mitigation with measures to be detailed in the oCEMP. Furthermore, **Volume 1, Chapter 12: Air Quality** advises that with these measures in place and the distance for AoI being limited to 250 m, impacts from emissions during construction would be Negligible and **Not Significant**. On this basis, potential effects from site-based air pollution on Crabtree Wood SSSI, and other SSSIs, would be short term, of Negligible magnitude, and **Not Significant**.
- 6.8.5 Construction traffic for transporting equipment and materials to Site could increase air emissions [PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>x</sub>, and NO<sub>2</sub>] that has the potential to adversely affect designated sites for particular habitat types. Based on the transport routes identified (see **Volume 3, Appendix 13.2: Transport Statement**), only Sprotborough Gorge SSSI has the potential for short term, LSEs from transport derived air pollution. All other designated sites fall outside of the air quality Study Area and are not subject to LSEs from transport derived air pollution. Further traffic and transport information available to date is provided as a quantitative assessment in **Volume 1, Chapter 13: Traffic and Transport**.
- 6.8.6 Quantitative information on the traffic routes and transport information will be updated in the ES, which will inform LSEs to air emissions from transport and by association to Sprotborough Gorge SSSI.
- 6.8.7 There is the potential for pollution as a result of Site construction activities to affect SSSIs with aquatic habitats where there is hydrological connectivity. Sprotborough Gorge SSSI has a hydrological link to the Site; however, the oCEMP will detail pollution prevention measures and careful drainage design that would remove this pathway for potential effects.
- 6.8.8 Firsby Reservoir LNR is 240 m from the Proposed 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. The oCEMP will include measures to remove pathways for these effects. The impacts

from the effects of lighting, noise and vibration on Firsby Reservoir LNR at construction are of short-term duration, local scale, of Negligible effect and are, therefore, Not Significant.

- 6.8.9 43% of Brampton Common LWS is located within the Site, and as a result, it would be directly affected by the Proposed Development. Brampton Common LWS is designated for its skylark population and native species hedgerows. However, the BBS found that the LWS had one of the lowest skylark densities found across the Site (see **Volume 3, Appendix 6.6: Breeding Bird Survey Report** for further information). Access limitations could result in the surveys underestimating the population present, however, it is considered that Brampton Common LWS is not currently important for skylark as the habitats and management are suboptimal.
- 6.8.10 Brampton Common LWS is also designated for its native species hedgerows. A review of historical mapping<sup>61</sup> identified that the native species hedgerows within the LWS have been present within the landscape for some time (i.e. at least the 19th century), and many of these hedgerows may be classified as 'Important' as defined by the Hedgerow Regulations 1997. The protection of these features is afforded not just through the LWS designation, but also where specific hedgerows are classified as 'Important' under the Regulations.
- 6.8.11 General protection measures for hedgerows are included in the oCEMP, with details on hedgerow management strategies included in an oLBMP. 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 potential losses of hedgerow.
- 6.8.12 Hedgerow loss 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. A net gain in hedgerows may not be possible within the LWS, but it would be achievable beyond the minimum 10% net gain across the Proposed Order Limits.
- 6.8.13 There is currently no Habitat Management Plan in place for the Brampton Common LWS. Discussion with RMBC and other relevant consultees will take place to seek an agreement on mitigation proposals for the LWS, and an agreed strategy developed for the designation. Assuming that a mitigation strategy is agreed, the magnitude of effect is anticipated to be Low, short-term in nature, local and **Not Significant**.
- 6.8.14 Ulley Country Park LWS is located 160 m from the Proposed Order Limits, and therefore, it may be subject lighting, noise, dust, and pollution effects from the Proposed Development. However, with the embedded mitigation measures detailed in the oCEMP the effects 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**.
- 6.8.15 Killamarsh Pond LWS may also be subject to effects from lighting, noise, dust, and pollution. An offset buffer zone of at least 15 times larger than the diameter of the tree would be applied. The buffer zone should be 5 m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter. This buffer distance is proposed between the designation and construction areas to mitigate

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<sup>61</sup> Historic Environment Records. (n.d.). [Online]. Available at: [Historic Environment Records \(HERs\) | Historic England](#). (Accessed August 2025)

potential effects, along with other mitigation measures to be included within the oCEMP. Therefore, with the proposed buffer and mitigation measures implemented, there is no pathway for significant effects.

## Habitats

### Ancient Woodland

- 6.8.16 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 through disturbance impacts to these features from lighting, noise, dust, and pollution having the potential to have a moderate magnitude of effect.
- 6.8.17 With a proposed buffer distance and the implementation of mitigation measures identified within Section 6.7 and detailed in the oCEMP, potential effects from disturbance or harm to ancient woodland are reduced. As a result of this, they are therefore assessed as short term, Negligible and **Not Significant**.

### Ancient/Veteran Trees

- 6.8.18 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<sup>62</sup>. 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 Options will be confirmed through baseline field surveys are reported in the ES.
- 6.8.19 To be confirmed following conclusion of field surveys, the impacts to this veteran tree and any other ancient or veteran trees found within the Cable Corridor Options are likely to be the same as for ancient woodland.
- 6.8.20 With a proposed buffer distance and the implementation of mitigation measures in Section 6.7 and identified within the oCEMP, potential effects from disturbance or harm to this IEF are much reduced. Potential effects are therefore assessed as short term, Negligible and **Not Significant**.

## Priority Habitats

### Native Hedgerows

- 6.8.21 Native hedgerows are found throughout the Site, with some of these likely to be identified as 'Important' under the Hedgerow Regulations. There is the potential that hedgerow losses would be required to facilitate access for machinery and

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<sup>62</sup> Keepers of time: ancient and native woodland and trees policy in England (2022): <https://www.gov.uk/government/publications/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england#:~:text=Ancient%20and%20veteran%20tree%20extent,inventories%20or%20Ancient%20Tree%20Inventory.> (Accessed July 2025)

vehicles, and to ensure that there are suitable highway visibility splays at access points.

- 6.8.22 The general protection measures for hedgerows will be included in an oCEMP and would be protected in compliance with best practice, with hedgerow strategies included in an oLBMP.
- 6.8.23 Subject to the completion of hedgerow surveys and an understanding of the distribution and location of 'Important' hedgerows where avoidance and further measures detailed in Section 6.7 are applied, the losses of hedgerow represent a Low magnitude of effect that is likely to be **Not Significant**.
- 6.8.24 Determining LSEs to hedgerows within the Cable Corridor Options will be subject to the final Cable Corridor Option selection, Proposed Development design, and survey findings. The assessment for hedgerows will be updated in the ES.

### **Wet Woodland**

- 6.8.25 Small areas of wet woodland priority habitat are found on the Site. The impacts on this habitat are the same as those identified for ancient woodland. With the proposed embedded mitigation detailed in Section 6.7 in place, effects to this habitat are anticipated to be short term, of negligible magnitude and Not Significant.

### **Arable Field Margins**

- 6.8.26 This priority habitat provides botanical interest and is an important habitat to priority and protected species of flora and fauna.
- 6.8.27 Direct disturbance and degradation through vehicle and machinery movement has 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.
- 6.8.28 Foot traffic and machinery has 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.
- 6.8.29 Further information on avoidance buffers and biosecurity around INNS will be included within the oCEMP and as referenced in **Section 6.7**. With the proposed embedded mitigation in place, effects to this habitat are short term, of Negligible magnitude and **Not Significant**.

### **Open Mosaic Habitat**

- 6.8.30 Open mosaic habitat (OMH) is a priority habitat that often contains rare floristic diversity and can contain protected and priority species. This habitat type is absent from the Site. However, the desk study identified that an OMH is present within CR 1b (see **Volume 3, Appendix 6.2: UK Habitat Survey Report**). If this option is progressed to Application, an OMH assessment will be undertaken to confirm the extent and nature of this habitat type. The effects would be temporary in nature and short term, with a Low magnitude of effect from direct disturbance to habitats through trench digging machinery.

- 6.8.31 Should this Cable Corridor Option be selected, the confirmation of LSEs will be included within the ES, with mitigation measures detailed in **Section 6.7**, the oCEMP, and addressed in the oLBMP.

### Species

#### Roosting, Foraging and Commuting Bats

- 6.8.32 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.
- 6.8.33 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) will be prioritised in the final design, with the majority of land-take occurring in lower value arable fields that would not offer value to bats.
- 6.8.34 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.
- 6.8.35 GLTAs for roosting bats will take place within the Cable Corridor Options with results presented in the ES.
- 6.8.36 Effects of construction to bats will be avoided and mitigated through best practice measures as referenced in Section 6.7. These measures will be detailed within an oCEMP.
- 6.8.37 The Proposed Development proposes to seek to avoid the habitats most used by bats by retaining woodland, hedgerows and tree lines within the Proposed Order Limits where reasonably practicable. Mitigation measures to protect these habitats is provided in Section 6.7.
- 6.8.38 Following completion of the surveys, with the design finalised, and with the embedded mitigation measures implemented, the effects of construction on bats would be Negative, short-term, of Low magnitude and likely **Not Significant**. However, the assessment will be updated in the ES.

#### Great Crested Newt

- 6.8.39 Absence of GCN recorded from surveys within the Site provides a preliminary assessment that GCN is not likely to be an IEF within the Site, however, access to 19 ponds has not been possible beyond the Site, in the wider Study Area. Precautionary measures would need to be applied in the absence of this information on GCN presence/absence status, on the basis that survey access will remain unattainable for those ponds.
- 6.8.40 Access is being sought for ponds within the Cable Corridor Route and Study Area to confirm presence or absence of ponds, suitability for GCN and whether this species would be an IEF. However, some assumptions on mitigation measures can be applied in the absence of GCN presence/absence status within ponds located in the Cable Corridor Options and Site at this stage which are referenced in **Section 6.7**.
- 6.8.41 In line with the mitigation hierarchy, the design would seek to avoid ponds within the Site and Cable Corridor Options to minimise the risk of effects of construction

on GCN. Avoidance can be achieved at ground level or below ground through trenchless crossing.

- 6.8.42 Terrestrial habitats within a minimum of 50 m of each pond would be avoided where reasonably practicable and where the status of GCN presence/absence is unknown, as all habitats within this distance are considered 'core habitat' for GCN that could lead to the functional loss of the pond.
- 6.8.43 As the design develops, and information on GCN habitat suitability become available where access is possible, further measures may apply to those detailed in Section 6.7 and will be updated in the ES.

### **Otter and Water Vole**

- 6.8.44 Absence of water vole recorded from surveys within the Site provide a preliminary assessment that this species is not likely to be an IEF within the Study Area, however, surveys are ongoing, and this status may change by completion of all surveys. The presence of otter has been confirmed within the Study Area, although no otter holts or resting places have been identified.
- 6.8.45 Access is being sought for watercourses within the Cable Corridor Options to confirm habitat suitability and presence/absence for both water vole and otter.
- 6.8.46 Although not currently identified, should otter holts or resting places be identified within the Site or on the Cable Route Options where works are likely to commence within 200 m of these features, measures would need to be implemented to avoid disturbance to otter from construction personnel and equipment noise. This will be addressed through the mitigation measures provided in Section 6.7 and detailed in the oCEMP supporting the ES. If necessary, a Natural England EPSM derogation licence will be applied for.
- 6.8.47 Although not currently identified, should water vole burrows and signs be identified the mitigation measures provided in Section 6.7 will be reviewed and updated where applicable. This will be revisited as the design develops, and as further surveys provide information on habitat suitability and presence/absence of otter and water vole where access is possible.
- 6.8.48 Further measures and licensing details, where required, will be detailed in Section 6.7 and the oCEMP submitted with the ES.
- 6.8.49 Whilst the measures in Section 6.7 are expected to reduce the potential for LSEs to occur to otter or water vole at the construction phase, this will need to be reviewed and updated at submission of the ES, once their status is confirmed.

### **Reptiles**

- 6.8.50 Habitats suitable for common and widespread reptile species, include, hedgerow margins, grassland, banks and ditch edge habitats, scattered scrub, and woodland margins are present within approximately 10% of the Site. Surveys are ongoing within these habitats, although the presence of grass snake has consistently been identified in very low numbers across W1, W2, and W3.
- 6.8.51 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.
- 6.8.52 The presence of reptiles within the Cable Corridor Options cannot be confirmed at this stage; however, the desk based UKHab assessment identified that the

habitats within the Cable Corridor Options 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.

- 6.8.53 Construction works within the Cable Corridor Options 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.
- 6.8.54 A small proportion of the Study Area contained reptiles, with many of these habitats likely to be retained in the final design. Losses of habitat of value to reptiles are expected to be very small and **Not Significant** in relation to the scale of the Proposed Development.
- 6.8.55 Following completion of the surveys, with the design finalised, and with the embedded mitigation measures in Section 6.7 implemented, the effects of construction on reptiles would be Negative, short-term, of Low magnitude and **Not Significant**.
- 6.8.56 The assessment for reptiles will be updated in the ES.

### **Badger**

- 6.8.57 Badger is a widespread species within rural areas of the UK. Badger setts are protected under the Protection of Badgers Act, 1997, which is in place to address impacts from badger baiting, and as a legal deterrent against persecution.
- 6.8.58 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. The confidential appendix also provides the location of specific mitigation for badgers where required. Surveys of the Cable Corridor Options will confirm the status of badger in these areas.
- 6.8.59 Potentially disturbing works would be avoided within the appropriate badger sett buffer zone and protection measures implemented to prevent disturbance. Should there be the potential for impacts to badgers from 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.
- 6.8.60 Mitigation measures for mammals that also apply to badgers will be detailed within the oCEMP and is referenced in Section 6.7.
- 6.8.61 In addition to reference within the oCEMP, specific measures to protect biodiversity from noise and vibration will be advised within **Volume 1, Chapter 14: Noise and Vibration**.
- 6.8.62 Following completion of the surveys, with the design finalised, and with the embedded mitigation measures in place, as referenced in Section 6.7, outlined in the oCEMP and oLBMP, the effects of construction on badger would be Negative, short-term, of Low magnitude and **Not Significant** at the construction phase of the Proposed Development.
- 6.8.63 The assessment for badgers will be updated in the ES.

### White Clawed Crayfish

- 6.8.64 A single desk study record of WCC approximately 2.5 km 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. eDNA surveys to include WCC are planned on those watercourses suitable for WCC at specific locations where there are potential effects to confirm their status.
- 6.8.65 The mitigation measures described in Section 6.7 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. Once the baseline is confirmed, any further protection measures will be detailed in Section 6.7 and the oCEMP submitted with the ES.

### Migratory Fish

- 6.8.66 A multi-species fisheries eDNA assessment of watercourses for migratory fish and other species of interest (barbel *Barbus barbus*; brown trout *Salmo trutta*; bullhead *Cottus gobio*; and European eel *Anguilla anguilla*) will be undertaken on suitable watercourses at specific locations where there are potential effects to confirm their status.
- 6.8.67 The mitigation measures described in Section 6.7 are designed to protect freshwater habitats and the species they support and are expected to reduce the potential for LSEs on migratory fish at the construction phase. Once the baseline is confirmed, any further protection measures will be detailed in Section 6.7 and the oCEMP submitted with the ES.

### Priority Species

#### Brown Hare

- 6.8.68 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 Corridor Options. 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 Options.
- 6.8.69 Effects from disturbance and barriers through the installation of temporary fencing is 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.
- 6.8.70 Working practice and fencing associated with the Cable Corridor Options 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 and summarised within Section 6.7.
- 6.8.71 The construction of any ditches, foundations, or trenching has the potential to entrap brown hare and other mammals. Measures to mitigate for entrapment will be included within the oCEMP and is referenced within Section 6.7.
- 6.8.72 With the measures referenced in Section 6.7 in place and detailed with the oCEMP to be provided to support the ES, disturbance or harm effects to brown

are short term, of Negligible magnitude and **Not Significant** and no further mitigation is required.

6.8.73 The significance of effects will be confirmed in the ES.

### ***Birds***

6.8.74 The measures outlined in the oCEMP 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 would be implemented in full, the potential for direct harm (i.e. loss or damage of nests) to nesting birds is not considered further in this assessment, unless species-specific measures may be relevant.

6.8.75 Habitat loss and disturbance during construction has the potential to impact IEFs both directly and indirectly. There is also potential for Beneficial impacts to some species through appropriate habitat management and enhancement.

6.8.76 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 would be secured via the CEMP.

6.8.77 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 **Significant**, but the presence of panels is likely to result in a long long-term effect that is assessed further in paragraph 6.8.1100.

6.8.78 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. 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 15 cm 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.

6.8.79 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 long-term effect that is assessed further in paragraph 0 0.

6.8.80 Barn owl: Due to the embedded mitigation measures outlined in the oCEMP, 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)<sup>63</sup>. 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**.

- 6.8.81 **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 would be secured via the CEMP. Prevailing guidance recommends a minimum buffer zone of 200-450 m<sup>64</sup>. 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**.

### Operation and Maintenance

- 6.8.82 IEFs are scoped out of further assessment within the Cable Corridor Options, with only IEFs considered within the Site. This is based on the assumption that LSEs are restricted only for a short duration during the construction phase and would not be manifested in the operation phase for the Cable Corridor Options.
- 6.8.83 New habitats would be created within the Site, and existing habitats would be enhanced for biodiversity and secured through the net gain plan and managed and maintained for at least 30 years through implementation of the HMMP. 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 Proposed Development.
- 6.8.84 During the operation and maintenance phase of the Proposed Development, habitat enhancement and creation would mature, and soils would recover from 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.
- 6.8.85 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

- 6.8.86 The design layout of the masterplan in **Volume 3, Appendix 5.1: Indicative Operation Masterplan** shows that the indicative location options for siting the

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<sup>63</sup> Shawyer, C. R. (2011) Barn Owl Tyto Alba Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. IEEM, Winchester. (Accessed: July 2025)

<sup>64</sup> Goodship, N.M. and Furness, R.W. (MacArthur Green) (2022) Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. NatureScot Research Report 1283. (Accessed: July 2025)

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.

- 6.8.87 However, general measures to address the potential for aquatic pollution will be proposed within the oOEMP, with containment measures identified within an outline Battery Safety Management Plan (oBSMP). Implementation of these management plans would remove this pathway for potential significant effects.
- 6.8.88 Operational effects on Brampton Common LWS are expected to include air pollutants/dust on habitats and introduction of INNS. Mitigation measures set out in the oOEMP will minimise pollution effects so that they are **Not Significant**. It is recognised that skylark territories would be displaced from the LWS, but that it is assumed that this can be offset with sensitive management of land within the LWS and the population maintained.
- 6.8.89 Consultation with RMBC and other stakeholders will take place 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.

### Priority Habitats

#### Native Hedgerows

- 6.8.90 The creation of a network of new connected and enhanced hedgerows to achieve at least a 10% biodiversity gain for linear features throughout the Proposed Order Limits, would provide a beneficial effect that is long term, of Moderate Magnitude, and **Significant**.

#### Bats

- 6.8.91 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.
- 6.8.92 Lighting controls proposed in Section 6.7 will also be applicable to bats and will follow best practice as specified by the Bat Conservation Trust (BCT).
- 6.8.93 The avoidance of perimeter fence lighting and controls to security lighting within the proposed BESS and Substation locations would have a Very Low Adverse effect, that is long term, and **Not Significant** to bats.
- 6.8.94 Creation of new grassland, hedgerow and woodland habitats, and enhancement proposals to existing hedgerow habitats, will be included within the final design submitted with the ES. 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, the addition of bat boxes on some retained trees with negligible bat roost potential within the

Site would provide roosting opportunities for bats beyond that is currently available.

- 6.8.95 These effects of habitat creation would be Beneficial, long term, on a district scale, and likely **Significant**. This significant effect will be confirmed in the ES.

### Reptiles

- 6.8.96 The maturing of connecting habitats during the operation 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.
- 6.8.97 The creation of brush or log piles from arisings, would provide sheltering opportunities for reptiles and other species across the Site. Information on habitat creation and enhancement for reptiles will also be included within an oLBMP.
- 6.8.98 These effects of habitat creation and enhancement would be Beneficial, long term, on a local scale, and likely **Significant**. Information on habitat creation and features to provide biodiversity benefits for reptiles will be included in an oLBMP. This significant beneficial effect will be confirmed in the ES.

### Badger

- 6.8.99 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.
- 6.8.100 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. Additional security lighting would be installed within the perimeter of BESS and substation areas.
- 6.8.101 The maturing of connecting habitats during the operation period such as grassland, created and enhanced hedgerows, and small woodland blocks that 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 Beneficial, long term, on a local scale, and **Not Significant**.
- 6.8.102 This significant beneficial effect will be confirmed in the ES.
- 6.8.103 The provision of mammal gates referenced in Section 6.7 within the perimeter fencing 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.
- 6.8.104 The avoidance of perimeter fence lighting and controls to security lighting within the proposed BESS and Substation locations referenced in Section 6.7 means disturbance would have a Very Low Adverse effect, that is long term, and **Not Significant** to badger.

### Priority Species – Brown Hare

- 6.8.105 Brown hare require large open areas available in their range and grassland areas for their 'forms'.

- 6.8.106 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, Low magnitude and **Significant** effect to brown hare across the whole Site.
- 6.8.107 Perimeter fencing would be installed throughout the Proposed Order Limits, around the solar PV array and around supporting infrastructure. They would be constructed of wire mesh and wooden posts and would be designed to be stock proof, with a minimum height of 2 m.
- 6.8.108 The provision of mammal gates within the perimeter fencing referenced in Section 6.7 ensures connectivity of habitats across the Site resulting in a Neutral effect, that is long term, and **Not Significant**.

### Birds

#### Breeding bird assemblage

- 6.8.109 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<sup>65,66,67</sup>. As such, long term habitat change during operation phase would have a Beneficial effect of Low to Medium magnitude, which would be **Significant** for many species. Many species within the wintering bird assemblage, although not assessed specifically (as per **Table 6.10**), are also likely to benefit from the measures which would improve foraging resources in the winter.

#### Breeding lapwing

- 6.8.110 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 24 pairs were identified during the BBS, of which 17 were within the solar PV array. Based on these results, up to 17 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.
- 6.8.111 To reduce these effects, compensatory habitat would be created close to fields that would be lost. Crop rotation means the suitability of individual field varies

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<sup>65</sup> H. Montag, G Parker & T. Clarkson. 2016. The Effects of Solar Farms on Local Biodiversity; A Comparative Study. Clarkson and Woods and Wychwood Biodiversity. (Accessed: July 2025)

<sup>66</sup> Jarčuška, B. *et al.*(2024) Solar parks can enhance bird diversity in agricultural landscape, Journal of Environmental Management, Volume 351. (Accessed: July 2025)

<sup>67</sup> Copping, J. P., Waite, C. E., Balmford, A., Bradbury, R. B., Field, R. H., Morris, I., & Finch, T. (2025). Solar farm management influences breeding bird responses in an arable-dominated landscape. *Bird Study*, 1–6. (Accessed: July 2025)

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. These typically span several fields and, in most cases, at least field is not included in the solar PV array. Therefore, compensation fields for lapwing would prioritise larger sub-populations (rather than individual, isolated pairs) and, where possible, incorporate a field where lapwing currently nest. The aim of the compensation fields would be to enhance them, and an adjacent field, to help maintain the pairs currently using that field/s and offer suitable nesting sites for lapwing displaced from solar fields. A minimum of two compensation fields would be incorporated into each part of the Site (WS1, WS2, and WS3). The habitat details are to be confirmed but are expected to include sensitive farming practice combined with features to encourage/further support lapwing, such as rotational areas of fallow within each field. With creation of the compensation long-term displacement of lapwing would be significantly reduced or avoided and therefore Neutral or of Very Low magnitude and **Not Significant**.

### Breeding skylark

- 6.8.112 Evidence for skylark use of solar sites is mixed. A study by Montag *et al.* (2016)<sup>68</sup> 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<sup>6</sup> 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 2019<sup>69</sup> and 2020<sup>70</sup> 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.
- 6.8.113 Up to 203 territories were identified during the BBS (including an estimate of territories in fields with limited access), of which at least 126 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.
- 6.8.114 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 habitat may be created in fields not intended for solar. The habitat details are to be confirmed and

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<sup>68</sup> Montag, H., Parker, G. and Clarkson, T. 2016. The Effects of Solar Farms on Local Biodiversity; A Comparative Study. Clarkson and Woods and Wychwood Biodiversity. (Accessed: July 2025)

<sup>69</sup> Clarkson & Woods. Solarview: Ecological monitoring of solar sites, overview of 2019 surveys. [Online] Available at: [http://www.clarksonwoods.co.uk/wp-content/uploads/2020/07/CW\\_2019-Solarview.pdf](http://www.clarksonwoods.co.uk/wp-content/uploads/2020/07/CW_2019-Solarview.pdf). (Accessed: July 2025)

<sup>70</sup> Clarkson & Woods. Solarview: Ecological monitoring of solar sites, overview of 2020 surveys. [Online] Available at: <https://www.clarksonwoods.co.uk/wp-content/uploads/PDF/Solarview2020.pdf> (Accessed: July 2025)

will evolve as knowledge grows of best practice, but are expected to include a combination of sensitive practices and management of non-arable land. Any habitats would be managed in a way that is sensitive to skylark, while balancing other species mitigation requirements, and seek to avoid potential harm during necessary habitat maintenance. As a result, long-term displacement of skylark would be significantly reduced and would be of Low magnitude and **Not Significant**.

### Barn owl

6.8.115 The OEMP will include measures to safeguard nesting barn owl during any routine or necessary maintenance throughout the operation phase.

6.8.116 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-hunt<sup>71</sup>. 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 the arrays should be allowed to develop into rough tussocky grassland. As a further enhancement, a minimum of three barn owl boxes (one each in W1, W2, and W3) would be installed and maintained according to best practice guidance<sup>72</sup> 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**.

### Hobby

6.8.117 As an aerial hunter, this species is not reliant on the terrestrial habitats present within the Study Area 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

6.8.118 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. Mitigation measures would be subject to a DEMP to be produced leading up to the end of the operation and maintenance phase and discussed in Section 6.7.

6.8.119 Mitigation measures will be included within a Decommissioning Environmental Management Plan to be produced near the end of the operation and maintenance phase and activities would be managed in line with best practices and are not expected to result in any adverse environmental impacts.

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<sup>71</sup>Ground-mounted solar panels and Barn Owls - The Barn Owl. [Online] Available at: [Trusthttps://www.barnowltrust.org.uk/barn-owls-ground-mounted-solar-panels/](https://www.barnowltrust.org.uk/barn-owls-ground-mounted-solar-panels/). (Accessed: July 2025)

<sup>72</sup>Nestboxes. [Online] Available at: <https://www.barnowltrust.org.uk/nestboxes/>. (Accessed: July 2025)

- 6.8.120 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.
- 6.8.121 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.
- 6.8.122 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.
- 6.8.123 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.

## 6.9 Summary of Preliminary Assessment

### Additional Mitigation Measures and Residual Effects

- 6.9.1 At this stage, following the preliminary assessment, no additional mitigation measures have been identified for the Proposed Development. However, through consultation on this Draft ES, additional mitigation will be considered and included within the ES where potential significant effects require mitigating. Should additional mitigation be required, the ES will present an assessment of the residual effects.
- 6.9.2 **Table 6.11** sets out a summary of the preliminary assessment. Where a preliminary assessment has not been completed at this stage but will be included in the ES, the receptor and impact pathway has been included in **Table 6.11**, with reference to the relevant section of this chapter.

**Table 6.11: Summary of Preliminary Assessment**

Receptor	Mitigation measures	Description of the Effect	Direct / Indirect	Duration	Geographical Scale	Nature of the Effect	Significant / Not Significant	Securing Mechanism
<b>Construction</b>								
Designated Sites – Sprotborough Gorge SSSI	oCEMP	Hydrologically linked aquatic pollution on designation feature	Indirect	Short Term	Local	Negligible	Not Significant	oCEMP
Designated Sites – Sprotborough Gorge SSSI	oCEMP	Air pollution from transport on designations	Indirect	Short Term	See Paragraphs 6.8.5 and 6.8.6	See Paragraphs 6.8.5 and 6.8.6	See Paragraphs 6.8.5 and 6.8.6	oCEMP
Designated Sites - SSSIs	oCEMP	Air pollution spreading from Site to designations	Indirect	Short Term	Local	Negligible	Not Significant	oCEMP
Designated Sites – Firsby Reservoir LNR	oCEMP	Aquatic pollution on designation	Direct	Short Term	Local	Negligible	Not Significant	oCEMP and oLBMP
Designated Sites – Brampton Common LWS	oCEMP, Design Principles	Habitat Loss to LWS	Direct	Short Term	Local	Low	Not Significant	oCEMP and oLBMP
Designated Sites – Ulley Country Park LWS	oCEMP	Lighting, Noise, Dust and Pollution to LWS	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Designated Sites – Killamarsh Pond LWS	oCEMP	Lighting, Noise, Dust and Pollution to LWS	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Ancient Woodland	oCEMP, Design Principles	Disturbance of habitats	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Ancient Woodland	oCEMP, Design Principles	Harm to habitats	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Veteran Trees	oCEMP, Design Principles	Harm	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Priority Habitats – Native Hedgerows	oCEMP, oLBMP	Habitat Loss	Direct	Long Term	Local	Low	Not Significant	oCEMP and oLBMP
Priority Habitats – Wet Woodland	oCEMP	Disturbance and harm to habitats	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Priority Habitats – Arable Field Margins	oCEMP	Disturbance and degradation of habitats	Direct	Long Term	Local	Negligible	Not Significant	oCEMP

DRAFT ENVIRONMENTAL STATEMENT

Receptor	Mitigation measures	Description of the Effect	Direct / Indirect	Duration	Geographical Scale	Nature of the Effect	Significant / Not Significant	Securing Mechanism
Priority Habitats – Open Mosaic Habitat	oCEMP and oLBMP	Habitat disturbance	Direct	Short Term	Local	Low	Not Significant	oCEMP and oLBMP
Protected Species - Bats	oCEMP, oLBMP	Disturbance and Harm	Direct/Indirect	Short Term	Local	Low	Not Significant	oCEMP and oLBMP
Protected Species - GCN	oCEMP, oLBMP	Disturbance to habitats and harm	Direct/Indirect	Short Term	See Section 6.7 and paragraphs 6.8.39 to 6.8.43	See Section 6.7 and paragraphs 6.8.39 to 6.8.43	See Section 6.7 and paragraphs 6.8.39 to 6.8.43	oCEMP and oLBMP
Protected Species – Otter and water vole	oCEMP, oLBMP	Disturbance to habitats and harm	Direct/Indirect	Short Term	See Section 6.7 and paragraphs 6.8.44 to 6.8.49	See Section 6.7 and paragraphs 6.8.44 to 6.8.49	See Section 6.7 and paragraphs 6.8.44 to 6.8.49	oCEMP and oLBMP
Protected Species - Reptiles	oCEMP, oLBMP, RAMs	Disturbance and Habitat Loss	Direct	Short Term	Local	Low	Not Significant	oCEMP and oLBMP
Protected Species - Badger	oCEMP, oLBMP	Disturbance and Harm	Direct/Indirect	Short Term	Local	Low	Not Significant	oCEMP and oLBMP
Protected Species – White clawed crayfish	oCEMP, oLBMP	Disturbance to habitats and harm	Direct/Indirect	Short Term	See Section 6.7 and Paragraphs 6.8.64 and 6.8.65	See Section 6.7 and Paragraphs 6.8.64 and 6.8.65	See Section 6.7 and Paragraphs 6.8.64 and 6.8.65	
Protected/Priority Species – Migratory Fish	oCEMP, oLBMP	Disturbance to habitats and harm	Direct/Indirect	Short Term	See Section 6.7 and Paragraphs 6.8.66 and 6.8.67	See Section 6.7 and Paragraphs 6.8.66 and 6.8.67	See Section 6.7 and Paragraphs 6.8.66 and 6.8.67	oCEMP and oLBMP
Priority Species – Brown hare	oCEMP	Disturbance and Harm	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Breeding bird assemblage	oCEMP	Direct harm	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Breeding lapwing	oCEMP	Habitat Loss	Direct	Short Term	Local	Low	Not Significant	oLBMP, HMMP
Breeding lapwing	oCEMP	Disturbance	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Breeding skylark	oCEMP	Habitat Loss	Direct	Short Term	Local	Low	Not Significant	oLBMP, HMMP
Breeding skylark	oCEMP	Disturbance	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Barn owl	oCEMP	Disturbance	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
Barn owl	oCEMP	Habitat Loss	Direct	Short Term	Local	Negligible	Not Significant	oLBMP, HMMP
Hobby	oCEMP	Disturbance	Direct	Short Term	Local	Negligible	Not Significant	oCEMP
<b>Operation and Maintenance</b>								
Protected Species - Bat	OEMP	Lighting Disturbance	Indirect	Long Term	Negligible	Very low	Not Significant	OEMP
Protected Species - Bat	OEMP	Habitat Change	Direct	Long Term	District	Moderate -Beneficial	Significant	oLBMP
Protected Species - Reptile	OEMP	Habitat Change	Direct	Long Term	Local	Moderate -Beneficial	Significant	oLBMP

**DRAFT ENVIRONMENTAL STATEMENT**

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	Very Low	Not Significant	OEMP
Protected Species - Badger	OEMP	Lighting Disturbance	Indirect	Long Term	Negligible	Very low	Not Significant	OEMP
Protected Species - Badger	OEMP	Habitat Change	Direct	Long Term	Local	Moderate -Beneficial	Not Significant	oLBMP
Priority species – Brown hare	OEMP	Fencing Displacement	Direct	Long Term	Negligible	Neutral	Not Significant	OEMP
Breeding bird assemblage	OEMP	Habitat change	Direct	Long Term	Local	Moderate -Beneficial	Significant	HMMP
Breeding lapwing	OEMP	Displacement	Direct	Long Term	Local	Neutral	Not Significant	HMMP
Breeding skylark	OEMP	Displacement	Direct	Long Term	Local	Low/Neutral	Not Significant	HMMP
Barn owl	OEMP	Habitat change	Direct	Long Term	Negligible	Moderate -Beneficial	Significant	HMMP
Barn owl & Hobby	OEMP	Disturbance	Direct	Long Term	Negligible	Negligible	Not Significant	OEMP
Hobby	OEMP	Habitat change	Direct	Long Term	Negligible	Moderate -Beneficial	Significant	HMMP
<b>Decommissioning</b>								
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.								



**WHITESTONE**  
solar farm

## Contact

Whitestone Net Zero Ltd

[info@whitestonesolarfarm.co.uk](mailto:info@whitestonesolarfarm.co.uk)

0800 0194 576