

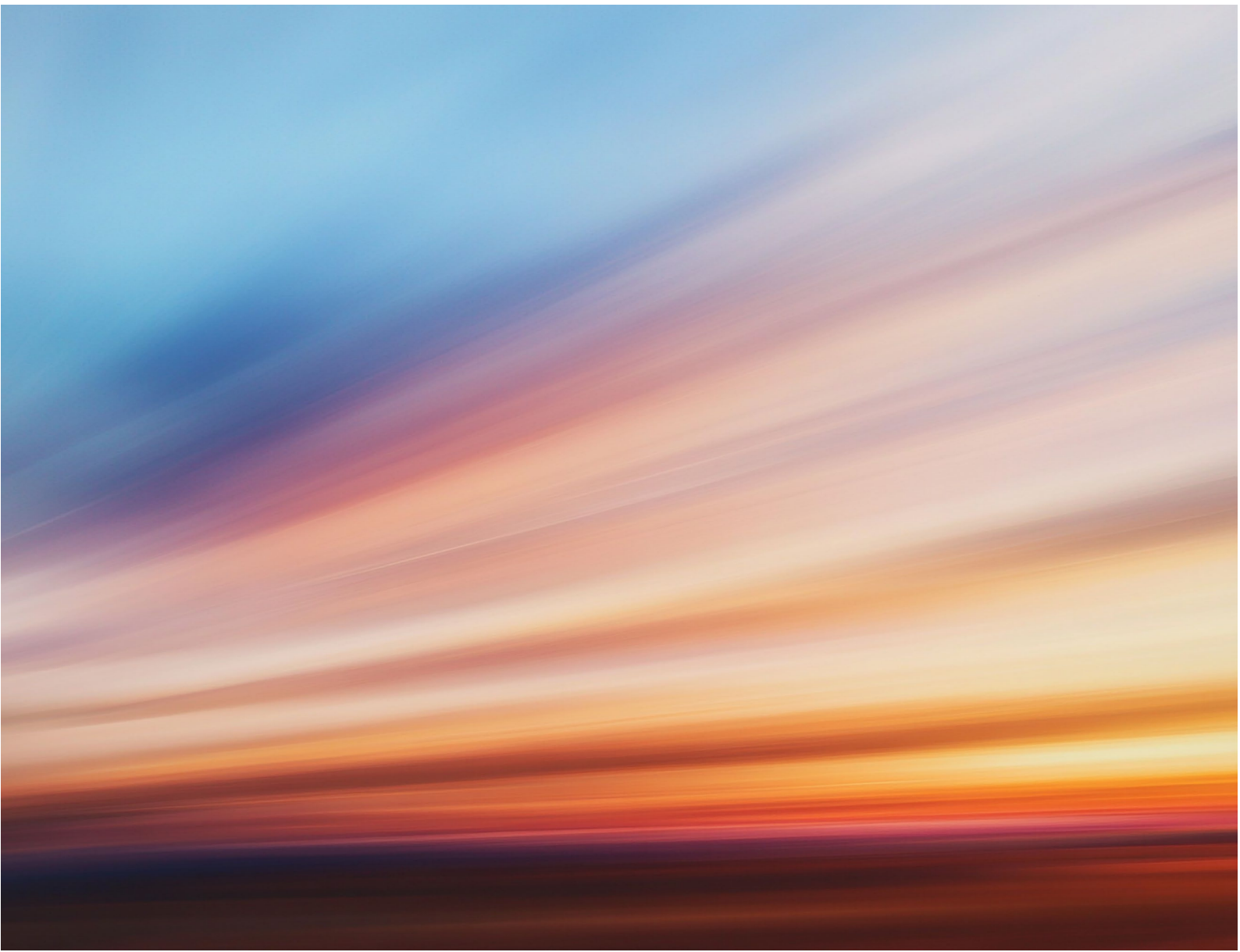
# **Mysten Leah Solar Farm**

## **Preliminary Environmental Information Report (PEIR)**

### **Volume 1**

### **Chapter 7: Biodiversity**

**April 2026**



## Contents

<b>7.</b>	<b>Biodiversity</b> .....	<b>1</b>
<b>7.1</b>	<b>Introduction</b> .....	<b>1</b>
<b>7.2</b>	<b>How have we engaged with others about biodiversity so far?</b> .....	<b>2</b>
<b>7.3</b>	<b>What legislation, planning policy and guidance is relevant to biodiversity?</b> .....	<b>5</b>
<b>7.4</b>	<b>What study area has been used for biodiversity?</b> .....	<b>7</b>
<b>7.5</b>	<b>How have existing biodiversity conditions been understood?</b> .....	<b>9</b>
<b>7.6</b>	<b>What are the biodiversity conditions within the study area?</b> .....	<b>14</b>
<b>7.7</b>	<b>How have the likely effects been assessed for biodiversity?</b> .....	<b>33</b>
<b>7.8</b>	<b>How has biodiversity informed the design so far?</b> .....	<b>35</b>
<b>7.9</b>	<b>What are the likely effects of Mylen Leah Solar Farm on biodiversity?</b> .....	<b>41</b>
<b>7.10</b>	<b>What additional mitigation is proposed to avoid, prevent, reduce or offset likely effects on biodiversity?</b> .....	<b>48</b>
<b>7.11</b>	<b>What likely effects would remain for biodiversity following additional mitigation?</b> .....	<b>56</b>
<b>7.12</b>	<b>What opportunities are there for environmental enhancement?</b> .....	<b>71</b>
<b>7.13</b>	<b>What difficulties and uncertainties have been encountered in this preliminary biodiversity assessment?</b> .....	<b>72</b>
<b>7.14</b>	<b>What further work is required to inform the full biodiversity assessment in the DCO application?</b> .....	<b>73</b>

## 7. Biodiversity

### 7.1 Introduction

7.1.1 This chapter presents a preliminary assessment of the likely significant effects arising on biodiversity during the construction, operation and decommissioning phases of Mylen Leah Solar Farm.

7.1.2 This chapter should be read in conjunction with the following figures in **Volume 2** and with the following appendices in **Volume 3**:

- **Figure 7.1: Designated Sites' Zone of Influence and Environmental Mitigation and Enhancement Areas;**
- **Figure 7.2: Biodiversity Zone of Influences;**
- **Figure 7.3: Tree Constraints Plan;**
- **Appendix 7.1: Habitat Survey Report (Solar PV Development Area);**
- **Appendix 7.2: Non-Confidential Badger Survey Report (Solar PV Development Area);**
- **Appendix 7.3: 2024 Breeding Bird Survey Report (Solar PV Development Area);**
- **Appendix 7.4: Non-Breeding Bird Survey Report (Solar PV Development Area);**
- **Appendix 7.5: Amphibian Baseline Report;**
- **Appendix 7.6: Ecological Constraints Report;**
- **Appendix 7.7: Bat Survey Report; and**
- **Appendix 7.8: Stage 1 Arboricultural Report.**

7.1.3 Following the Environmental Impact Assessment (EIA) scoping process, the following receptors/matters have not been considered within this preliminary assessment (refer to **Table 7.1** below):

- Skipwith Common Special Area of Conservation (SAC);
- Allerthorpe Common Site of Special Scientific Interest (SSSI);
- Habitats not of principal importance;
- Amphibians during operation;
- Non-ground nesting birds; and
- Hazel dormice.

7.1.4 It is worth noting that at this PEIR stage, there is limited survey information available for the underground grid connection corridor. The underground grid connection corridor will be refined for the Environmental Statement (ES), and surveys on this area will be undertaken to inform the ES. Further information on the difficulties and uncertainties at this PEIR stage are provided in **Section 7.13**.

**7.2 How have we engaged with others about biodiversity so far?**

7.2.1 **Table 7.1** provides a summary of the engagement undertaken to date to inform this preliminary assessment, outside of the EIA Scoping process.

**Table 7.1: Summary of engagement undertaken to date in relation to biodiversity**

Consultee	Date of engagement	Summary of engagement
Natural England	23 July 2025 to 10 December 2025	<u>Great crested newt (<i>Triturus cristatus</i>) District Level Licence enquiry</u> Initial enquiry from was sent to Natural England who responded with a provisional impact assessment and conservation payment certificate. The District Level Licence was a feasible option at the time, when Natural England issued the provisional impact assessment and conservation payment certificate; however, the application has lapsed and the licence has not been confirmed. There have been follow up email communications up to 10 December 2025 (see below).
	23rd July 2025 - 04 December 2025	<u>Emails</u> Discussion with Natural England with regards to the great crested newt District Level Licensing application.
	09 December 2025	<u>MS Teams meeting</u> Discussed ornithology mitigation technical note, bird day calculation and peak counts to inform mitigation, noise modelling to inform mitigation and bird survey scope of the underground grid connection corridor. Initial discussion regarding proposed bird mitigation using the draft Environmental Masterplan.
	10 December 2025	<u>Email</u> Great crested newt District Level Licence still an option to be determined as the project evolves.
	22 December 2025	<u>Email</u> Natural England provided whimbrel ( <i>Numenius phaeopus</i> ) GPS tagging data associated with the draft Order Limits.
	02 February 2026	<u>Email</u> The Applicant provided Natural England with the indicative operational layout and

Consultee	Date of engagement	Summary of engagement
		requested a meeting to discuss the layout and other agenda items raised during the MS Teams meeting on 09 December 2025.
	10 February 2026	<u>Email</u> Natural England provided an update regarding their review of the indicative operational layout and confirmed availability for a MS Teams meeting and potential site meeting.
	11 February 2026	<u>Email</u> The Applicant provided Natural England with the underground grid connection corridor bird survey methodology to allow Natural England to review.
	13 February 2026	<u>Email</u> Natural England provided written feedback regarding the indicative operational layout.
	04 March 2026	<u>Email</u> Natural England provided written feedback regarding the underground grid connection corridor bird survey methodology.
East Riding of Yorkshire Council (ERYC)	10 February 2026	<u>MS Teams meeting</u> The Applicant provided a summary of the ecological survey scope. Initial discussions were held regarding the Scoping Opinion and ecological mitigation.
Environment Agency	16 March 2026	<u>MS Teams meeting</u> The Applicant's Biodiversity and Hydrology teams discussed the Environment Agency's Scoping Opinion comments. The Applicant's Biodiversity team discussed preliminary effects associated with aquatic habitats and species and provided a summary of the proposed surveys to be completed to inform the ES.
Yorkshire Wildlife Trust	16 December 2025	<u>Email</u> Mylen Leah Solar Farm progress update, including the updated draft Order Limits and requesting a consultation meeting.

Consultee	Date of engagement	Summary of engagement
	14 January 2026	<u>MS Teams meeting</u> Introduction to Mylen Leah Solar Farm, draft Order Limits and ecological survey scope. Introduction of key project personnel and local Yorkshire Wildlife Trust staff. Initial discussion regarding ecological mitigation.
East Yorkshire Bat Group	05 December 2025	<u>Email</u> Introduction to Mylen Leah Solar Farm, including the updated draft Order Limits and requesting a consultation meeting.
	03 February 2026	<u>MS Teams meeting</u> Introduction to Mylen Leah Solar Farm, draft Order Limits and ecological survey scope. Introduction of key project personnel and members of East Yorkshire Bat Group. Initial discussion regarding ecological mitigation and stakeholder input.
Carstairs Countryside Trust	05 December 2025	<u>Email</u> Introduction to Mylen Leah Solar Farm, including the updated draft Order Limits and requesting a consultation meeting.
	13 January 2026	<u>MS Teams meeting</u> Introduction to Mylen Leah Solar Farm, draft Order Limits and ecological survey scope. Introduction of key project personnel and members of Carstairs Countryside Trust. Initial discussion regarding ecological mitigation and stakeholder input.
Friends of the Lower Derwent Valley	16 December 2025	<u>Email</u> Introduction to Mylen Leah Solar Farm, including the updated draft Order Limits and requesting a consultation meeting.
	22 January 2026	<u>Email</u> The Applicant sent a follow up email requesting a consultation meeting.
York Ornithological Club	16 December 2025	<u>Email</u> Introduction to Mylen Leah Solar Farm, including the updated draft Order Limits and requesting a consultation meeting.
	20 January 2026	<u>MS Teams meeting</u>

Consultee	Date of engagement	Summary of engagement
		Introduction to Mylen Leah Solar Farm, draft Order Limits and ecological survey scope. Introduction of key project personnel and members of York Ornithological Club. Initial discussion regarding ecological mitigation and stakeholder input.
Royal Society for the Protection of Birds	16 December 2025	<u>Email</u> Mylen Leah Solar Farm progress update, including the updated draft Order Limits and requesting a consultation meeting.

### 7.3 What legislation, planning policy and guidance is relevant to biodiversity?

7.3.1 The general legislation and planning policy context for Mylen Leah Solar Farm is provided in **Section 1.4 of Chapter 1: Introducing Mylen Leah Solar Farm in Volume 1**. Legislation, planning policy and guidance relevant to this preliminary biodiversity assessment is detailed below:

#### Legislation

- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (the Bird Directive)<sup>1</sup> - this relates to the conservation of all species of naturally occurring birds in their wild state in the territory of the European Union Member States to which the treaty applies. This legislation still applies to the UK post-leaving the European Union. Under the Birds Directive, the most suitable areas of conservation of the species set out in Annex I to the Directive are to be designated as Special Protection Areas (SPAs);
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (The Habitats Directive)<sup>2</sup> - this requires European Union Member States to maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of community interest, which are listed under Annex I, II, IV and/or V. This legislation still applies to the UK post-leaving the European Union. Species listed under Annex IV are known as 'European Protected Species'. The most suitable areas for habitats or species are to be designated as SACs;
- Conservation of Habitats and Species Regulations 2017 (as amended)<sup>3</sup>. Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the national site network. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats. All Ramsar sites remain protected in the same way as SACs and SPAs.

- Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019<sup>4</sup>;
- Wildlife and Countryside Act 1981 (as amended)<sup>5</sup>;
- Countryside and Rights of Way Act 2000<sup>6</sup>;
- Environment Act 2021<sup>7</sup>;
- Natural Environment and Rural Communities Act 2006 (NERC)<sup>8</sup>;
- The Hedgerows Regulations 1997<sup>9</sup>;
- The Protection of Badgers Act 1992<sup>10</sup>; and
- The Invasive Alien Species (Enforcement and Permitting) Order 2019<sup>11</sup>.

### **National planning policy**

- Overarching National Policy Statement for Energy (NPS EN-1) (December 2025, published January 2026)<sup>12</sup>. Section 4.6 discusses environmental and biodiversity net gain;
- National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (December 2025, published January 2026)<sup>13</sup>. Paragraphs 2.10.57 to 2.10.61 discuss project lifetime and decommissioning, including considering instances where retaining certain elements of infrastructure, such as underground cabling, beyond the operational lifetime may be less harmful to ecology. Paragraphs 2.10.67 to 2.10.84 discuss potential impacts to biodiversity and ecology from solar PV generation projects. Paragraphs 2.10.120 to 2.10.122 discuss mitigation associated with biodiversity and ecological conservation for solar PV generation projects;
- National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) (December 2025, published January 2026)<sup>14</sup>. Section 2.5 discusses environmental and biodiversity net gain and paragraphs 2.9.3 to 2.9.6 and 2.10.2 to 2.10.4 discuss biodiversity conservation, although focussed on overhead power lines;
- National Planning Policy Framework (NPPF) (2024)<sup>15</sup>. Section 15 'Conserving and enhancing the natural environment', specifically paragraphs 187 to 195;
- A Green Future: Our 25 Year Plan to Improve the Environment (2018)<sup>16</sup>;
- Environmental Improvement Plan 2023<sup>17</sup>;
- Biodiversity 2020. A strategy for England's wildlife and ecosystem services.<sup>18</sup>.

### **Local planning policy**

- 7.3.2 The East Riding Local Plan Update 2020-2039 (adopted April 2025)<sup>19</sup> includes the following policies relevant to biodiversity and solar PV generation projects:

- Policy EC5 - Supporting the renewable and low carbon energy sector;
- Policy S9 - Strengthening blue/green infrastructure;
- Policy ENV2 - Promoting a high quality landscape;
- Policy ENV4 - International, national and local sites of importance for biodiversity; and
- Policy ENV5 - Enhancing biodiversity and geodiversity; and
- Policy A6 Part C - Vale of York sub area.

### Guidance

- 7.3.3 This preliminary assessment has been undertaken in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3 (2018, updated September 2024).<sup>20</sup>
- 7.3.4 Guidance followed for specific surveys is presented in **Appendices 7.1 to 7.8** in **Volume 3**.
- 7.3.5 The preliminary assessment of great crested newts has been undertaken in line with District Level Licence methodology.<sup>21</sup> This guidance determines which ponds are required to be included within or excluded from the licence application. Where ponds are excluded from a licence application, they are not considered to provide suitable habitat for great crested newts or lack connectivity to the draft Order Limits.
- 7.4 What study area has been used for biodiversity?**
- 7.4.1 **Table 7.2** below provides the desk study search area for each receptor. The desk study search area is the geographical boundary within which desk-based ecological information has been gathered to inform this preliminary assessment.
- 7.4.2 **Table 7.2** also presents the potential zone of influence (Zoi) for each receptor. The Zoi is the geographical area over which Mylen Leah Solar Farm could affect the receptors identified within it. The Zoi identified in **Table 7.2** has considered potential impact pathways and embedded mitigation measures (design measures that are intrinsic to Mylen Leah Solar Farm, refer to **Section 7.8**). The relevant Zois for each receptor presented in **Table 7.2** are presented on **Figure 7.2: Biodiversity Zone of Influences** in **Volume 2**.
- 7.4.3 Ecological surveys have been undertaken for several receptors; details of the survey areas are provided in **Section 7.5**.
- 7.4.4 In some instances, distances for desk study search areas and survey areas have changed since the EIA Scoping Report was submitted to the Secretary of State on 8 January 2025.<sup>22</sup> This is in response to the evolving design of Mylen Leah Solar Farm, availability of information regarding potential impact pathways, consultation comments and desk based assessments of habitat suitability within the updated draft Order Limits.

**Table 7.2: Biodiversity desk study search area and Zol**

Receptor	Desk study search area	Zol
International/European statutory designated sites	Within 10km of the draft Order Limits. Note that following consultation with Natural England (as part of the Scoping Opinion adopted by the Planning Inspectorate (on behalf of the Secretary of State) on 18 February 2025 <sup>23</sup> ), the Humber Estuary SPA and Ramsar site (that lies outside the 10km desk study area/Zol) have been included within this preliminary assessment.	
National statutory designated sites	Within 5km of the draft Order Limits (to include consideration of SSSI impact risk zones, in accordance with East Riding of Yorkshire Council’s request within the Scoping Opinion adopted by the Planning Inspectorate (on behalf of the Secretary of State) on 18 February 2025).	
Non-statutory designated sites	Within 1km of the draft Order Limits. Note that Wheldrake Ings Yorkshire Wildlife Trust Reserve (that lies outside the 1km desk study area/Zol) has been included within this preliminary assessment due to its importance for wintering birds and distance from the draft Order Limits (1.14km).	
Habitats of principal importance and irreplaceable habitats <sup>1</sup> (including ancient woodland, veteran and ancient trees and important hedgerows)	Within 1km of the draft Order Limits	Within the draft Order Limits
Notable plants and plant communities <sup>2</sup>	Within 2km of the draft Order Limits	Within the draft Order Limits
Invertebrates	Within 2km of the draft Order Limits	Within the draft Order Limits
Fish	Within 2km of the draft Order Limits	Within the draft Order Limits
Amphibians	Within 2km of the draft Order Limits	Within 500m of the draft Order Limits
Reptiles	Within 2km of the draft Order Limits	Within the draft Order Limits

<sup>1</sup> Habitats of principal importance are defined by the Natural Environment and Rural Communities (NERC) Act 2006 and comprise of habitats identified as priority habitats within the UK Biodiversity Action Plan (although this is not an active policy framework, it is still used to guide conservation). Irreplaceable habitats are defined by those habitats listed within the schedule of irreplaceable habitats within The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024. Ancient woodland and veteran trees are considered irreplaceable habitats.

<sup>2</sup> Notable plants are those that are recorded as “red list” species within the desk study data, priority species under section 41 of the NERC Act 2006, or those with legal protections.

Receptor	Desk study search area	ZoI
Breeding birds	Within 2km of the draft Order Limits	Within 100m of the draft Order Limits
Non-breeding birds (wintering and passage birds)	Within 2km of the draft Order Limits. Due to potential for SPA/Ramsar site qualifying bird species to use land beyond 10km of the designated site boundaries (refer to <b>paragraph 7.6.3</b> ), British Trust for Ornithology Wetland Bird Survey data was also obtained for the Humber Estuary SPA/Ramsar site and the Lower Derwent Valley SPA/Ramsar site (which are beyond 2km from the draft Order Limits) which will be used to inform the identification of functionally linked land <sup>3</sup> .	Within 600m of the draft Order Limits (distance advised by Natural England (as part of the Scoping Opinion adopted by the Planning Inspectorate (on behalf of the Secretary of State) on 18 February 2025))
Bats	Within 10km of the draft Order Limits	Within the draft Order Limits
Water voles ( <i>Arvicola amphibius</i> )	Within 2km of the draft Order Limits	Within 200m of the draft Order Limits
Otters ( <i>Lutra lutra</i> )	Within 2km of the draft Order Limits	Within 200m of the draft Order Limits
Badgers ( <i>Meles meles</i> )	Within 2km of the draft Order Limits	Within 30m of the draft Order Limits
Other species of principal importance	Within 2km of the draft Order Limits	Within the draft Order Limits
Invasive non-native species	Within 2km of the draft Order Limits	Within the draft Order Limits

## 7.5 How have existing biodiversity conditions been understood?

### Data sources to inform the EIA baseline characterisation

7.5.1 The following data sources have been used to understand the existing biodiversity baseline conditions:

- North and East Yorkshire Ecological Data Centre for details of statutory and non-statutory designated sites (SACs, SPAs, Ramsar sites, SSSIs, National Nature Reserves (NNR), ancient woodlands, Local Nature Reserves (LNR) and Local Wildlife Sites (LWS)),

<sup>3</sup> Functionally linked land describes areas of land or sea occurring outside a designated site, which are considered to be critical to, or necessary for, the ecological or behavioural functions in a relevant season of a qualifying feature for which a SAC/SPA/Ramsar site has been designated. These habitats are frequently used by qualifying species and support the functionality and integrity of the designated sites for these features. Impacts on functionally linked land could lead to changes in species distribution and, ultimately, prevent the conservation objectives of the European site from being met.

together with records of notable plant species, rare or notable invertebrates, fish, amphibians, reptiles, protected/notable breeding birds, protected/notable non-breeding birds, bats, water voles, otters, badgers and other species of principal importance;

- The multi-agency geographic information for the countryside<sup>24</sup> to search for SSSI impact zones;
- The Priority Habitats Inventory (England)<sup>25</sup> to determine the locations of habitat of principal importance;
- The ancient woodland inventory<sup>26</sup> to determine the locations of ancient woodland;
- The ancient tree inventory<sup>27</sup> to determine the locations of ancient trees;
- Environment Agency monitoring data has been obtained from within the past 20 years up to 2025<sup>28</sup> from the relevant locations closest to the draft Order Limits, within the Foulness catchment and the Lower Derwent-Yorkshire catchment; to provide additional fish data relevant to the local area; and
- British Trust for Ornithology Wetland Bird Surveys data for the Lower Derwent Ings SSSI to provide additional bird data relevant to the local area.

### Site visits/surveys

7.5.2 No specific surveys have been undertaken for the following species within the solar PV development area (defined as the area of the Site comprising Land Parcels A-E). However, a desk based assessment has been undertaken to identify their potential presence within the solar PV development area.

- Invertebrates;
- Fish;
- Reptiles;
- Water voles; and
- Otters.

7.5.3 As detailed within **Section 7.14**, surveys for these species within the solar PV development area will be completed to inform the ES and the findings of these surveys will be submitted in support of the Development Consent Order (DCO) application. However, it should be noted that in terms of reptiles, the Applicant proposes to undertake reptile habitat assessment surveys, as opposed to reptile presence/absence surveys. This is a change to what the Applicant proposed in the Scoping Report submitted to the Secretary of State on 8 January 2025, which stated that presence/absence surveys for reptiles will be undertaken.<sup>22</sup> Following the desk based assessment undertaken and the embedded mitigation measures detailed in **Section 7.8**, the Applicant considers that such surveys are not necessary.

- 7.5.4 No surveys apart from the non-breeding bird surveys, which began during March 2026, have been undertaken within the underground grid connection corridor. However, these surveys will be undertaken to inform the ES (refer to **Section 7.14**) and the findings of these surveys will be submitted in support of the DCO application. In the absence of such surveys, a desk based assessment of the likely habitats within the underground grid connection corridor has been undertaken using aerial photography and the desk study information, the findings of which have informed this preliminary assessment.

Habitats of principal importance, irreplaceable habitats (including ancient woodland, veteran and ancient trees and important hedgerows)

- 7.5.5 A UK Habitat classification survey using the UK Habitat Classification methodology<sup>29</sup> was undertaken between August 2023 and September 2024 to determine the habitats present within the solar PV development area (at the time of survey)<sup>4</sup>. The results of the UK Habitat classification survey are provided within **Appendix 7.1: Habitat Survey Report (Solar PV Development Area)** in **Volume 3**.

- 7.5.6 Arboricultural surveys undertaken between July 2024 and March 2025 identified ancient and veteran trees within the solar PV development area, following BS: 5837<sup>30</sup>, as presented in **Figure 7.3: Tree Constraints Plan** in **Volume 2** and described within **Appendix 7.8: Stage 1 Arboricultural Report** in **Volume 3**.

Notable plants and plant communities

- 7.5.7 Vascular plant species were recorded during the UK Habitat classification survey of the solar PV development area (refer to **paragraph 7.5.5** above), the results of which are provided within **Appendix 7.1: Habitat Survey Report (Solar PV Development Area)** in **Volume 3** (although this does not constitute an exhaustive species list).

Amphibians

- 7.5.8 Where land access was permitted, ponds within 250m of the earlier revisions of the solar PV development area were surveyed during June 2023 and June 2024. The pond surveys undertaken within 250m of the earlier revisions of the solar PV development area comprised habitat suitability index assessments to identify whether the waterbodies were suitable for great crested newts. In addition, samples were taken for environmental deoxyribonucleic acid (eDNA) analysis for great crested newts. Incidental records of other amphibians such as the presence of amphibian spawn were also recorded during the habitat suitability index assessments and eDNA surveys. Where surveys have been undertaken on ponds within 250m of the earlier revisions of the solar PV development area and are now beyond 250m of the solar PV development area, the survey data have been included in this preliminary assessment.

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<sup>4</sup> The UK Habitat Classification system is the habitat classification that underpins the Department for Environment, Food and Rural Affairs Biodiversity Metric (Statutory Metric) and is therefore the favoured habitat classification to use when surveys need to inform a biodiversity net gain calculation.

- 7.5.9 Additional surveys were undertaken on 27 May 2025 to gather information, as required by Natural England, to assess the solar PV development area for a Natural England District Level Licence. This assessment provided further clarification regarding ponds that were dry at the time of the survey, or where ponds were marked on Ordnance Survey mapping, but were absent when surveyed. One additional eDNA sample was taken during this survey.
- 7.5.10 The results of the great crested newt surveys undertaken to date are detailed in **Appendix 7.5: Amphibian Baseline Report in Volume 3**. As detailed within **Section 7.14**, appropriate great crested newt surveys of the draft Order Limits will be completed during 2026. A further detailed assessment for amphibians will be provided with the ES.

Breeding birds

- 7.5.11 Breeding bird surveys were undertaken within the solar PV development area and up to 100m from the boundary (at the time of the survey) between April and July (inclusive) in 2024. As the 2024 breeding bird surveys were completed prior to the draft Order Limits being confirmed, some fields which were surveyed are no longer within the draft Order Limits and a small number of fields have not been surveyed as they were not included within the draft Order Limits at the time.
- 7.5.12 Details of the 2024 breeding bird survey results are provided in **Appendix 7.3: 2024 Breeding Bird Survey Report (Solar PV Development Area) in Volume 3**.

Non-breeding birds

- 7.5.13 Non-breeding bird surveys comprising wintering and passage surveys have been completed during 2023/24 and 2024/25 within the solar PV development area (at the time of the surveys) and up to 600m from the boundary. **Table 7.3** below presents an overview of the non-breeding bird surveys undertaken to date.

**Table 7.3: Non-breeding bird surveys 2023/24 and 2024/25**

Survey	Dates
Non-breeding bird walkover surveys	October 2023 to March 2024 (inclusive) 1 visit per month
Non-breeding bird nocturnal surveys	November 2023 to April 2024 (inclusive) 1 visit each month August 2024 to May 2025 (inclusive) 1 visit per month
Non-breeding bird vantage point surveys	November 2023 to April 2024 (inclusive) 1 visit per month October 2024 to March 2025 (inclusive) 1 visit per month
Non-breeding passage bird walkover surveys	August 2024 to May 2025 (inclusive) 1 visit per month August and September 2025 1 visit each month
Targeted whimbrel surveys	25 April 2025 to 3 May 2025 6 visits to Fields 451-453

- 7.5.14 Details of the 2023/24 and 2024/25 non-breeding survey results are provided in **Appendix 7.4: Non-breeding Bird Survey Report (Solar PV Development Area)** in **Volume 3**.
- 7.5.15 As detailed within **Section 7.14**, further non-breeding bird surveys will be undertaken within the draft Order Limits. The results of the non-breeding bird surveys completed up to March 2026 will be presented with the ES and Habitats Regulations Assessment submitted in support of the DCO application. The ES and Habitats Regulations Assessment will be updated once non-breeding bird surveys are completed during January 2027.

#### Bats

- 7.5.16 A bat habitat assessment survey was undertaken within the solar PV development area during May 2024. In order to gather information on bat species assemblage and to assess the importance of the solar PV development area for bats, automated detectors were deployed in May, June and September 2024 across 20 locations within the solar PV development area (at the time of the survey). 12 night-time bat walkover surveys were also undertaken between spring and autumn 2024 within the solar PV development area (at the time of the survey). **Appendix 7.7: Bat Survey Report** in **Volume 3** provides further methodology information and survey results.
- 7.5.17 A daytime bat walkover survey of trees and tree lines within the solar PV development area was completed in May 2024. The daytime bat walkover provided a high-level assessment of the approximate number of trees and tree lines suitable for roosting and/or hibernating bats within the solar PV development area (at the time of survey). The daytime bat walkover involved making an assessment whether each tree and tree line contained characteristics suitable for roosting and/or hibernating bats, such as age, size, species, site and geographic location and clear roost features visible from ground level. **Appendix 7.7: Bat Survey Report** in **Volume 3** provides further methodology information and survey results.
- 7.5.18 The EIA Scoping Report submitted to the Secretary of State on 8 January 2025 stated that bat activity surveys will be undertaken within the draft Order Limits and up to 20m from the draft Order Limits boundaries.<sup>22</sup> Bat activity surveys have not been undertaken beyond the solar PV development area boundaries and it is not anticipated that further bat activity surveys of the solar PV development area or surrounding habitat will be undertaken. The bat activity data gathered within the solar PV development area to date is sufficient to support this preliminary assessment and the assessment to be undertaken for the ES.
- 7.5.19 The EIA Scoping Report submitted to the Secretary of State on 8 January 2025 stated that preliminary bat roost assessments will be undertaken on all trees and structures within the draft Order Limits and up to 20m from the draft Order Limits boundaries.<sup>22</sup> Considering the large-scale size of the draft Order Limits and the embedded mitigation measures (refer to **Section 7.8**) aimed at retaining existing linear habitat features such as hedgerows and offsets from boundaries, it is not considered necessary or proportionate to undertake ground level tree assessments to inform the DCO application. Preliminary roost assessments of structures and ground level tree assessments of trees

will be undertaken at the pre-construction stage once final construction plans have been produced. These surveys will inform the need for subsequent surveys, such as aerial inspection surveys.

#### Badgers

- 7.5.20 Evidence of badger activity was recorded within the solar PV development area during the ecological walkover survey undertaken during May and June 2024. This was followed by a targeted badger survey in November 2024, which included searching for signs of badgers including setts, foraging signs, paths (runs), dung pits and latrines where possible. The category of sett and levels of activity visible at each sett was recorded. Further methodology information and survey results have been provided within **Appendix 7.2: Non-Confidential Badger Survey Report (Solar PV Development Area) in Volume 3**.
- 7.5.21 The EIA Scoping Report submitted to the Secretary of State on 8 January 2025 stated that badger surveys will be undertaken within the draft Order Limits and within 30m of the draft Order Limits.<sup>22</sup> Badger surveys beyond the solar PV development area have not been undertaken, but will be undertaken during 2026 where land access permits and through the use of vantage point surveys.

#### Other species of principal importance

- 7.5.22 Incidental sightings of species of principal importance have been recorded during the ecological surveys of the solar PV development area completed to date (**Appendices 7.1 to 7.4 in Volume 3**).

#### Invasive non-native plant species

- 7.5.23 Invasive non-native plant species were recorded during the UK Habitat classification survey of the solar PV development area (refer to **paragraph 7.5.5** above), the results of which are provided within **Appendix 7.1: Habitat Survey Report (Solar PV Development Area) in Volume 3**. Further detail regarding invasive non-native plant species is presented in **Appendix 7.6: Ecological Constraints Report in Volume 3**.

### **7.6 What are the biodiversity conditions within the study area?**

#### **Existing baseline**

- 7.6.1 The following section provides a summary of the desk based assessments and the field survey results (to date, April 2026) that have informed this preliminary assessment. Full details of the baseline conditions can be found in **Appendices 7.1 to 7.7 in Volume 3**.

#### International/European statutory designated sites

- 7.6.2 There are no statutory designated sites of international/European importance within the draft Order Limits.
- 7.6.3 Four statutory designated sites of international/European importance lie within 10km of the draft Order Limits. Following consultation with Natural England (as part of the Scoping Opinion adopted by the Planning Inspectorate (on behalf of the Secretary of State) on 18 February 2025), the Humber Estuary SPA and Ramsar site (which lie approximately 11.2km from

the draft Order Limits) has also been included within this preliminary assessment. This is because several of the individual qualifying/ listed assemblage qualifying bird species (such as golden plover (*Pluvialis apricaria*), lapwing (*Vanellus vanellus*) and pink-footed geese (*Anser brachyrhynchus*)) are known to use land beyond 10km of the designated site boundaries<sup>5</sup>.

7.6.4 The international/European statutory designated sites are summarised in **Table 7.4** and shown on **Figure 7.1: Designated Sites' Zone of Influence and Environmental Mitigation and Enhancement Areas** in **Volume 2**.

**Table 7.4: International/European statutory designated sites**

Site name and designation	Approximate distance/ direction from the draft Order Limits	Summary of qualifying features which have the potential to be affected by Mylen Leah Solar Farm
Lower Derwent Valley SAC	0m northwest (adjacent)	Annex I habitats: Lowland hay meadows and alluvial forests. Annex II species: Otter.
Lower Derwent Valley SPA	0m northwest (adjacent)	Article 4.1 of the Directive: supporting nationally important winter numbers of the following Annex I species: Bewick's swan ( <i>Cygnus columbianus bewickii</i> ), golden plover, ruff ( <i>Calidris pugnax</i> ) (winter and spring migration). Article 4.2 of the Directive: regularly supporting a breeding population of shoveler ( <i>Spatula clypeata</i> ). Article 4.2 of the Directive: area of international importance to waterfowl by regularly supporting over 20,000 waterfowl in winter, including internationally important numbers of teal ( <i>Anas crecca</i> ) and wigeon ( <i>Anas penelope</i> ).
Lower Derwent Valley Ramsar site	0m northwest (adjacent)	Ramsar criterion 1: traditionally managed species-rich alluvial flood meadow habitat. Ramsar criterion 2: assemblage of wetland invertebrates including 16 species of dragonfly and damselfly, 15 British Red Data Book wetland invertebrates, and a leafhopper <i>Cicadula ornata</i> . Ramsar criterion 4: staging post for passage birds in spring. Of particular note are the nationally important numbers of ruff and whimbrel. Ramsar criterion 5: assemblages of international importance. Species with peak counts in winter: 31,942 waterfowl.

<sup>5</sup> Note that the qualifying features of the Humber Estuary Ramsar site also include habitats, grey seals and natterjack toad, which have not been considered in this preliminary assessment.

Site name and designation	Approximate distance/ direction from the draft Order Limits	Summary of qualifying features which have the potential to be affected by Mylen Leah Solar Farm
		Ramsar criterion 6: species/populations occurring at levels of international importance. Winter: wigeon and teal.
River Derwent SAC	1.45km west	Annex I habitats: Watercourses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation. Annex II species: River lamprey ( <i>Lampetra fluviatilis</i> ), sea lamprey ( <i>Petromyzon marinus</i> ), European bullhead ( <i>Cottus gobio</i> ) and otter.
Humber Estuary SPA	11.2km south	Article 4.1 of the Directive: regularly used by more than 1% or more of the Great Britain populations of the following Annex I species in any season: avocet ( <i>Recurvirostra avosetta</i> ) (wintering and breeding), bittern ( <i>Botaurus stellaris</i> ) (wintering and breeding), hen harrier ( <i>Circus cyaneus</i> ) (wintering), golden plover (wintering), ruff (passage), marsh harrier ( <i>Circus aeruginosus</i> ) (breeding), little tern ( <i>Sterna albifrons</i> ) (breeding). Article 4.2 of the Directive: regularly used by more than 1% or more of the Great Britain populations of the following Annex I species in any season: shelduck ( <i>Tadorna tadorna</i> ) (wintering), knot ( <i>Calidris canutus</i> ) - (wintering and passage), dunlin ( <i>Calidris alpina</i> ) - (wintering and passage), black-tailed godwit ( <i>Limosa limosa</i> ) (wintering and passage), redshank ( <i>Tringa tetanus</i> ) (wintering and passage), bar-tailed godwit ( <i>Limosa lapponica</i> ) (wintering). In the non-breeding season, the area regularly supports 153,934 individual waterbirds.
Humber Estuary Ramsar site	11.2km south	Ramsar criterion 5: assemblages of international importance: 153,934 waterfowl, non-breeding season. Ramsar criterion 6: species/ populations occurring at levels of international importance: golden plover (passage and wintering), knot (passage and wintering), dunlin (passage and wintering), black-tailed godwit (passage and wintering), redshank (passage and wintering), shelduck (wintering), bar-tailed godwit (wintering).

National statutory designated sites

- 7.6.5 There is one statutory designated site of national importance within the draft Order Limits; Pocklington Canal SSSI. A further six national statutory designated sites are located within 5km of the draft Order Limits, as summarised in **Table 7.5** and shown on **Figure 7:1: Designated Sites and Environmental Mitigation and Enhancement Areas** in **Volume 2**.
- 7.6.6 Skipwith Common SSSI is located approximately 4.5km west of the draft Order Limits. Skipwith Common SSSI is designated for Atlantic wet heaths, European dry heaths, poor fen, reed (*Phragmites australis*) swamp, bracken (*Pteridium aquilinum*), open water and birch (*Betula pendula*) and (*B.puescens*) habitats, as well as assemblages of invertebrates including moths and dragonflies and breeding bird assemblages. It is unlikely that Mylen Leah Solar Farm will result in a significant effect on the SSSI qualifying features, due to the distance between Mylen Leah Solar Farm and the SSSI. Therefore, Skipwith Common SSSI has not been considered within this preliminary assessment.

**Table 7.5: National statutory designated sites**

Site name and designation	Approximate distance/direction from the draft Order Limits	Reasons for designation
Pocklington Canal SSSI	Within the draft Order Limits	Assemblage of breeding birds, canals, invertebrate assemblages associated with slow-flowing rivers and mineral marsh and open water, dragonfly assemblage and otter.
Melbourne and Thornton Ings SSSI (underpins the Lower Derwent Valley Ramsar site, SAC, SPA and NNR) <sup>6</sup>	Adjacent to the draft Order Limits	Aggregations of breeding birds: gadwall ( <i>Mareca strepera</i> ), garganey ( <i>Spatula querquedula</i> ) and pintail ( <i>Anas acuta</i> ). Aggregations of non-breeding birds: Bewick's Swan, teal and wigeon. Aggregations of non-breeding birds - variety of wintering species. Assemblages of breeding birds. Floodplain fen, Lowland mire grassland and rush pasture, Lowland neutral grassland (National Vegetation Classification MG8) and Lowland wet neutral grassland (National Vegetation Classification MG11, MG13). Wet woodland. Otter. Dragonfly assemblage.
Lower Derwent Valley NNR	295m northwest	Assemblage of nationally important breeding birds, wintering bird species

<sup>6</sup> The SSSI forms part of the ecological and legal foundation of the SAC, SPA and NNR designations

Site name and designation	Approximate distance/direction from the draft Order Limits	Reasons for designation
		assemblage, migratory birds and associated habitats, assemblage of rare plants, important habitats and species, invertebrate assemblage (including rare and scarce species, and dragonflies and damselflies), otter, habitats (including lowland neutral grassland, wet woodland and wetland habitats).
White Carr Meadow SSSI	815m northeast	Neutral grassland – lowland.
Derwent Ings SSSI (underpins the Lower Derwent Valley Ramsar site, SAC, SPA and NNR)	1.12km west	Aggregations of breeding birds: gadwall, garganey, pochard ( <i>Aythya ferina</i> ), ruff, shoveler and tufted duck ( <i>Aythya fuligula</i> ). Aggregations of non-breeding birds: Bewick’s swan, golden plover, mallard ( <i>Anas platyrhynchos</i> ), pochard, ruff, teal, whimbrel, wigeon. Supporting more than 20,000 non-breeding waterbirds. Invertebrate assemblages associated with open water on disturbed sediments, undisturbed fluctuating marsh, moss and tussock fen and reed-fen and pools. Dragonfly assemblage. Habitats: lowland damp grassland, floodplain fen (lowland). lowland neutral grassland (National Vegetation Classification MG4 and MG8) and lowland wet neutral grassland (National Vegetation Classification MG11, MG13). Vascular plant assemblage.
River Derwent SSSI (underpins the River Derwent SAC, Lower Derwent Valley SPA and NNR)	1.45km west	Aggregations of non-breeding birds: Bewick’s swan. Assemblages of breeding birds, otter, dragonfly assemblage, habitats (rivers and streams).

Non-statutory designated sites

7.6.7 There are two non-statutory designated sites located within the draft Order Limits, and a further 14 sites have been identified within 1km of the draft Order Limits. As noted in **Table 7.2**, one additional site, Wheldrake Ings Yorkshire Wildlife Trust Reserve, which is located outside the 1km desk study area, has been included in this preliminary assessment due to its

importance for wintering birds in the wider area and close proximity to the draft Order Limits.

7.6.8 The non-statutory designated sites are summarised in **Table 7.6.** and shown on **Figure 7:1: Designated Sites and Environmental Mitigation and Enhancement Areas in Volume 2.**

**Table 7.6: Non-statutory designated sites**

Site name and designation	Approximate distance/direction from the draft Order Limits	Citation summary
Hedge, Sand Lane, East Moor LWS	Within the draft Order Limits	Good quality hedgerow on both sides of the road. Eight woody species identified per 30m sample.
Ruddings Wood LWS	Within the draft Order Limits	Assumed woodland habitat; however, no citation or online information available.
Bracepits Wood LWS	Directly adjacent to the draft Order Limits	Assumed woodland habitat; however, no citation or online information available.
Kidd Lane, Rossmoor LWS	Directly adjacent to the draft Order Limits	Good quality hedgerow and both roadside verges which include a variety of wayside species are included within the designation.
Intakes Lane, Rossmoor LWS	Directly adjacent to the draft Order Limits	Good quality hedgerow and both roadside verges which include a variety of wayside species are included within the designation.
Breckstreet Farm Disused Airfield LWS	Directly adjacent to the draft Order Limits	Good quality semi-natural grassland comprising a variety of species including common-spotted orchids ( <i>Dactylorhiza fuchsii</i> ). Himalayan balsam ( <i>Impatiens glandulifera</i> ) which is an invasive species, is known to be present on-site.
Brickyard Farm Wood & Ponds LWS	7m (between Land Parcels)	Assumed woodland and wetland habitat; however, no citation or online information available.
Farm Wood, New Covert and Park Wood LWS	63m northeast	Ancient or long standing acid woodland.
Quaker's Wood, Storwood LWS	82m west	Assumed woodland habitat; however, no citation or online information available.
Bubwith – Holme-On-Spalding-Moor	377m south	Good quality established semi-natural verge.

Site name and designation	Approximate distance/direction from the draft Order Limits	Citation summary
Disused Railway Line LWS		
Walloway Fields LWS	400m west	Mosaic of semi-natural habitats including grassland and wetland.
Thornton's Wood LWS	415m east	Assumed woodland habitat; however, no citation or online information available.
Melbourne Grange LWS	431m north	Nutrient rich standing water. Site constraints neutral grassland, wetland and dense peripheral scrub and tall ruderal vegetation.
Grange Meadow LWS	584m north	Assumed grassland habitat, however no citation or online information available.
White Carr, candidate LWS	661m northeast	Good quality semi-improved grassland, reedbed and woodland.
Pocklington Canal LWS	965m northwest	Supports abundant submerged, floating-leaved and emergent vegetation including shining pondweed ( <i>Potamogeton lucens</i> ).
Wheldrake Ings Yorkshire Wildlife Trust Reserve	1.13km west	Lowland meadow and pasture and wetland habitat within the Lower Derwent Valley. Hosts large flocks of overwintering waders and waterfowl during winter and breeding birds during the spring and summer.

- 7.6.9 One area of ancient woodland is located within 1km of the draft Order Limits; Park Wood is located approximately 355m northeast of Field 15.b, separated by General Lane, residential dwellings, commercial units and other areas of woodland.
- 7.6.10 The Yorkshire Rivers Important Invertebrate Areas comprises several rivers to the west and north of the draft Order Limits. It includes the Lower Derwent Valley Ramsar site which is designated for its important wetland invertebrate assemblage (refer to **Table 7.4**). Important Invertebrate Areas are identified by Buglife and are not a legal designation, but help to ensure that key sites for invertebrates are identified across the UK. Buglife is currently producing profile documents which identify the key locations for invertebrates within each Important Invertebrate Area. A profile has not yet been published for the Yorkshire Rivers Important Invertebrate Areas and therefore the boundary (shown on **Figure 7:1: Designated Sites and Environmental Mitigation and Enhancement Areas in Volume 2.**) is based on high-level hectad (10km x 10km squares) data which will be refined further when the profile is

produced. Therefore, although Fields 10a, 10b and 8a within the solar PV development area are in the high-level hectad boundary, these arable habitats are unlikely to support aquatic invertebrate species associated with the River Derwent and therefore there would be no loss of suitable aquatic invertebrate habitat. Likely effects on the aquatic invertebrate assemblage associated with the River Derwent Ramsar site will be considered as part of the assessment of likely effects on the Lower Derwent Valley Ramsar site.

Habitats of principal importance and irreplaceable habitats (including ancient woodland, veteran and ancient trees and important hedgerows)

7.6.11 The desk study identified four habitats of principal importance within the draft Order Limits:

- Deciduous woodland;
- Mosaic of potential priority habitats;
- Ponds; and
- Coastal and floodplain grazing marsh.

7.6.12 The areas of coastal and floodplain grazing marsh and mosaic of potential priority habitats are located within the underground grid connection corridor, which is yet to be surveyed; therefore, presence of these habitats within the draft Order Limits has not been confirmed.

7.6.13 The desk study also identified four habitats of principal importance within 1km of the draft Order Limits: traditional orchard, lowland meadows, lowland fens and reedbeds; and one area of irreplaceable habitat, ancient and semi-natural woodland.

7.6.14 **Appendix 7.1: Habitat Survey Report (Solar PV Development Area) in Volume 3** provides further detail on the habitats of principal importance which were recorded within the solar PV development area, which are summarised in **Table 7.7**. The UK habitat classification name, as recorded during the UK habitat classification survey is provided, alongside the corresponding habitat of principal importance.

**Table 7.7: Habitats recorded within the solar PV development area, with corresponding habitats of principal importance**

Habitat recorded on within the solar PV development area (UK Habitat classification)	Corresponding habitat of principal importance
Arable margins pollen and nectar (c1a6)	Arable field margins
Pond (r1g.42)	Ponds
Other Lowland mixed deciduous woodland (w1f7)	Lowland mixed deciduous woodland
Native hedgerow (h2a)	Hedgerows
Species-rich native hedgerow (h2a5)	Hedgerows
Other native hedgerow (h2a6)	Hedgerows

7.6.15 Seven ancient trees and six veteran trees were recorded within or directly adjacent to the solar PV development area. Further details can be found within **Appendix 7.8: Stage 1 Arboricultural Report in Volume 3. Table 7.8** below shows the tree identification references, species, status and locations of these trees. The locations of ancient and veteran trees are presented on **Figure 7.3: Tree Constraints Plan in Volume 2.**

**Table 7.8: Ancient and veteran trees**

Tree ID	Species	Status	Grid reference	Land Parcel/Field reference
T0250	Crack-willow ( <i>Salix fragilis</i> )	Ancient	SE7399340416	Field 18.p in Land Parcel B
T0317	Crack-willow	Ancient	SE7330340538	Field 18.m in Land Parcel B
T0408	Crack-willow	Ancient	SE7331140852	Between Fields 18.n and 18.m in Land Parcel B
T0514	Crack-willow	Ancient	SE7333940548	Between Fields 18.n and 18.m in Land Parcel B
T0523	Common Hawthorn ( <i>Crataegus monogyna</i> )	Ancient	SE7528942483	Outside the draft Order Limits. Directly adjacent to Field 12.k and Land Parcel C.
T0820	Crack-willow	Ancient	SE7331340802	Between Fields 18.n and 18.m in Land Parcel B
T0877	Crack-willow	Ancient	SE7339540549	Field 18.n in Land Parcel B
T0035	Common Ash ( <i>Fraxinus excelsior</i> )	Veteran	SE7327240707	Between Fields 18.m and 18.l in Land Parcel B
T0133	Common Ash	Veteran	SE7338540489	Field 31.f in Land Parcel B
T0232	Pedunculate Oak ( <i>Quercus robur</i> )	Veteran	SE7436641656	Field 15.e in Land Parcel C
T0323	Pedunculate Oak	Veteran	SE7525342074	Outside the draft Order Limits. Directly adjacent to Fields 13.r and 13.q and Land Parcel D
T0468	Pedunculate Oak	Veteran	SE7372440858	Between Field 4.a and 7.b in Land Parcel B
T0895	Crack-willow	Veteran	SE7321240246	Field 31.f in Land Parcel B

Notable plants and plant communities

7.6.16 Desk study records of 13 notable plants species within 2km of the draft Order limits were returned, as shown in **Table 7.9**. The desk study record provided records of English Bluebell (*Hyacinthoides non-scripta*) within the draft Order Limits, such as within Ruddings Wood LWS. The status of the plants has been listed, with any relevant legal protections, the age of the most recent record, and a broad description of the habitats the plant may be found in.

**Table 7.9: Notable plants recorded in 2km of the draft Order Limits**

Species	Most recent record	Status	Source for conservation status	Habitat
Rye Brome ( <i>Bromus secalinus</i> )	2013	Notable species	RDB-NS, RL-NT	Arable
Box ( <i>Buxus sempervirens</i> )	2009	Notable species	RDB-NR, RL-DD	Woodlands and scrub
Corn Marigold ( <i>Glebionis segetum</i> )	2018	Notable species	RL-VU	Sandy arable field margins
English Bluebell	2019	Legally Protected Species	WCA8	Woodlands
Field Pepperwort ( <i>Lepidium campestre</i> )	2023	Notable species	RL-NT	Open grassland and arable, particularly sandy areas
May Lily ( <i>Maianthemum bifolium</i> )	2017	Notable species	RDB-NR, RL-VU	Woodlands
Pale Forget-me-not ( <i>Myosotis stolonifera</i> )	2007	Notable species	RDB-NS	Ditches/ watercourses
Pointed Stonewort ( <i>Nitella mucronata</i> )	2007	Notable species	RDB-NS	Lakes, canals and ponds
Tubular Water-dropwort ( <i>Oenanthe fistulosa</i> )	2007	Priority species	RL-VU, S41	Water margins or wetlands
Tasteless Water-pepper ( <i>Persicaria mitis</i> )	2007	Notable species	RDB-NS, RL-VU	Exposed, wet mud
Flat-stalked Pondweed ( <i>Potamogeton friesii</i> )	2013	Notable species	RDB-NS, RL-NT, RL-VU	Ditches, watercourses, slow moving water
Annual Knawel ( <i>Scleranthus annuus</i> )	2011	Priority species	RL-EN, S41	Shallow, dry soil or rocks
Marsh Stitchwort ( <i>Stellaria palustris</i> )	2009	Priority species	RL-VU, S41	Inundated areas, grasslands, fen, water margins

Species	Most recent record	Status	Source for conservation status	Habitat
<p><b>RDB-NR:</b> Red Data Book listing (not based on International Union for Conservation of Nature guidelines) Nationally Rare,  <b>RDB-NS:</b> Red Data Book listing (not based on IUCN guidelines) Nationally Scarce,  <b>RL-DD:</b> IUCN Red List of Threatened Species Data Deficient  <b>RL-EN:</b> IUCN Red List of Threatened Species Endangered,  <b>RL-NT:</b> IUCN Red List of Threatened Species Near Threatened,  <b>RL-VU:</b> IUCN Red List of Threatened Species Vulnerable,  <b>S41:</b> Natural Environment and Rural Communities Act 2006 (Section 41)  <b>WCA8:</b> Wildlife &amp; Countryside Act 1981 Schedule 8 Plants which are protected</p>				

7.6.17 No notable plant species were recorded during the UK habitat classification surveys of the solar PV development area, as detailed in **Appendix 7.1: Habitat Survey Report (Solar PV Development Area) in Volume 3.**

7.6.18 The habitats (arable, field margins, woodland, ditches and wet grassland) which typically support the rare plants identified in **Table 7.9**, are either present within the solar PV development area or are likely to be present within the underground grid connection corridor. Therefore, notable plant species are considered to potentially be present within the draft Order Limits.

Invertebrates

7.6.19 Desk study records of invertebrate species of conservation interest within 2km of the draft Order Limits were returned, including species associated with aquatic habitats, such as dragonflies. Further details of these records are presented in **Appendix 7.6: Ecological Constraints Report in Volume 3.**

7.6.20 Invertebrates are a qualifying feature/reason for designation for River Derwent Ramsar site, Pocklington Canal SSSI, Melbourne and Thornton Ings SSSI, Lower Derwent Valley NNR, Derwent Ings SSSI and River Derwent SSSI (refer to **Tables 7.4 to 7.5**). The draft Order Limits include habitats such as ditches, streams, ponds, still and slow moving water and the Pocklington Canal. These habitats are suitable to support aquatic invertebrates and species such as dragonflies which require water for part of their life cycle, including species which could be associated with the designated sites.

7.6.21 The draft Order Limits are considered likely to support an assemblage of common terrestrial invertebrate species, typical of the improved grassland, arable, hedgerow and damp grassland habitats present.

7.6.22 Further detail regarding invertebrates is presented in **Appendix 7.6: Ecological Constraints Report in Volume 3.** As detailed in **Section 7.14**, aquatic invertebrate habitat assessment surveys will be undertaken to inform the DCO application, the results of which will be presented within the ES.

Fish

7.6.23 There were desk study records of European eel (*Anguilla anguilla*), spined loach (*Cobitis taenia*) and brown trout (*Salmo trutta*), within 2km of the draft Order Limits. In addition, the Environment Agency noted within the Scoping Opinion adopted by the Planning Inspectorate (on behalf of the Secretary of

State) on 18 February 2025, that European eel and European bullhead are known to be present in Bielby Beck within the draft Order Limits.

- 7.6.24 Fish (European bullhead, river and sea lamprey) are a qualifying feature/reason for designation for the River Derwent SAC (refer to **Table 7.4**), which is located approximately 1.45km west of, and hydrologically connected to the draft Order Limits. In addition, although not a reason for designation, fish are noted in the citation for the River Derwent SSSI, which underpins the River Derwent SAC; this includes bleak (*Alburnus Alburnus*), Eurasian ruffe (*Gymnocephalus cernua*) and burbot (*Lota lota*). Burbot are currently believed to be extinct in the UK.<sup>31</sup>
- 7.6.25 The west and north of the draft Order Limits fall within the River Derwent catchment, with the remainder falling within the Foulness catchment. The desk based assessment included a review of aquatic habitats within the draft Order Limits to identify those suitable to support fish (including species associated with the designated sites). Aquatic habitats present include flowing watercourses (streams and rivers), ditches/field drains and still waters (e.g. small ponds).
- 7.6.26 The review of Environment Agency monitoring data identified records of European bullhead within the draft Order Limits. There were no records of river lamprey, sea lamprey, bleak or ruffe, including within the Foulness River, Bielby Beck System and Pocklington Beck at the locations closest to the draft Order Limits. This is likely due to the habitats being lowland, slow flowing drainage watercourses, which are likely to be predominantly silt sediment, with a lack of suitable spawning habitat (shallow gravels/pebbles in flowing water). Although river and sea lamprey may make use of the watercourses within the draft Order Limits that are connected to the River Derwent, the watercourses within the draft Order Limits do not provide any migratory routes to upstream reaches and are considered likely to provide sub-optimal habitat conditions for breeding lamprey and therefore are unlikely to be an important habitat for the populations of river or sea lamprey associated with the River Derwent SAC. European eel may be present throughout the drainage network; however, they are likely to be more prevalent within the larger drains with better quality habitat.
- 7.6.27 Further detail regarding fish is presented in **Appendix 7.6: Ecological Constraints Report** in **Volume 3**. As detailed in **Section 7.14**, appropriate aquatic surveys will be undertaken to inform the DCO application, the results of which will be presented within the ES.

#### Amphibians

- 7.6.28 Records of great crested newt, common toad (*Bufo bufo*) and common frog (*Rana temporaria*) within 2km of the draft Order Limits were returned. The desk study provided records of great crested newts within Seaton Ross, the closest record being approximately 100m north of Field 13.v, although the record does not correspond to a waterbody shown on Ordnance Survey maps.
- 7.6.29 There are 113 waterbodies located on Ordnance Survey mapping within 500m of the draft Order Limits. 23 of those waterbodies are larger than 2,500m<sup>2</sup> and are therefore excluded from further assessment in accordance

with Natural England District Level Licence guidance<sup>32</sup>. Therefore, 90 ponds suitable for breeding amphibians are located within 500m of the draft Order Limits. Of these, 27 ponds are within the draft Order Limits, 45 ponds are located within 250m of the draft Order Limits and 18 ponds are located within 250m to 500m of the draft Order Limits.

7.6.30 The location of the ponds is shown in **Appendix 7.5: Amphibian Baseline Report** in **Volume 3**.

7.6.31 A summary of the results of the great crested newt surveys undertaken to date is shown in **Table 7.10** below.

**Table 7.10: Summary of great crested newt survey results**

Data source	Within the draft Order Limits	0-250m of the draft Order Limits	250m-500m of the draft Order Limits
Waterbodies on Ordnance Survey mapping	27	61	25
Ponds over 2500m <sup>2</sup>	0	16	7
Ponds less than 2500m <sup>2</sup>	27	45	18
Number of ponds which have not been surveyed	5	45	16
Number of ponds subject to survey	22	0	1
Number of ponds which were dry at time of survey (2025)	5	0	0
Number of ponds which do not exist	4	0	0
Total number of ponds subject to eDNA survey	13	0	1
Total number of ponds with a positive eDNA result (confirmed presence)	1 (pond 60 – Field 3.e)	0	0
Total number of ponds with a negative eDNA result (likely absence)	11	0	1
Ditch with negative eDNA result (likely absence)	1 (pond 16 – Field 14.d)	0	0
Number of ponds subject to the Natural England District Level Licence application	22	45	0

7.6.32 The Natural England District Level Licence requires information on all ponds within 250m of the draft Order Limits. 67 ponds will be included within the Natural England District Level Licence application. This comprises 22 ponds within the draft Order Limits and 45 ponds within 250m of the draft Order Limits. The ponds excluded from the proposed licence application comprise:

- 25 ponds that are beyond 250m of the draft Order Limits;
- 16 ponds within 250m of the draft Order Limits that are larger than 2500m<sup>2</sup>;

- Four ponds within the draft Order Limits that were identified using Ordnance Survey and aerial mapping but are no longer present; and
- One pond within the draft Order Limits, which was a ditch rather than a pond; the ditch was tested for eDNA which provided a negative result.

7.6.33 Of the 27 ponds within the draft Order Limits:

- Four were identified using Ordnance Survey and aerial mapping but are no longer present, and therefore unsuitable for breeding great crested newts;
- Five were dry at the time of the survey, and therefore great crested newts were considered to be likely absent from these ponds;
- 13 were subject to eDNA testing. 11 ponds (and one ditch) provided a negative result, and Pond 60 within Field 3.e provided a positive result.
- Five have not been surveyed, because they are within areas for which access was not granted during the survey period (four ponds) or where the draft Order Limits have expanded to include additional ponds since the most recent survey was undertaken (one pond). These ponds are currently considered “not surveyed” for the District Level Licence application and may provide habitat for great crested newts and other amphibians.

7.6.34 The information currently available is sufficient to support a District Level Licence for great crested newts; however, additional surveys are due to be undertaken to inform the DCO application (as detailed within **Section 7.14**).

7.6.35 Suitable terrestrial amphibian habitats are present within the draft Order Limits, including areas of hedgerow, field margins, rough grassland and woodland. Common toad and common frog are considered likely to be present within suitable ponds and associated terrestrial habitats. Further detail regarding amphibians is presented in **Appendix 7.5: Amphibian Baseline Report** in **Volume 3**.

#### Reptiles

7.6.36 Desk study records of common lizard (*Zootoca vivipara*), adder (*Vipera berus*) and slow-worm (*Anguis fragilis*) within 2km of the draft Order Limits were returned. The closest reptile records to the draft Order Limits were from Allerthorpe Common, which is approximately 1.2km from the draft Order Limits.

7.6.37 Most of the land within the solar PV development area comprises open arable and pasture fields which are considered sub-optimal to support reptiles. Smaller areas of rough grassland, scrub habitats, hedges, ditches and woodland margins are considered to provide suitable sheltering and foraging habitat to support small numbers of common reptile species, but these were limited in extent. Further detail regarding reptiles is presented in **Appendix 7.6: Ecological Constraints Report** in **Volume 3**.

### Breeding birds

- 7.6.38 The breeding bird surveys carried out in 2024 identified 44 species within the solar PV development area at the time. Of these, breeding was confirmed or suspected for 22 species, comprising:
- Two species recorded listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (barn owl (*Tyto alba*) and red kite (*Milvus milvus*)).<sup>5</sup>
  - 14 listed as rare and most threatened species under Section 41 of the NERC Act 2006<sup>8</sup> (grey partridge (*Perdix perdix*), lapwing, curlew (*Numenius Arquata*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), mistle thrush (*Turdus viscivorus*), tree sparrow (*Passer montanus*), house sparrow (*Passer domesticus*), dunnock (*Prunella modularis*), yellow wagtail (*Motacilla flava*), linnet (*Linaria cannabina*), corn bunting (*Emberiza calandra*), yellowhammer (*Emberiza citronella*) and reed bunting (*Emberiza schoeniclus*)).
  - 11 Red Birds of Conservation Concern<sup>33</sup> List species (grey partridge, lapwing, curlew, skylark, mistle thrush, tree sparrow, house sparrow, yellow wagtail, linnet, corn bunting and yellowhammer).
  - 11 Amber Birds of Conservation Concern<sup>33</sup> List species (curlew, tawny owl (*Strix aluco*), rook (*Corvus frugilegus*), willow warbler (*Phylloscopus trochilus*), whitethroat (*Sylvia communis*), wren (*Troglodytes troglodytes*), song thrush, dunnock, pied wagtail (*Motacilla alba*), meadow pipit (*Anthus pratensis*) and reed bunting).
  - Eight species recorded listed under the East Riding of Yorkshire Local Biodiversity Action Plan (curlew, grey partridge, skylark, tree sparrow, yellow wagtail, linnet, yellowhammer and corn bunting).
- 7.6.39 Breeding birds are a qualifying feature for Lower Derwent SPA and Humber Estuary SPA and a reason for designation for Pocklington Canal SSSI, Melbourne and Thornton Ings SSSI, Derwent Ings SSSI, River Derwent SSSI and Lower Derwent Valley NNR (refer to **Table 7.4** and **7.5**). Two of the named species listed as reasons for designation of the Derwent Ings SSSI were recorded during the surveys (tufted duck and pochard); of which tufted duck was recorded breeding within 600m of the solar PV development area.
- 7.6.40 22 additional bird species were also recorded during the 2024 breeding bird surveys, but no evidence of breeding for these species was noted.
- 7.6.41 Further details of the breeding bird surveys are presented in **Appendix 7.3: 2024 Breeding Bird Survey Report (Solar PV Development Area)** in **Volume 3**.

### Non-breeding birds

- 7.6.42 Non-breeding birds are a qualifying feature/reason for designation for Lower Derwent Valley SPA and Ramsar site, Humber Estuary SPA and Ramsar site, Melbourne and Thornton Ings SSSI, Derwent Ings SSSI, River Derwent SSSI and Lower Derwent Valley NNR (refer to **Table 7.4** and **Table 7.5**).

7.6.43 During consultation (refer to **Table 7.1**), Natural England provided guidance documents on the ‘main component species’ of the SPA non-breeding waterbird assemblages:

- ‘Annex B: Humber Estuary Special Protection Area: Non-breeding waterbird assemblage (October 2022)’; and
- ‘Annex B1: Lower Derwent Valley Special Protection Area: non-breeding waterbird assemblage (Version 1.1, June 2023)’.

7.6.44 These set out which species should be considered when assessing the non-breeding waterbird assemblage features of the SPAs. **Table 7.11** shows the SPA/Ramsar site non-breeding qualifying species (including those listed within Annex B and B1 of the Natural England guidance) which have been recorded foraging/roosting on the ground within the solar PV development area during the non-breeding bird surveys undertaken to date (2023/24 and 2024/25).

**Table 7.11: SPA/Ramsar site non-breeding qualifying species (including those listed within Annex B and B1 of the Natural England guidance) recorded during the non-breeding bird surveys in 2023/24 and 2024/25 (\*species not recorded)**

Species	Recorded during the 2023/24 surveys	Recorded during the 2024/25 surveys
Black-headed gull ( <i>Chroicocephalus ridibundus</i> )	✓	✓
Common gull ( <i>Larus canus</i> )	✓	✓
Curlew	✓	✓
Dunlin	✓	✓
Golden plover	✓	✓
Greenshank ( <i>Tringa nebularia</i> )	✓	*
Greylag goose ( <i>Anser anser</i> )	✓	✓
Lapwing	✓	✓
Little egret ( <i>Egretta garzetta</i> )	✓	*
Mallard	✓	✓
Wigeon	✓	✓
Teal	✓	✓
Oystercatcher ( <i>Haematopus ostralegus</i> )	✓	✓
Shelduck	✓	
Ruff	*	✓
Pink-footed goose	✓	✓
Whimbrel	*	✓

7.6.45 Habitats within the draft Order Limits have the potential to be functionally linked land for a number of the qualifying bird species of the International/European designated sites. This will be determined following completion of the non-breeding bird surveys.

- 7.6.46 Further details of the non-breeding bird surveys and a definition of the 'main component species' are presented in **Appendix 7.4: Non-breeding Bird Survey Report (Solar PV Development Area)** in **Volume 3**.

#### Bats

- 7.6.47 The desk study records show that at least six species of bat have been recorded within 500m of the draft Order Limits, including whiskered bat (*Myotis mystacinus*), Daubenton's bat (*Myotis daubentonii*), noctule (*Nyctalus noctule*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), and brown long-eared bat (*Plecotus auritus*). Of the 30 records within 500m of the draft Order Limits, 11 are field observations recorded between 2018 and 2021, four are grounded bats recorded between 1996 and 2009 and 16 are for roosts recorded between 2013 and 2023, two of which are located within the draft Order Limits.
- 7.6.48 Records of Brandt's bat (*Myotis brandti*) and Natterer's bat (*Myotis nattereri*) were also returned within 2km of the draft Order Limits.
- 7.6.49 The desk study provided records of bat roosts within 500m of the draft Order Limits, which included 11 day roosts (six common pipistrelle day roosts, three brown long-eared day roosts, two whiskered bat day roosts, one myotis species day roost) and one brown long-eared maternity roost located approximately 400m from the draft Order Limits. The recorded bat day roosts are located between 250m and 480m from the draft Order Limits. Further detail is provided within **Appendix 7.7: Bat Survey Report** in **Volume 3**.
- 7.6.50 The majority of habitats within the solar PV development area comprise open arable crop fields and modified grassland, which provide low value habitats for bats; whereas the woodlands, areas of scrub, neutral grassland, hedgerow and watercourses provide habitat of higher value. The hedgerows and watercourses also provide good connectivity throughout. Overall, the solar PV development area is assessed as being of 'low to moderate potential value' for bats, as defined in the Bat Survey Guidelines (Collins, 2023).<sup>34</sup>
- 7.6.51 The solar PV development area includes various individual trees, tree lines and trees along woodland boundaries which are potentially suitable for roosting and/or hibernating bats. Due to the size of the solar PV development area, a detailed ground level tree assessment has not been undertaken. However, a day-time bat walkover has been undertaken to determine whether a tree, tree line or woodland edge is likely to support roosting and or hibernating bats. A total of 124 trees and 125 tree lines were recorded during the daytime bat walkover, of which 74 individual trees and 51 tree lines were assessed as having multiple features suitable for roosting bats. The day-time bat walkover information is provided within **Appendix 7.7: Bat Survey Report** in **Volume 3**.
- 7.6.52 At least six bat species were recorded during the static detector and night-time bat walkover surveys undertaken within the solar PV development area during 2024. The species recorded included common pipistrelle, soprano pipistrelle Nathusius' pipistrelle (*Pipistrellus nathusii*), noctule, brown long-eared bat, and *Myotis* species. Identification of *Myotis* bat registrations to species level has not been undertaken. However, based on the desk study

results, geographic location of the study area and habitat within the solar PV development area, the *Myotis* species likely to be present include Daubenton's, Natterer's, whiskered and Brandt's bats. Common pipistrelle was the most frequently recorded species within the solar PV development area, followed by soprano pipistrelle, *Myotis* species, noctule, brown long-eared and lastly the rarer Nathusius' pipistrelle.

- 7.6.53 The full bat survey methodology and results are presented within **Appendix 7.7: Bat Survey Report** in **Volume 3**.

#### Water voles

- 7.6.54 There were three desk study records of water voles within the draft Order Limits, and a further 20 records within 2km of the draft Order Limits, although all water vole records were from the year 2000 or earlier. The most recent record of water vole within the study area was from 2000, in relation to Bielby Beck, within the underground grid connection corridor.
- 7.6.55 The desk based assessment identified habitats potentially suitable for water voles within the draft Order Limits (detailed within **Appendix 7.6: Ecological Constraints Report** in **Volume 3**). As detailed in **Section 7.14**, appropriate water vole surveys will be undertaken to inform the DCO application, the results of which will be presented within the ES.

#### Otters

- 7.6.56 There were five desk study records of otters within the draft Order Limits and a further 38 records within 2km. The most recent record of otters was from 2003, in relation to Pocklington Canal (within the draft Order Limits).
- 7.6.57 Otters are a qualifying feature/reason for designation for Lower Derwent Valley SAC, River Derwent SAC, Pocklington Canal SSSI, Melbourne and Thornton Ings SSSI, River Derwent SSSI and Lower Derwent Valley NNR (refer to **Tables 7.5** and **7.6**).
- 7.6.58 These designated sites are all hydrologically linked to the draft Order Limits, the closest of which are Lower Derwent Valley SAC, Pocklington Canal SSSI and Melbourne and Thornton Ings SSSI, located within and adjacent to the draft Order Limits respectively. If otters are confirmed to be present within the draft Order Limits, it is possible that they are part of the populations associated with the designated sites, as this species can have a home range of over 20km.<sup>35</sup>
- 7.6.59 The desk based assessment identified numerous watercourses within the draft Order Limits suitable for commuting/foraging otters. The terrestrial habitat within the draft Order Limits is dominated by open agricultural fields which offer limited suitability for otters. However, the less disturbed areas, such as the woodland, scrub and hedgerows alongside watercourses, are likely to provide suitable habitat for otter holts and or resting places. Further detail is provided within **Appendix 7.6: Ecological Constraints Report** in **Volume 3**.

### Badgers

- 7.6.60 Desk study records of badgers were returned within 2km of the draft Order Limits, the closest of which was approximately 400m from the draft Order Limits (from 2017).
- 7.6.61 The ecological walkover of the solar PV development area completed during May and June 2024 and badger survey completed within the solar PV development area during November 2024 identified badger paths, badger hair, latrines and both disused and active badger setts. The badger survey methodology and results are presented in **Appendix 7.2: Non-Confidential Badger Report (Solar PV Development Area)** in **Volume 3**.
- 7.6.62 The solar PV development area also provides suitable badger foraging habitat in the form of arable fields, grassland and woodlands, and areas of relative cover within the woodland and hedgerows. Watercourses, ditches and ponds provide water sources. Badgers are considered to make use of the entire draft Order Limits for commuting and foraging.

### Other species of principal importance

- 7.6.63 Desk study records of brown hare (*Lepus europaeus*), harvest mouse (*Micromys minutus*), and hedgehog (*Erinaceus europaeus*) were returned within 2km of the draft Order Limits, of which hedgehog were recorded within the draft Order Limits.
- 7.6.64 Brown hares were recorded incidentally throughout the solar PV development area during the ecological surveys undertaken to date. Further information regarding other species of principal importance is presented in **Appendix 7.6: Ecological Constraints Report** in **Volume 3**.

### Invasive non-native species

- 7.6.65 Desk study records of invasive non-native plant species including *Japanese knotweed (Reynoutria japonica)*, *Himalayan Balsam*, *Rhododendron (Rhododendron ponticum)*, *Nuttall's Waterweed (Elodea nuttallii)* and *Canadian Waterweed (Elodea canadensis)* were returned within 2km of the draft Order Limits. The closest record to the draft Order Limits was Canadian pondweed, recorded within Pocklington Canal in 2016. Nuttall's waterweed has also been recorded within Pocklington Canal, most recently in 2013; the closest record, approximately 400m from the draft Order Limits, was recorded in 2007.
- 7.6.66 Himalayan balsam has been recorded along Pocklington Canal within the underground grid connection corridor during 2020. It has also been recorded within land directly adjacent to the solar PV development area including within Breckstreet Farm Disused Airfield LWS, located adjacent to Fields 13.zg, 13.zf, 13.zc, 13.zb, 13.zn, 13za and 13.zo. The citation for Breckstreet Farm Disused Airfield LWS states Himalayan balsam is known to be present within the LWS.
- 7.6.67 There were three records of Japanese knotweed, the closest of which was approximately 575m from the draft Order Limits at Allerthorpe Gold and Country Club.

- 7.6.68 Rhododendron was identified along the south-western boundary of Field 13.x within Land Parcel D and along the north eastern boundary of Field 13.zg within Land Parcel D during the UK habitat classification survey undertaken between August 2023 and September 2024.
- 7.6.69 Desk study records of grey squirrel (*Sciurus carolinensis*), Egyptian goose (*Alopochen aegyptiaca*) and black swan (*Cygnus atratus*) were returned within 2km of the draft Order Limits.
- 7.6.70 Further detail regarding invasive non-native species and surveys undertaken to date are presented in **Appendix 7.6: Ecological Constraints Report in Volume 3**.

#### **Future baseline**

- 7.6.71 The habitat within the solar PV development area is largely arable farmland, cropped on rotation, with some modified grassland and grass leys, bordered by hedgerows, arable field margins and wet and dry ditches. In the short to medium term, in the absence of Mylen Leah Solar Farm, these habitats would likely continue to be intensively managed as farmland which would provide potential habitat for species such as ground nesting birds and foraging bats. The distribution of some species may change in response to cropping patterns, whilst the assemblages would likely remain the same.
- 7.6.72 In the longer term (equivalent to the 50 year operational phase), broad habitat types would likely continue under agricultural management. The majority of existing habitats are likely to continue to be present, although some changes in habitat extent, composition and structure would occur as a result of ecological succession, such as the establishment of tree and shrub seedlings. These resultant gradual changes in habitat composition are unlikely to materially alter the ecological baseline and therefore the habitats and species present are very unlikely to undergo significant change.

### **7.7 How have the likely effects been assessed for biodiversity?**

#### **Approach to design flexibility**

- 7.7.1 The design of Mylen Leah Solar Farm currently has flexibility over the On-Site Substation locations; however, the approach taken has assessed the reasonable worst-case scenario of all potential options.

#### **Assessment assumptions**

- 7.7.2 As ecological surveys are ongoing, this preliminary assessment has been based on the results of desk-based assessments and the survey results available to date. As such, a precautionary approach taking into account the worst case scenario has been considered when assessing potential effects, as detailed below.
- 7.7.3 Where surveys are yet to be completed but the desk based assessment indicates likely or potential presence of an ecological receptor, these have been considered in the preliminary assessment of potential effects, for example: habitats of principal importance, notable plant species and plant communities, fish, invertebrates, water voles, otters and species of principal importance. The preliminary assessment of effects which assumes presence

will be updated following the completion of the surveys, as detailed within **Section 7.14**.

7.7.4 Surveys of the underground grid connection corridor have yet to be undertaken. As such, the preliminary assessment of potential effects within the underground grid connection corridor has been based on the desk based assessment and informed by the survey results for the solar PV development area, in relation to habitats and species assumed to be present.

7.7.5 Taking into account the results of the non-breeding bird surveys undertaken to date within the solar PV development area, the preliminary assessment of potential effects has been undertaken on the precautionary assumption that habitats within the solar PV development area constitute functionally linked land for species associated with SPAs/Ramsar sites. The assessment of potential effects will be updated in the ES, once full survey information is available.

#### **Assessment methodology and criteria**

7.7.6 The assessment methodology detailed in this section has been undertaken in accordance with CIEEM Guidelines<sup>36</sup>, as summarised below.

7.7.7 This preliminary assessment has comprised the following steps:

- Identify relevant ecological features (e.g. designated sites, habitats, species or ecosystems) that may be impacted;
- Determine the ecological importance of receptors using geographic frames of reference; and
- Provide a scientifically rigorous and transparent assessment of the likely ecological impacts and resultant effects. Impacts and effects may be positive or negative.

7.7.8 Criteria that have been taken into account when determining significance comprise:

- Duration (short-term, medium-term or long-term);
- Permanence (permanent or temporary) and changes in significant (increase or decrease); and
- Reversibility - e.g. is the change reversible or irreversible, permanent or temporary.

7.7.9 The geographic frames of reference used for this preliminary assessment to help determine the ecological importance of receptors in accordance with the CIEEM Guidelines are as follows:

- International (i.e. Ramsar Sites, SACs and SPAs) (normally within the geographic area of Europe);
- UK or National;
- Regional;
- County;
- District; and

- Local (i.e. within approximately 5km of the draft Order Limits).
- 7.7.10 The ecological importance of species populations is based on their size, recognised status and legal protection.
- 7.7.11 When assigning ecological importance to species populations, the following has been considered: legal protection, distribution, rarity, population trends and population size. The assessment of ecological importance relies on the professional opinion and judgment of experienced ecologists, informed by species population information and scientific research.
- 7.7.12 When assigning ecological importance to plant communities, these have been assessed in terms of their intrinsic value, habitat for supporting protected species and for supporting plants species of nature conservation concern.
- 7.7.13 When describing ecological impacts and effects, reference is made to the following characteristics as required:
- **Positive or negative:** Positive represents a change that improves the quality of the environment e.g. by increasing species diversity, extending habitat or improving water quality. This may also include halting or slowing an existing decline in the quality of the environment. Negative represents a change which reduces the quality of the environment e.g. destruction of habitat, removal or foraging habitat, habitat fragmentation, pollution.
  - **Extent:** The spatial or geographical area over which the impact/effect may occur under a suitably representative range of conditions (e.g. noise transmission under water).
  - **Magnitude:** The size, amount, intensity and volume – this should be described on a quantitative basis where possible.
  - **Duration:** Defined in relation to ecological characteristics (such as the lifecycle of a species) as well as human timeframes.
  - **Frequency and timing:** The number of times an activity occurs.
  - **Reversibility:** An irreversible effect is one from which recovery is not possible within a reasonable timeframe or there is no reasonable chance of action being taken to reverse it. A reversible effect is one from which spontaneous recovery is possible or which may be counteracted by mitigation. In some case, the same activity can cause both reversible and irreversible effects.
- 7.7.14 CIEEM Guidelines requires a clear statement as to whether or not an effect is significant and at what geographical scale, for example 'significant at the national level'. In accordance with CIEEM Guidelines, a significant effect is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. A significant effect can be either positive or negative.
- 7.8 How has biodiversity informed the design so far?**
- 7.8.1 This preliminary assessment has been based on the principle that certain mitigation measures have been 'embedded' into the design of Mylen Leah

Solar Farm to minimise likely significant effects as far as reasonably practicable at this early stage of the design process, for example by the considered placement of infrastructure. Embedded (primary) environmental mitigation measures relevant to this preliminary biodiversity assessment are shown in **Table 7.12**.

**Table 7.12: Embedded mitigation measures relevant to biodiversity**

Embedded mitigation measures relevant to biodiversity	Function
The On-Site Substation(s) will not be located within 250m of statutory and non-statutory designated sites.	Avoid impacts on statutory and non-statutory designated sites from the construction, operation or decommissioning of the On-Site Substations.
A minimum 20m offset distance from development to non-statutory designated sites.	The offset distance would avoid/minimise potential impacts on non-statutory designated sites.
Other than access tracks, Mylen Leah Solar Farm will incorporate a minimum offset distance of 15m from any ancient and veteran trees (from the edge of the canopy).	The offset distance would protect ancient and veteran trees (irreplaceable habitats) by avoidance of the root protection zones.
Where possible, Mylen Leah Solar Farm will avoid development on the habitats of principal importance.	Avoid/minimise potential impact on habitats of principal importance within the draft Order Limits.
Where possible, existing hedgerows, woodland, ditches and field margins would be retained. Any breaks or crossings (associated new tracks, security fencing and/or cable routes) would be designed to use existing agricultural tracks between fields and the width of any crossings would be kept to a minimum.	Avoid/minimise potential impacts on these habitats and the ecological receptors they may support: notable plants and plant communities, invertebrates, fish, amphibians, reptiles, breeding and non-breeding birds, bats, water voles (if present), otters, badgers and other species of principal importance.
Cables will be located in existing gaps in hedgerows, where reasonably practicable.	To minimise impacts on hedgerows and the ecological receptors they may support, and to retain habitat connectivity for species across the draft Order Limits.
<p>Where reasonably practicable, Mylen Leah Solar Farm (excluding cables and access routes) will incorporate a minimum offset distance of:</p> <ul style="list-style-type: none"> <li>• 10m from any woodland, tree lines and individual trees (from the edge of the canopy or root protection zone whichever is bigger).</li> <li>• 5m from the outer edge of</li> </ul>	<p>The offset distances would protect trees/tree lines, hedgerows and woodland (habitats of principal importance) by avoidance of the root protection zones.</p> <p>These offset distances would also protect habitats of value to ecological receptors, such as: notable plants and plant communities, invertebrates, amphibians, reptiles, breeding and non-breeding birds, bats, badgers and other species of</p>

Embedded mitigation measures relevant to biodiversity	Function
hedgerows.	principal importance. It would minimise disturbance of these ecological receptors during construction and operation and would allow continued movement of species across the draft Order Limits.
A minimum offset distance of 10m from development to existing ponds.	The offset distance would protect ponds, which are a habitat of principal importance. This would also avoid/minimise impacts on aquatic invertebrates, fish and amphibians which may be present within the ponds and would retain surrounding terrestrial habitat of value for amphibians.
10m development offset from the banks of Internal Drainage Board watercourses, 5m development offset from banks of Ordinary Watercourses	Retain vegetation connectivity, help stabilise watercourse and ditch banks and help provide protection from pollution such as surface water run-off. It will also maintain the vegetated watercourse corridor habitat for riparian mammals and nesting birds. The offset distance would protect watercourses. It would also avoid/minimise impacts on aquatic invertebrates, fish, amphibians, otters and water voles, which may be present within the watercourses, and would retain the vegetated watercourse corridor of potential value for riparian mammals and nesting birds.
Exact standoff distances for horizontal directional drilling will depend on geology and adjacent habitats present within the draft Order Limits, informed by surveys. The horizontal directional drilling standoff distance required is expected to be a minimum of 50m for Pocklington Canal and a minimum of 20-30m from other watercourses, as advised by Natural England and the Canal and River Trust in the Scoping Opinion adopted by the Planning Inspectorate (on behalf of the Secretary of State) on 18 February 2025.	To retain vegetation connectivity, help to stabilise watercourse banks and help provide protection from pollution such as surface water run-off. It will also maintain the vegetated watercourse corridor for riparian mammals and nesting birds.
The exact horizontal directional drilling depth will depend on geology; however, it will be a minimum depth of 5m.	The depth of 5m will avoid/minimise potential impacts on fish within the

Embedded mitigation measures relevant to biodiversity	Function
	<p>Pocklington Canal and other waterbodies from noise/vibration during construction.</p> <p>Laying cables under waterbodies at a minimum depth of 5m will also avoid/minimise potential impacts on fish from electromagnetic fields during operation, by increasing the separation distance so that magnetic fields above the bed of the waterbody remain below natural levels.</p>
<p>Underground cables will have an insulating layer.</p>	<p>During operation, there is the potential for disturbance of fish species as a result of electromagnetic fields from the underground grid connection corridor and interconnecting underground cables. Insulating the cables will minimise any such potential impacts, as will laying cables under waterbodies at a minimum depth of 5m to increase the separation distance so that magnetic fields above the bed of the waterbody remain below natural levels (see row above).</p> <p>A full assessment will be undertaken and presented in the ES once aquatic habitat walkover surveys have been completed (refer to <b>Section 7.14</b>), full details of the cable design and horizontal directional drilling methodology are known, and the electromagnetic field assessment report has been completed (refer to <b>Chapter 18: Other Environmental Considerations in Volume 1</b>).</p>
<p>Watercourse crossings would be required for access during construction and operation. Any proposed bridges or culverts to facilitate these crossings would include appropriate mitigation measures:</p> <ul style="list-style-type: none"> <li>• span bridges would have deck levels being at or above the bank level.</li> <li>• culverts would be fitted with mammal shelves.</li> <li>• suitable bed substrate to match that of the watercourse within the vicinity of the crossing.</li> </ul>	<p>To avoid/minimise potential impacts on aquatic species/riparian mammals by:</p> <ul style="list-style-type: none"> <li>• Maintaining watercourse flow rates.</li> <li>• Ensuring connectivity of aquatic and riparian habitats, allow species such as fish, otters and water voles (if present) to pass through the watercourse crossings.</li> <li>• Maintaining existing substrates which may be of value to aquatic invertebrates and fish.</li> </ul>

Embedded mitigation measures relevant to biodiversity	Function
<p>Where possible, open base box culverts and single span bailey bridges will be used rather than pipe culverts. Open base box culverts will include measures such as ledges and a gravel base to encourage use by riparian mammals and fish. Mammal ledges will be installed and will be a minimum of 500mm wide, at least 150mm above the highest water level and allow 600mm head room. Ramps must be provided to allow an otter to access to the ledge.</p>	<p>Single span bailey bridges are less impactful on the banks than box culverts and less impactful on the bed of a watercourse. Where single span bridges are not appropriate, box culverts will be used and will be designed to be as ecologically sensitive as possible, Box culverts allow measures such as mammal ledges and gravel beds to be incorporated into the design when compared to pipe culverts. They are also less likely to prevent species movement, when compared to pipe culverts.</p>
<p>New culverts excluding those used within watercourses which infrequently contain water will be designed to be as short as possible. Culvert diameter should be a minimum of 600mm when under 20m in length and a minimum of 900mm when above 20m in length. Riparian vegetation will be included at the culvert inlet and outlet to provide transitional light levels. New culverts excluding those used within watercourses which infrequently contain water will have inlets depressed at least 150mm below the watercourse bed, baffles built into the culvert base to limit sediment loss during surcharging and improve the design for fish passage. Pools will be incorporated at culvert outlets to limit scour, dissipate energy and maintain channel stability.</p>	<p>To avoid/minimise potential impacts on aquatic species and riparian mammals by maintaining connectivity of aquatic and riparian habitats, allowing species such as fish, otters, and water voles (if present) to pass through the watercourse crossings.</p>
<p>Mysten Leah Solar Farm will incorporate ecological mitigation areas that will remain free of solar PV development. Where reasonably practicable, ecological mitigation areas will be created in advance of construction to allow the habitat to establish and become functional for the mitigated species.</p>	<p>To provide continued availability of habitat for ecological receptors, including: invertebrates, amphibians, reptiles, breeding and non-breeding birds, bats, badgers and other species of principal importance.</p>
<p>The ground underneath and around solar PV modules would be sown with a native shade tolerant native flower and legume rich grass mix.</p>	<p>To overall increase the biodiversity value of the solar PV development area. To provide habitat for ecological receptors, including: invertebrates, amphibians (terrestrial habitat), reptiles, breeding and</p>

Embedded mitigation measures relevant to biodiversity	Function
	non-breeding birds, foraging bats, badgers and other species of principal importance.
All construction lighting will be hooded and directed away from ecologically sensitive receptors such as hedgerows and tree lines.	To reduce light spill and avoid/minimise disturbance impacts during construction on light sensitive ecological receptors, such as invertebrates, bats, otters, badgers and other species of principal importance.
On-site lighting during the operation phase will be sensor triggered infrared security lighting, to be located around key electrical infrastructure and will not be continuous.	To reduce light spill and avoid/minimise disturbance impacts during operation on light sensitive ecological receptors, such as invertebrates, bats, otters, badgers and other species of principal importance.
The perimeter security fencing will be either wire mesh or deer fence, that will not be dug into the ground.	Fencing would not be buried and it is likely that undulations in ground level would enable mammals such as badger and brown hare to push underneath. This would avoid/minimise impacts on these species by enabling continued access within the draft Order Limits.
Post and wire fencing will separate public footpaths and bridleways from ecological mitigation areas.	To avoid/minimise disturbance of breeding and non-breeding birds.
Landscaping, including new and reinstated hedgerow and tree planting, is proposed. The planting type will be decided on each species' resilience to the impacts of climate change and comprise of majority native (and of local provenance) species.	<p>Minimise impacts on hedgerows (a habitat of principal importance) by ensuring replacement planting.</p> <p>This will also minimise impacts on other ecological receptors such as bats, by maintaining/improving habitat connectivity across the draft Order Limits and providing habitat for receptors such as birds, foraging badgers.</p> <p>The use of plants which are native and sourced locally will provide biodiversity enhancement and ensure planted species benefit the local ecosystem.</p> <p>There is also potential for improvement of the ecological value of existing low-quality hedgerows.</p>
Work within the underground grid connection corridor will be restricted to as narrow corridor as reasonably practicable. The habitat within the underground grid connection corridor	Minimise impacts on habitats within the underground grid connection corridor, including coastal and floodplain grazing marsh and mosaic of potential priority habitats (if confirmed to be present).

Embedded mitigation measures relevant to biodiversity	Function
will be reinstated in manner which allows the habitat condition to return to its pre-construction condition within the appropriate timeframe.	
Where reasonably practicable, construction work will not take place within 30m from active badger setts.	Badger setts can extend up to 30m underground. The offset distance of 30m would avoid damage to the setts and reduce disturbance during construction.
Demarcation fencing will be installed to prevent impact on specific features such as important habitat and badger setts.	Avoid impacts on important retained habitats/features.
A buffer of 50m will be retained between existing buildings (non-residential) and any above ground infrastructure.	A 50m offset distance would be sufficient to minimise impacts on species which may inhabit buildings such as bats and barn owl.
The solar PV modules would be separated with a minimum row separation space of between 2.5 -12m. The spacing between the rows would vary across the solar PV development area to minimise effects of overshadowing and to ensure optimal efficiency. They will be grid-formed with anti-reflective coating to increase the amount of light absorption.	Reduce potential for disruption of bird flight paths from glint and glare during operation.

## 7.9 What are the likely effects of Mylen Leah Solar Farm on biodiversity?

### Construction

#### International/European statutory designated sites

- 7.9.1 There will be no direct land take from within the international/European statutory designated sites.
- 7.9.2 Based on the current preliminary understanding of the baseline conditions, the following likely effects on qualifying features of the international/European statutory designated sites have been identified:
- Degradation of habitats which support qualifying species, as a result of changes in water quality and hydrology (including as a result of horizontal directional drilling), changes in air quality, and spread of invasive non-native plant species;
  - Loss of functionally linked land for non-breeding qualifying bird species;
  - Disturbance/displacement of qualifying bird species and otters;
  - Injury/mortality of fish during in-channel works and/or pollution of aquatic habitats; and

- Disturbance of qualifying fish species as a result of vibration/noise in relation to horizontal directional drilling.

National statutory designated sites

- 7.9.3 As Melbourne and Thornton Ings SSSI and River Derwent SSSI legally underpin an international/European statutory designated site (refer to **Table 7.5**); likely effects in relation to shared qualifying features/reasons for designation have been considered above (refer to **paragraph 7.9.2**). Likely effects on the remaining reasons for the SSSI designations, as well as likely effects on SSSIs outside an international/European statutory designated site, are outlined below.
- 7.9.4 There will be no direct land take from within the national statutory designated sites.
- 7.9.5 Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:
- Degradation of habitats as a result of changes in water quality and hydrology (including as a result of horizontal directional drilling), changes in air quality, and spread of invasive non-native plant species;
  - Disturbance/displacement of breeding and non-breeding birds; and
  - Loss of breeding and non-breeding bird habitat.

Non-statutory designated sites

- 7.9.6 In relation to non-statutory designated sites, based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:
- Degradation of habitats as a result of changes in water quality and hydrology, air quality, and spread of invasive non-native plant species.

Habitats of principal importance and irreplaceable habitats (including ancient woodland, ancient and veteran trees and important hedgerows)

- 7.9.7 The desk-based assessment of habitats identified areas of coastal and flood plain grazing marsh and mosaic of potential priority habitats adjacent to Pocklington Canal within the underground grid connection corridor. Habitat surveys of the underground grid connection corridor are due to be completed to inform the DCO application (refer to **Section 7.14**), and therefore the classification of these habitats cannot be determined until the appropriate surveys have been completed.
- 7.9.8 There will be no direct loss of irreplaceable habitats during the construction phase. Habitats of principal importance will be largely retained and protected by the minimum offset distances for woodland, ponds and hedgerows. There is likely to be a loss of small sections of habitat of principal importance, such as hedgerows and arable field margins during the construction phase for the creation of access tracks and underground cable installation. However, this would be minimised by making use of existing tracks and gaps in hedgerows, where possible and keeping width of any access points to a minimum.

- 7.9.9 Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:
- Degradation of habitats as a result of changes in water quality and hydrology, air quality and the spread of invasive non-native plant species; and
  - Small-scale loss of areas of habitats of principal importance due to the removal of small sections of hedgerow, arable field margins, mosaic of multiple priority habitats and coastal and flood plain grazing marsh (if presence confirmed).

Notable plants and plant communities

- 7.9.10 As detailed in **Section 7.14**, further specialist botanical surveys are due to be completed to inform the DCO application. Therefore, the likely effects on notable plants and plant communities are not fully known at this stage. However, it is likely the embedded mitigation measures (refer to **Section 7.8** above) would protect the majority of the more ecologically diverse habitats likely to contain rare plants if they are present, such as field margins, hedgerows, woodlands, ponds and watercourses. Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:
- Direct loss of notable plants and/or plant communities (if present), or indirect loss as a result of water pollution run-off and dust.

Invertebrates

- 7.9.11 In addition to the likely effects on the invertebrate assemblages which are qualifying features/reasons for designation of statutory designated sites considered above (refer to **paragraphs 7.9.1 to 7.9.5**), the habitats present within the draft Order Limits also have the potential to support other aquatic and terrestrial invertebrate species.
- 7.9.12 Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:
- Degradation of habitats as a result of changes in water quality and hydrology, air quality and spread of non-native species.

Fish

- 7.9.13 The streams, rivers, ditches/field drains and ponds within the draft Order Limits and the Pocklington Canal have been assessed as having the potential to support fish, including European bullhead which are qualifying species of the River Derwent SAC. The habitats were considered to be sub-optimal for sea and river lamprey (also qualifying fish species of the River Derwent SAC). Likely effects in relation to qualifying fish species have been considered above (refer to **paragraphs 7.9.1 to 7.9.2**).
- 7.9.14 The habitats present within the draft Order Limits also have the potential to support other fish species. Aquatic habitat walkover surveys, which will include an assessment of habitat suitability for fish, will be undertaken to inform the DCO application (refer to **Section 7.14**). However, based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Degradation of habitats as a result of changes in water quality and hydrology; and
- Injury/mortality of fish during in-channel works and/or pollution of aquatic habitats.
- Disturbance of fish species as a result of vibration/noise in relation to horizontal directional drilling.

#### Amphibians

7.9.15 Aquatic habitats will be retained and protected. While the majority of potential terrestrial amphibian habitats will also be retained and protected, there may be some small-scale terrestrial habitat loss. Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Loss of terrestrial amphibian habitat; and
- Injury/mortality of amphibians during vegetation clearance.

#### Reptiles

7.9.16 Surveys to assess habitat suitability for reptiles within the draft Order Limits will be undertaken to inform the DCO application (refer to **Section 7.14**). The majority of potentially suitable reptile habitats identified from the desk based assessment will be retained and protected during construction. However, the construction activities may result in the loss of small areas of suitable habitat, such as watercourse banks and undisturbed field boundaries. Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Loss of suitable reptile habitat; and
- Injury/mortality of reptiles during vegetation clearance.

#### Breeding birds

7.9.17 Likely effects on breeding bird species which are qualifying features/reasons for designation of statutory designated sites are considered above (refer to **paragraphs 7.9.1 to 7.9.5**).

7.9.18 The habitats present within the draft Order Limits also have the potential to support other breeding bird species. Breeding bird surveys of the underground grid connection corridor will be undertaken to inform the DCO application. However, based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Degradation of habitats as a result of changes in water quality and hydrology, and air quality;
- Disturbance/displacement of breeding birds; and
- Loss of habitat for ground-nesting bird species.

#### Non-breeding birds

7.9.19 Likely effects on non-breeding bird species which are qualifying features/reasons for designation of statutory and non-statutory designated sites are considered above (refer to **paragraphs 7.9.1 to 7.9.5**).

7.9.20 The habitats present within the draft Order Limits also have the potential to support other non-breeding bird species during winter and passage. Non-breeding bird surveys will be completed to inform the DCO application (refer to **Section 7.14**). However, based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Degradation of habitats as a result of changes in water quality and hydrology, and air quality;
- Disturbance/displacement of non-breeding birds; and
- Loss of habitat for non-breeding bird species.

#### Bats

7.9.21 Habitats of value to roosting, foraging and commuting bats will be largely retained and protected. However, individual trees may require removal, and some small sections of hedgerow may require permanent removal. Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Loss of bat roosts within trees.

#### Water voles

7.9.22 Habitats of value to water voles (if present) will be largely retained and protected. Water vole habitat assessment surveys and targeted surveys will be completed to inform the DCO application (refer to **Section 7.14**). However, based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Degradation of habitats as a result of changes in water quality and spread of invasive non-native species;
- Loss of small areas of suitable habitat, such as watercourse banks impacted by construction of watercourse crossings; and
- Injury/mortality of water voles.

#### Otters

7.9.23 Otters are a qualifying feature and reason for designation of several international/European and national statutory designated sites. As such, the likely effects in relation to otters have been considered above (refer to **paragraphs 7.9.1 to 7.9.5**).

#### Badgers

7.9.24 The embedded mitigation measures (refer to **Section 7.8** above) will retain and protect active badger setts, as well as largely retain and protect foraging habitats and maintain access within the draft Order Limits. No likely effects on badgers are therefore envisaged.

#### Other species of principal importance

7.9.25 Species of principal importance that are currently known to make use of the habitat within the draft Order Limits, include brown hare and hedgehog; habitats within the draft Order Limits also have the potential to support

harvest mouse, for which there were desk study records in the surrounding area.

7.9.26 Embedded mitigation measures (refer to **Section 7.8** above) would largely retain and protect habitats suitable for these species. However, some small-scale removal of suitable habitat may be required. Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Injury/mortality of species of principal importance during habitat clearance.

#### Invasive non-native species

7.9.27 Invasive non-native floral species have been recorded within and adjacent to the solar PV development area and surveys are yet to be undertaken within the underground grid connection corridor (refer to **Section 7.14**). There is potential for adverse impacts from the spread of invasive non-native flora species during the construction phase, if present.

### **Operation**

#### International/European statutory designated sites

7.9.28 Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Disturbance/displacement of qualifying bird species during maintenance;
- Disruption of flight paths of qualifying non-breeding bird species as a result of glint and glare; and
- Reduction in breeding success of qualifying wetland/aquatic invertebrate species as a result of invertebrates mistaking polarised light reflected from the solar PV modules for water and attempting to lay eggs on the surface.

7.9.29 Note that potential impacts in relation to loss of functionally linked land for non-breeding qualifying bird species have been identified during the construction phase (refer to **paragraph 7.9.2**); the loss of which would remain throughout the operation phase.

#### National statutory designated sites

7.9.30 Melbourne and Thornton Ings SSSI and River Derwent SSSI legally underpin international/European statutory designated sites (refer to **Table 7.5**); as such, the likely effects in relation to shared qualifying features/reasons for designation have been outlined above (refer to **paragraph 7.9.29**).

7.9.31 Likely effects on the remaining reasons for the SSSI designations, as well as likely effects on SSSIs outside an international/European statutory designated site, are outlined below:

- Disturbance/displacement of birds; and
- Reduction in breeding success of wetland/aquatic invertebrate species as a result of invertebrates mistaking polarised light reflected from the solar PV modules for water and attempting to lay eggs on the surface.

Non-statutory designated sites

- 7.9.32 Non-statutory designated sites will be retained and protected through the embedded mitigation measures. No likely direct or indirect adverse effects are anticipated during the operation phase.

Habitats of principal importance and irreplaceable habitats (including ancient woodland, ancient and veteran trees and important hedgerows)

- 7.9.33 Due to the passive nature of Mylen Leah Solar Farm during operation, no likely adverse effects are anticipated during the operation phase on habitats of principal importance or irreplaceable habitats.

Notable plants and plant communities

- 7.9.34 Due to the passive nature of Mylen Leah Solar Farm during operation, no likely adverse effects are anticipated during the operation phase on notable plants and plant communities.

Invertebrates

- 7.9.35 Likely effects in relation to the invertebrate assemblages which are qualifying features/reasons for designation of statutory designated sites have been outlined above (refer to **paragraph 7.9.28**).

- 7.9.36 The habitats present within the draft Order Limits also have the potential to support other aquatic and terrestrial invertebrate species. Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Reduction in breeding success of wetland/aquatic invertebrate species as a result of invertebrates mistaking polarised light reflected from the solar PV modules for water and attempting to lay eggs on the surface.

Fish, reptiles, water voles, otters, badgers and other species of principal importance

- 7.9.37 The embedded mitigation measures (refer to **Section 7.8** above) will ensure the majority of the existing habitat suitable for fish, amphibians, reptiles, water voles, otters, badgers and other species of principal importance will be retained and strengthened throughout the operation phase of Mylen Leah Solar Farm. As such, no likely adverse effects on these species are anticipated.

Breeding and non-breeding birds

- 7.9.38 Potential impacts during the operation phase in relation to breeding and non-breeding bird species which are qualifying features/reasons for designation of statutory and non-statutory designated sites are considered above (refer to **paragraphs 7.9.28 to 7.9.31**).

- 7.9.39 The habitats present within the draft Order Limits also have the potential to support other breeding and non-breeding bird species. Based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Disturbance/displacement of breeding and non-breeding bird species during maintenance; and

- Disruption of flight paths of non-breeding bird species as a result of glint and glare.

### Bats

7.9.40 The embedded mitigation measures (refer to **Section 7.8** above) will ensure (where reasonably practicable) that all boundary features of value to foraging/commuting bats and which support potential bat roost features in trees will be retained throughout the operation phase. However, recent evidence has indicated that some species of foraging bat are (to an extent) displaced by solar arrays, although the exact mechanism causing the displacement is not known. As such, based on the current preliminary understanding of the baseline conditions, the following likely effects have been identified:

- Displacement of bats.

### Invasive non-native species

7.9.41 In the absence of additional mitigation measures, habitat management during the operation phase has the potential to result in the spread of invasive non-native species.

### **Decommissioning**

7.9.42 The likely effects of the decommissioning phase of Mylen Leah Solar Farm on biodiversity are expected to be similar to those for the construction phase. Habitats and protected or notable species are likely to be subject to adverse impacts during decommissioning activities, such as temporary loss of habitat, habitat degradation or disturbance.

## **7.10 What additional mitigation is proposed to avoid, prevent, reduce or offset likely effects on biodiversity?**

### **Construction**

7.10.1 Pre-construction surveys would be undertaken to confirm the continued presence of ecological constraints previously identified and also to determine whether there are any new ecological constraints. Surveys would be undertaken in the appropriate season and would include species which are mobile, or where the constraints posed by these species may have changed location (see below). This would also be required for any protected species licensing that may be necessary. Pre-construction surveys would be undertaken for the following species and would be detailed in and secured by the Outline Construction Environmental Management Plan (Outline CEMP).

- Badger surveys within the draft Order Limits and within a 30m buffer, where land access is permitted;
- Ground level tree assessment of trees due to removed or within close proximity to an area to be impacted;
- Preliminary bat roost assessment and barn owl stage 1 survey of any structures due to be impacted or removed;

- Further bat surveys to inform an appropriate Natural England licence (if required), such as aerial tree inspection and/or dusk emergence surveys;
- Water vole surveys of watercourses due to impacted by crossing points. Surveys would be focussed on the watercourses assessed as suitable for water vole within the ES and the survey area would be a minimum of 150m upstream and downstream of the crossing point;
- Otter surveys of watercourses due to impacted by crossing points. Surveys would be focussed on the habitats assessed as suitable for otter within the ES and the survey area would be a minimum of 200m from the crossing point;
- Invasive non-native flora species surveys within the draft Order Limits; and
- Hedgerow Regulations Assessments to determine if there are any Important Hedgerows that may require part removals.

7.10.2 Species protection plans would be produced by the Principal Contractor if required, based on pre-construction survey results. Each species protection plan would be a live document subject to review and updating and would assist site personnel in the protection of species during construction, under the guidance of the suitably qualified ecologist. In the event protected species are found to be a constraint during the pre-construction surveys and if a protected species licence is deemed by the ecologist to be required, applications would be submitted to Natural England sufficiently in advance of the works to meet with the optimum time for mitigation and to minimise any changes to the construction programme.

7.10.3 Construction activities would be undertaken in accordance with the Outline CEMP, implemented by the Principal Contractor and overseen by the Ecological Clerk of Works, where required.

7.10.4 The Ecological Clerk of Works would be appointed prior to the construction phase to advise on protecting valued biodiversity features and provide practical, site-specific and proportionate advice on how to achieve compliance with environmental legislation. The Ecological Clerk of Works would also provide toolbox talks on the ecological risk present, legal requirements and working arrangements necessary to comply with legislation. Toolbox talks would be repeated as necessary over the duration of the works.

7.10.5 The Outline CEMP will be informed by the mitigation stated within the ES, Habitats Regulations Assessment and Ornithology Mitigation Strategy which will include detailed mitigation measures required for all species likely to be affected by the construction phase of Mylen Leah Solar Farm. The Outline CEMP will include best practice environmental protection measures to control noise, light, vibration, and airborne and waterborne pollutants. Specific methodologies for works within sensitive areas, such as horizontal directional drilling under watercourses, particularly the Pocklington Canal and any works near to designated sites, will be produced as part of the Outline CEMP, with inclusion of procedures to protect biodiversity, relevant to the specific task.

7.10.6 Mitigation measures to offset the effects on receptors during the construction phase will also be detailed in the Outline Landscape and Ecological Management Plan (Outline LEMP). The Outline LEMP will be developed in accordance with the Ornithology Mitigation Strategy. The Ornithology Mitigation Strategy will include detailed mitigation measures required for qualifying bird species associated with the international/European and nationally designated sites recorded within the solar PV development area. The mitigation requirements will be informed by the ongoing non-breeding and breeding bird surveys (refer to **Section 7.14**) and on-going consultation with Natural England.

7.10.7 In addition to the above, additional mitigation measures for individual ecological receptors are outlined in **Table 7.13** below. These will be further informed by the results of the ongoing/upcoming ecological surveys (refer to **Section 7.14**).

**Table 7.13: Additional mitigation measures for individual ecological receptors during construction**

Receptor	Additional mitigation measures
International/European and national statutory designated sites and non-statutory designated sites	<ul style="list-style-type: none"> <li>• Avoiding certain activities during optimum seasons for receptors which may be present within or close to the draft Order Limits.</li> <li>• Habitats within the draft Order limits have the potential to be functionally linked land for non-breeding qualifying bird species associated with the SPAs and Ramsar sites. Details of habitat creation to mitigate for habitat loss and disturbance (amount of land required and habitat type) will be informed by the ongoing survey results and in consultation with Natural England.</li> </ul>
Habitats of principal importance and irreplaceable habitats (including ancient woodland, ancient and veteran trees and important hedgerows)	<ul style="list-style-type: none"> <li>• Where possible, hedgerows removed during construction would be reinstated within the same location from where it was removed. Where reinstatement is not possible, new hedgerow elsewhere within the solar PV development area would be planted to compensate for the lost section of hedgerow. Hedgerow planting would use native, local provenance species.</li> <li>• The removal of sections of any important hedgerows may require the submission of a Hedgerow Removal Notice to the ERYC if the removal is not already consented.</li> <li>• Additional reinstatement measures to ensure the habitat returns back to its pre-construction condition, such as turf translocation.</li> <li>• Avoiding certain construction activities which would potentially cause the greatest impact to habitats, such as avoiding work within areas prone to flooding during</li> </ul>

Receptor	Additional mitigation measures
	<p>the period likely to have the greatest precipitation.</p> <ul style="list-style-type: none"> <li>Supervision of vegetation clearance and earth works by an appointed Ecological Clerk of Works.</li> </ul>
Notable plants and plant communities	<ul style="list-style-type: none"> <li>Translocating rare notable plants into suitable habitat within the solar PV development area, if they are identified within areas due to be developed.</li> <li>Supervision of initial vegetation clearance and earth works by an appointed Ecological Clerk of Works.</li> </ul>
Invertebrates	<ul style="list-style-type: none"> <li>Avoiding work activities during certain seasons in particular habitats likely to be inhabited by notable invertebrates.</li> </ul>
Fish	<ul style="list-style-type: none"> <li>Sensitive timing of in channel works and horizontal directional drilling underneath and within watercourses assessed as suitable for spawning or migrating fish, if required.</li> <li>Electrofishing sections of watercourse due to be impacted by in-channel works such as culvert installation and translocating fish within suitable habitat downstream from the working area.</li> <li>Obtain appropriate Environment Agency permit.</li> <li>Supervision of works such as culvert installation and crossing points by an appointed Ecological Clerk of Works.</li> </ul>
Amphibians and reptiles	<p>Mitigation measures to protect amphibians including great crested newts and reptiles during the construction phase would be detailed in an amphibian and reptile method statement which would form part of the Natural England District Level Licence for Mylen Leah Solar Farm. Surveys for great crested newts within the underground grid connection corridor will be undertaken to inform the DCO application, not least detailed mitigation measures. Mitigation measures for great crested newts will be in accordance with the Natural England District Level Licence.</p>
Breeding birds	<p>Breeding bird surveys of the underground grid connection corridor will be undertaken to inform the DCO application, not least appropriate additional mitigation measures. Additional mitigation measures for statutory and non-statutory designated sites would also provide mitigation for breeding birds. Appropriate additional mitigation measures may include;</p> <ul style="list-style-type: none"> <li>Wherever reasonably practicable, to minimise likely effects for breeding birds, clearance of vegetation of potential value to nesting birds (i.e. to facilitate access) would be completed outside of the bird breeding</li> </ul>

Receptor	Additional mitigation measures
	<p>season (considered to be between mid-February and August, inclusive). However, should it not be possible to avoid this season, vegetation would be inspected/surveyed by the Ecological Clerk of Works immediately before clearance (i.e., within 24 hours of clearance works). Any active nests would be given an appropriate disturbance buffer for that species, with work only allowed to take place within this buffer once the Ecological Clerk of Works has confirmed any young have fully fledged and left the nest.</p> <ul style="list-style-type: none"> <li>• Provision of appropriate ground nesting bird mitigation habitat. The amount of ground nesting bird mitigation and type of habitat creation is yet to be determined.</li> </ul>
<p>Non-breeding birds (wintering and passage)</p>	<p>Mitigation measures to reduce the potential effects caused by construction on non-breeding birds will be informed by ongoing non-breeding bird surveys. The Outline CEMP will include measures which will reduce potential impacts to non-breeding birds, such as measures to reduce acoustic and visual impacts. Furthermore, additional mitigation measures for the qualifying non-breeding bird species associated with the statutory and non-statutory designated sites would also mitigate other non-breeding birds.</p>
<p>Bats</p>	<ul style="list-style-type: none"> <li>• Compounds and generators would be positioned away from habitats suitable for roosting, commuting and foraging bats.</li> <li>• The Ecological Clerk of Works would be responsible for ensuring appropriate buffer zones are installed around trees and structures assessed as suitable for roosting bats.</li> </ul>
<p>Water voles and otters</p>	<ul style="list-style-type: none"> <li>• Where possible, avoid impact to areas where water vole has been recorded during pre-construction surveys.</li> <li>• Where possible, avoid impact to otter holt or resting places.</li> <li>• If avoidance is not possible and if appropriate, use of a Natural England water vole displacement licence for works which directly impact water vole habitat.</li> <li>• If avoidance to an otter holt or resting place is not possible, an appropriate Natural England otter licence will be required.</li> <li>• The Ecological Clerk of Works would be responsible for ensuring an appropriate buffer zone is installed around an otter holt or resting place to prevent disturbance.</li> </ul>

Receptor	Additional mitigation measures
	<ul style="list-style-type: none"> <li>In addition to the pre-construction surveys, the Ecological Clerk of Works would check all suitable habitat prior to vegetation clearance and earthworks. If water vole or otter field signs are found, the Ecological Clerk of Works would be responsible for ensuring appropriate mitigation is actioned prior to works being undertaken.</li> <li>All open excavations within suitable habitat would be securely covered up when construction workers are off-site (i.e. at night-time).</li> </ul>
Badgers	<ul style="list-style-type: none"> <li>It is anticipated that badger sett closure would not be required. However, in an event that removal or disturbance of a badger sett is required, the setts would be excluded following all legislative requirements, including the creation of artificial setts (if required).</li> <li>Depending on the results of the pre-construction surveys, mammal gates would be installed at appropriate locations along the fence lines to allow badgers and other small mammals access into fields for foraging.</li> <li>All open excavations would be securely covered up when construction workers are off-site (i.e. at night-time).</li> <li>The appointed Ecological Clerk of Works would check all areas prior to vegetation clearance and earthworks and appropriate mitigation would be undertaken if badger field signs are identified.</li> </ul>
Other species of principal importance	<p>The majority of the additional mitigation measures detailed above will also mitigate for other species of principal importance. Mitigation measures in addition to those detailed above may include:</p> <ul style="list-style-type: none"> <li>Avoid impact to habitat which is suitable for hibernating small mammals (such as hedgehog) during the hibernation period (October to April) and undertaking two-stage vegetation clearance using hand-tools.</li> <li>The appointed Ecological Clerk of Works would ensure species of principal importance are considered during the construction phase and appropriate supervision and habitat checks are undertaken. In the event field signs or other species of principal importance are found, the Ecological Clerk of Works is responsible for ensuring appropriate mitigation is undertaken prior to works.</li> </ul>

Receptor	Additional mitigation measures
Invasive non-native species	<ul style="list-style-type: none"> <li>• Invasive species surveys would be undertaken to determine presence or absence, assess the risk of impacts, and establish appropriate control, or management.</li> <li>• Biosecurity control measures to reduce the risk of invasive non-native species being introduced and/or spread within the draft Order Limits will be detailed within the Outline CEMP.</li> </ul>

**Operation**

- 7.10.8 Proposed habitat retention and creation measures would be set out in the Outline LEMP. The Outline LEMP will include the principles of monitoring and management that would need to take place during operation such as to maintain the retained, strengthened and created habitat within the solar PV development area in a manner sympathetic to all ecological receptors. The Outline LEMP will be informed by the appropriate receptor surveys results and the Ornithology Mitigation Strategy.
- 7.10.9 The Ornithology Mitigation Strategy will include detailed mitigation measures such as mitigation habitat created for breeding and non-breeding birds, as well as mitigation for statutory designated site qualifying bird species for which the draft Order Limits has been assessed as providing functionally linked land. The Ornithology Mitigation Strategy and Outline LEMP will include monitoring schedules to ensure the habitat creation and measures are delivering appropriate mitigation.
- 7.10.10 An Outline Operational Environmental Management Plan (Outline OEMP) will be submitted in support of the DCO application. The Outline OEMP will include the principals of the measures that would be required during maintenance work including, but not limited to, relevant species surveys that would need to be undertaken prior to any works and regular checks of animal fencing to ensure no large mammals have become trapped. The Outline OEMP will be informed by the measures included within the Ornithology Mitigation Strategy and Outline LEMP.
- 7.10.11 Work outside standard maintenance works would have appropriate ecological surveys prior to works to determine appropriate mitigation measures. Reasonable avoidance measures, including appropriate offset distances around receptors, would be maintained throughout operation.
- 7.10.12 In addition to the above, additional mitigation measures for individual ecological receptors are outlined in **Table 7.14** below. These will be further informed by the results of the ongoing/upcoming ecological surveys (refer to **Section 7.14**).

**Table 7.14: Additional mitigation measures for individual ecological receptors during operation**

Receptor	Additional mitigation measures
International/European and national statutory designated sites, non-	<ul style="list-style-type: none"> <li>• Monitoring, management and outline remedial measures of mitigation areas in accordance with the</li> </ul>

Receptor	Additional mitigation measures
statutory designated sites, breeding and non-breeding birds	<p>Outline LEMP and Ornithology Mitigation Strategy.</p> <ul style="list-style-type: none"> <li>• Regular checks of fencing and culverts during maintenance visits by appropriately trained staff would occur to ensure fencing between footpath, bridleways and ecological mitigation areas remains functional and effective.</li> <li>• Avoiding vegetation clearance and non-urgent maintenance activities throughout the solar PV development area, including the ecological mitigation areas and boundary habitats during the nesting bird season (mid-February to August).</li> <li>• Avoiding habitat management activities within the non-breeding bird mitigation areas during the peak passage and wintering bird seasons. Habitat management within the non-breeding bird mitigation areas would be undertaken between September and mid-October.</li> </ul>
Habitats of principal importance and irreplaceable habitats (including ancient woodland, ancient and veteran trees and important hedgerows) and notable plants and plant communities	<ul style="list-style-type: none"> <li>• Habitats would be sensitively managed using best practice guidance and considering best practice habitat management for appropriate ecological receptors such as nesting birds and amphibians. This includes all habitats of principal importance within the solar PV development area, such as ponds.</li> <li>• Appropriate monitoring of planting and reinstated habitat and (if required) remedial measures undertaken.</li> <li>• The use of chemicals would be undertaken in accordance with legislative requirements and best practice. The use of pesticides or herbicides would only be undertaken unless there is no other reasonable alternative.</li> <li>• Where reasonably practicable, vegetation would be left to grow up and only managed in accordance with the Outline LEMP.</li> </ul>
Invertebrates, fish, amphibians, reptiles, water voles, otter and other species of principal importance	<ul style="list-style-type: none"> <li>• Where reasonably practicable, restricting certain habitat management practices to avoid specific seasons and if required ensuring appropriate licences are obtained. Appropriate management practices will be determined by the results of the invertebrate habitat suitability surveys, aquatic surveys, reptile habitat assessment, water and otter surveys due to be undertaken to inform the DCO application (refer to <b>Section 7.14</b>).</li> </ul>
Bats	<ul style="list-style-type: none"> <li>• Management of trees or structures would consider roosting bats and will be surveyed by an ecologist prior</li> </ul>

Receptor	Additional mitigation measures
	<p>to works which many cause disturbance to bats.</p> <ul style="list-style-type: none"> <li>• Night-time maintenance work would be avoided where possible; in the event night-time work is required, any on-site lighting will be hooded and directed away from boundary habitats, trees, woodlands and structures.</li> </ul>
Badgers	<ul style="list-style-type: none"> <li>• In the event that removal or disturbance of a badger sett is required, badgers would be excluded from the setts following all legislative requirements, including the creation of artificial setts (if required).</li> <li>• Maintenance of fences and mammal gates to allow badgers and other small mammals access into fields for foraging.</li> <li>• Any open excavations would be securely covered up when workers are off-site (i.e. at night-time).</li> </ul>
Invasive non-native species	<ul style="list-style-type: none"> <li>• Appropriate control or management measures for invasive non-native species.</li> <li>• Prior to non-standard maintenance works, invasive species surveys will be undertaken to determine presence or absence, assess the risk of impacts, and establish appropriate control, or management.</li> <li>• Biosecurity control measures to reduce the risk of invasive non-native species being introduced and/or spread within the draft Order Limits will be informed by the invasive species surveys.</li> </ul>

### Decommissioning

7.10.13 An Outline Decommissioning Environmental Management Plan (Outline DEMP) will be submitted in support of the DCO application. It will include the principles of the measures that would be required to mitigate temporary loss of habitat, habitat degradation or disturbance during decommissioning activities. As the likely effects of the decommissioning phase of Mylen Leah Solar Farm on biodiversity are expected to be similar to those for the construction phase, the mitigation measures within the Outline DEMP are likely to be similar to those in the Outline CEMP.

### 7.11 What likely effects would remain for biodiversity following additional mitigation?

7.11.1 Using the significance criteria set out within the CIEEM Guidelines, the potential residual effects related to each receptor have been characterised, following the implementation of the embedded mitigation measures (refer to **Section 7.8**) and the proposed additional mitigation measures (refer to **Section 7.10**). Likely residual effects are summarised in **Table 7.15**.

7.11.2 Whilst it is expected that the embedded and additional mitigation measures would reduce potential residual effects, it should be noted that some ecological surveys are ongoing (refer to **Section 7.14**). The results of these

surveys will therefore inform the full assessment which will be presented in the ES and Habitats Regulations Assessment and will also be used to inform the detailed design of mitigation measures.

**Table 7.15 Likely residual effects on biodiversity**

Receptor	Likely residual effects following additional mitigation measures
International/ European statutory designated sites National statutory designated sites Non-statutory designated sites	<p>The Lower Derwent Valley SAC, SPA and Ramsar site, the River Derwent SAC and the Humber Estuary SPA and Ramsar site are considered to be of <b>International</b> ecological importance.</p> <p>Pocklington Canal SSSI, Melbourne and Thornton Ings SSSI, Lower Derwent Valley NNR, White Carr Meadow SSSI, Derwent Ings SSSI, and River Derwent SSSI are considered to be of <b>National</b> ecological importance.</p> <p>Hedge, Sand Lane, East Moor LWS; Ruddings Wood LWS; Bracepits Wood LWS; Kidd Lane, Rossmoor LWS; Intakes Lane, Rossmoor LWS; Breckstreet Farm Disused Airfield LWS; Brickyard Farm Wood &amp; Ponds LWS; Farm Wood, New Covert and Park Wood LWS; Quaker’s Wood, Storwood LWS; Bubwith-Holme-On-Spalding-Moor Disused Railway Line LWS; Walloway Fields LWS; Thornton’s Wood LWS; Melbourne Grange LWS; Grange Meadow LWS; White Carr (candidate LWS); Pocklington Canal LWS and Wheldrake Ings Yorkshire Wildlife Trust Reserve are considered to be of <b>County</b> ecological importance.</p> <p>There will be no direct land take from within the international/European and national statutory or non-statutory designated sites.</p> <p><b><u>Construction</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to potential habitat degradation, loss of functionally linked land for qualifying non-breeding bird species associated with the SPAs and Ramsar site, loss of supporting habitats for breeding and non-breeding birds which are reasons for SSSI designation, disturbance/displacement of qualifying bird species and otters, injury/mortality of fish during in-channel works and disturbance of qualifying fish species as a result of vibration/noise in relation to horizontal directional drilling.</p> <p>With regard to habitat degradation, the implementation of standard environmental protection measures during construction, such as dust suppression, pollution prevention (including a bentonite breakout plan) and biosecurity measures to avoid the spread of invasive species will be detailed in, and secured by, the Outline CEMP. Security fences will ensure provision of buffers during construction, and monitoring throughout works would ensure compliance and implementation of pollution prevention measures and buffers are maintained. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p>In relation to loss of potential functionally linked land/supporting habitats for bird species which are qualifying species/reasons for designation of designated sites, habitat creation to mitigate for this loss would be</p>

Receptor	Likely residual effects following additional mitigation measures
	<p>undertaken to provide suitable alternative habitats in advance of impacts occurring. The design of such measures would be detailed in and secured by the Outline LEMP and Ornithology Mitigation Strategy, informed by survey results (once completed) and developed in consultation with Natural England. On a precautionary basis, given that bird surveys are ongoing and the habitat creation design is yet to be finalised, the potential for an adverse residual effect has been identified. This is predicted to be <b>reversible, long-term</b> (for the duration of Mylen Leah Solar Farm (50 years)), <b>adverse</b>, and <b>potentially significant</b> at the <b>Local level</b>. The potential for residual effects will be fully assessed in the ES, once the survey data is available and the mitigation measures are finalised.</p> <p>In relation to disturbance/displacement of qualifying bird species and otters, standard measures to minimise noise and vibration set out in the Outline CEMP will be implemented and pre-construction surveys will be undertaken for otters. The habitat creation for non-breeding birds outlined above would provide undisturbed habitats, and phasing of construction works would also help minimise disturbance of qualifying bird species. Nevertheless, there may be a residual effect during the construction phase, which is predicted to be <b>short-term, temporary, adverse and potentially significant</b> at the <b>Local level</b>. The final assessment of residual effects presented in the ES will be informed the results of ongoing/upcoming surveys, mitigation design and noise modelling which is currently being undertaken.</p> <p>With regard to injury/mortality of fish during in-channel works, additional mitigation measures include standard environmental protection measure to protect water quality, and (if required) sensitive timing of in channel works, electrofishing sections of watercourse due to be impacted by the works and translocating fish within suitable habitat downstream from the working area, and/or supervision of works such as culvert installation and crossing points by an appointed Ecological Clerk of Works. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p>Horizontal directional drilling may result in vibration/noise with the potential to disturb qualifying fish species. This has the potential to result in <b>short-term, temporary, adverse</b> residual effects at the <b>Local level</b>; however, given the depth of the proposed works (minimum depth of 5m) and short-term nature of the works, this is deemed to be <b>not significant</b>.</p> <p><b><u>Operation</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the potential need for additional mitigation in relation to: disturbance/displacement of qualifying bird species during</p>

Receptor	Likely residual effects following additional mitigation measures
	<p>maintenance; disruption of bird flight paths from glint and glare; reduction in breeding success of qualifying wetland/aquatic invertebrate species.</p> <p>In relation to disturbance/displacement of qualifying bird species, additional mitigation measures during the operational phase include sensitive timing of maintenance activities, including habitat management activities within the bird mitigation areas, to avoid the peak passage and wintering bird seasons and/or breeding season. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p>With regards to disruption of flight paths from glint and glare, the embedded mitigation measures will minimise the potential impacts; however, there may be a <b>reversible, long-term</b> (for the duration of the Mylen Leah Solar Farm (50 years)), <b>adverse</b> residual effect, <b>potentially significant</b> at the <b>Local level</b>. The full assessment will be undertaken and presented in the ES once non-breeding bird surveys have been completed to review levels of flight activity across the draft Order Limits.</p> <p>In relation to potential reduction in breeding success of wetland/aquatic invertebrate species, the embedded mitigation measures would minimise the likelihood of such impacts by retaining/protecting existing aquatic habitats. The offset distances would provide separation between the solar PV modules and these habitats, and spacing of solar PV modules may also reduce this potential impact. Nevertheless, there may be a residual effect during the operation phase, which is predicted to be <b>reversible, long-term</b> (for the duration of the Mylen Leah Solar Farm (50 years)), <b>adverse</b>, and <b>potentially significant</b> at the <b>Local level</b>. The final assessment of residual effects will be informed by the results of aquatic invertebrate habitat assessment surveys and presented in the ES.</p> <p>Note that potential impacts in relation to loss of functionally linked land for non-breeding qualifying bird species have been identified during the construction phase; the loss of which would be long-term and remain throughout the operation phase.</p> <p><b><u>Decommissioning</u></b></p> <p>The residual effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be detailed in and secured by the Outline DEMP. In addition, reversion to farmland habitat types previously present within the solar PV development area would provide habitats potentially suitable for breeding and wintering birds.</p>
Habitats of principal importance and	Within the draft Order Limits, habitats of principal importance include arable field margins, ponds, lowland mixed deciduous woodland, hedgerows. The desk study indicates that coastal and floodplain grazing marsh and mosaics of other habitats of principal importance may also be present in the underground grid connection

Receptor	Likely residual effects following additional mitigation measures
irreplaceable habitats (including ancient woodland, ancient and veteran trees and important hedgerows)	<p>corridor. Ancient and veteran trees are present within the draft Order Limits and are considered irreplaceable habitat. These habitats are considered to be of <b>County</b> ecological importance.</p> <p><b>Construction</b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to potential habitat loss and degradation during construction.</p> <p>In relation to habitat loss; where possible, hedgerows will be replanted with like-for-like species as soon as practicable after construction. Where reinstatement in situ is not possible, new hedgerow will be planted to mitigate for the lost section of hedgerow, using native (and of local provenance) species that contribute to biodiversity enhancement. This will be detailed in and secured by the Outline CEMP to ensure habitats of principal importance are reinstated in a manner which allows the habitat condition to return to its pre-construction condition within the appropriate timeframe. The residual effect during the construction phase is predicted to be <b>adverse, short-term</b> and <b>temporary</b> at the <b>Local level</b>, while reinstated sections of hedgerow/new hedgerows and arable field margins become re-established. Given the hedgerow and arable field margin resource in the local area, this is deemed to be <b>not significant</b>.</p> <p>With regards to habitat degradation, the implementation of standard environmental protection measures during construction, such as dust suppression, pollution prevention (including a bentonite breakout plan) and biosecurity measures to avoid the spread of invasive species will be detailed in and secured by the Outline CEMP. Security fences will ensure provision of buffers during construction and monitoring throughout works would ensure compliance and implementation of pollution prevention measures and buffers are maintained. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p><b>Operation</b></p> <p>Due to the passive nature of Mylen Leah Solar Farm during operation, residual effects on habitats of principal importance or irreplaceable habitats during operation are considered to be <b>not significant</b>.</p> <p><b>Decommissioning</b></p> <p>The residual effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be detailed in and secured by the Outline DEMP.</p>
Notable plants and plant communities	<p>Notable plant species have not been recorded within the solar PV development area during the UK habitat classification survey. There is potential for notable plant species identified during the desk study to be present</p>

Receptor	Likely residual effects following additional mitigation measures
	<p>within the draft Order Limits. Botanical surveys are yet to be completed (refer to <b>Section 7.14</b>), but if confirmed, the presence of these species would likely be considered of up to <b>County</b> ecological importance.</p> <p><b><u>Construction</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to potential loss of notable plants and/or plant communities. This could be direct, under the footprint of the proposed works, or indirect loss as a result of water pollution run-off and dust.</p> <p>If present, it is likely that such species would be associated with the more ecologically diverse habitats, such as field margins, hedgerows, woodlands, ponds and watercourses. Therefore, the additional mitigation measures described for habitats above, would also avoid/minimise potential impacts on notable plants and plant communities during construction. In addition, should targeted surveys identify the presence of a rare plant which could be lost during construction, additional mitigation measures such as micro-siting of infrastructure or translocation of rare plants would be considered. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p><b><u>Operation</u></b></p> <p>During the operation phase, it is expected that there would be beneficial effects due to habitat change underneath and between the solar PV modules, from arable and modified grassland to flower-rich grassland or herbal leys, as well as habitat creation and enhancement measures. This is anticipated to be <b>significant</b> at the <b>Local level</b>.</p> <p><b><u>Decommissioning</u></b></p> <p>The residual effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be detailed in and secured by the Outline DEMP.</p>
Invertebrates	<p>Aquatic invertebrate habitat assessment surveys are yet to be completed (refer to <b>Section 7.14</b>); however, given the presence of a number of designated sites of importance for aquatic invertebrates within the draft Order Limits and the surrounding area, there is potential for habitats within the draft Order Limits to support an aquatic invertebrate assemblage of up to <b>County</b> ecological importance. The draft Order Limits were considered likely to support an assemblage of common terrestrial invertebrate species, typical of the improved grassland, arable, hedgerow and damp grassland habitats present. The terrestrial invertebrate assemblage within the draft Order Limits is considered likely to be of <b>Local</b> ecological importance.</p>

Receptor	Likely residual effects following additional mitigation measures
	<p>Likely residual effects in relation to the invertebrate assemblages which are qualifying features/reasons for designation of statutory designated sites have been outlined above. The assessment of likely residual effects for other invertebrate species would be the same and has not been repeated here.</p> <p>Whilst not a mitigation measure, the operation phase is likely to involve the cessation of chemical use (i.e. fertilisers and pesticides), which may have beneficial effects for invertebrate populations. In addition, habitat creation and enhancement measures will be beneficial to invertebrate populations within the draft Order Limits. This is anticipated to be <b>beneficial</b> and <b>significant</b> at the <b>Local level</b>.</p>
Fish	<p>Habitat suitability surveys for fish are yet to be completed (refer to <b>Section 7.14</b>); however, based on the desk based assessment, fish populations within the draft Order Limits (excluding qualifying species associated with International/European designated sites, considered above) are considered to be of up to <b>County</b> ecological importance.</p> <p>Likely residual effects in relation to the fish species which are qualifying features/reasons for designation of statutory and non-statutory designated sites have been outlined above. The assessment of likely residual effects for other fish species would be the same and has not been repeated here.</p>
Amphibians	<p>Great crested newt and other amphibian populations are considered to be of <b>Local</b> ecological importance. The eDNA surveys have confirmed the presence of great crested newt within one pond within the draft Order Limits. Common toad and common frog are also considered likely to be present within suitable ponds and associated terrestrial habitats within draft Order Limits. The great crested newt and other amphibian populations are considered to be of <b>Local</b> ecological importance.</p> <p><b>Construction</b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to loss of terrestrial amphibian habitat and injury/mortality of amphibians during vegetation clearance. The majority of suitable terrestrial amphibian habitat within the draft Order Limits will be retained and protected during construction. However, construction activities may result in removal of small areas of suitable amphibian habitat, which would result in <b>adverse, short-term</b> and <b>temporary</b> residual effects at the <b>Local level</b> whilst reinstated habitats become re-established. Given the small-scale and temporary nature of such effects, this is deemed to be <b>not significant</b>. Additional mitigation measures would be detailed within the Natural England District Level Licence for Mylen Leah Solar Farm. As such, residual effects in relation to injury/mortality are anticipated to be <b>not significant</b>.</p>

Receptor	Likely residual effects following additional mitigation measures
	<p><b><u>Decommissioning</u></b></p> <p>The residual effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be detailed in and secured by the Outline DEMP.</p>
Reptiles	<p>Reptile habitat suitability assessments within the draft Order Limits are due to be completed to inform the DCO application (refer to <b>Section 7.14</b>). However, based on the habitats recorded within the solar PV development area and review of online aerial maps of the draft Order Limits, reptiles (if present) are considered likely to be of <b>Local</b> ecological importance.</p> <p><b><u>Construction</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to loss of reptile habitat and injury/mortality during vegetation clearance.</p> <p>Although the majority of suitable reptile habitat within the draft Order Limits will be retained and protected during construction, construction activities may result in short-term and temporary impact to small areas of suitable reptile habitat, such as watercourse banks and undisturbed field boundaries. This would result in <b>adverse, short-term and temporary</b> residual effects at the <b>Local level</b> whilst reinstated habitats become re-established. Given the small-scale and temporary nature of such effects, this residual effect is deemed to be <b>not significant</b>.</p> <p>Additional mitigation measures which would avoid/minimise injury/mortality of reptiles will be detailed within the amphibian and reptile method statement which would form part of the Natural England Great Crested Newt District Level Licence for Mylen Leah Solar Farm. As such, residual effects in relation to injury/mortality are anticipated to be <b>not significant</b>.</p> <p><b><u>Operation</u></b></p> <p>The embedded mitigation measures will ensure the majority of the existing habitat suitable for reptiles will be retained and strengthened throughout the operation phase. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p><b><u>Decommissioning</u></b></p> <p>The residual effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be detailed in and secured by the Outline DEMP.</p>

Receptor	Likely residual effects following additional mitigation measures
Breeding birds	<p>Likely residual effects in relation to breeding bird species which are qualifying features/reasons for designation of statutory designated sites have been outlined above.</p> <p>The habitats present within the draft Order Limits also have the potential to support other breeding bird species during winter and passage. Although the breeding bird surveys of the underground grid connection corridor have yet to be undertaken (refer to <b>Section 7.14</b>), based on the survey results from the solar PV development area, the breeding bird assemblage is considered likely to be of up to <b>County</b> ecological importance.</p> <p><b><u>Construction</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to degradation of habitats, disturbance, and loss of habitat for ground-nesting bird species.</p> <p>With regard to habitat degradation, the implementation of standard environmental protection measures (described above) will be detailed in and secured by the Outline CEMP. Security fences will ensure provision of buffers during construction and monitoring throughout works would ensure compliance and implementation of pollution prevention measures and buffers are maintained. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p>Habitat creation to mitigate for loss of habitats suitable for ground-nesting birds would provide suitable alternative undisturbed habitats. The design of such measures would be detailed in and secured by the Outline LEMP and Ornithology Mitigation Strategy, informed by survey results once completed and developed in consultation with Natural England. On a precautionary basis, given that bird surveys are ongoing and the mitigation design is yet to be finalised, the residual effects are predicted to be <b>reversible, long-term</b> (for the duration of the Mylen Leah Solar Farm (50 years)), <b>adverse</b>, and <b>potentially significant</b> at the <b>Local level</b>. Residual effects will be fully assessed in the ES, once the survey data is available and the mitigation measures are finalised.</p> <p>In relation to disturbance of breeding birds, standard measures to minimise noise and vibration detailed in and secured by the Outline CEMP will be implemented. The habitat creation for ground-nesting birds outlined above would provide undisturbed habitats, and phasing of construction works would also help minimise disturbance of breeding birds. Nevertheless, there may be a residual effect during the construction phase, which is predicted to be <b>short-term, temporary, adverse</b>, and <b>potentially significant</b> at the <b>Local level</b>.</p>

Receptor	Likely residual effects following additional mitigation measures
	<p>The final assessment of residual effects presented in the ES will be informed the results of the breeding bird surveys and noise modelling which is being undertaken.</p> <p><b><u>Operation</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation in relation to: disturbance/ displacement of breeding birds during maintenance.</p> <p>Additional mitigation measures include sensitive timing of maintenance activities and habitat management activities within the bird mitigation areas, to avoid the breeding bird season. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p>Note that potential impacts in relation to habitat loss have been identified during the construction phase; the loss of which would be long-term and remain throughout the operation phase.</p> <p><b><u>Decommissioning</u></b></p> <p>The likely effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be detailed in and secured by the Outline DEMP. In addition, reversion to farmland habitat types previously present within the solar PV development area would provide habitats potentially suitable for breeding birds.</p>
Non-breeding birds (wintering and passage birds)	<p>In addition to the species of non-breeding birds which are qualifying features of designated sites, the habitats present within the draft Order Limits have the potential to support other non-breeding bird species during winter and passage. Although the non-breeding bird surveys are ongoing and surveys of the underground grid connection corridor have yet to be undertaken (refer to <b>Section 7.14</b>), the non-breeding bird assemblage is considered likely to be of up to <b>County</b> ecological importance.</p> <p>The potential for residual effects during construction, operation and decommissioning in relation to non-breeding bird species which are qualifying features/reasons for designation of statutory and non-statutory designated sites have been outlined above. The assessment of residual effects for other non-breeding bird species would be the same and has not been repeated here.</p>
Bats	<p>The solar PV development area for the foraging and roosting bat assemblage is considered to be of <b>County</b> ecological importance.</p> <p><b><u>Construction</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to potential loss of bat roosts within trees during construction.</p>

Receptor	Likely residual effects following additional mitigation measures
	<p>Additional mitigation measures include the following pre-construction surveys, should removal of trees/structures be required:</p> <ul style="list-style-type: none"> <li>• Ground level tree assessment of trees due to removed or within close proximity to an area to be impacted;</li> <li>• Preliminary bat roost assessment survey of any structures due to be impacted or removed; and</li> <li>• Further bat surveys to inform an appropriate Natural England licence such as aerial tree inspection and/or dusk emergence surveys.</li> </ul> <p>Overall, given the embedded and additional mitigation measures relating to bats, residual effects during the construction phase are considered to be <b>not significant</b>.</p> <p><b><u>Operation</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for potential effects in relation to displacement of bats during operation.</p> <p>There is recent limited evidence that some species of foraging bat are (to an extent) displaced by solar arrays, although the exact mechanism causing the displacement is not known. On a precautionary basis, this has been assessed as having the potential to constitute a <b>reversible, long-term</b> (for the duration of Mylen Leah Solar Farm (50 years)) <b>adverse</b> effect, <b>potentially significant</b> at the <b>Local level</b>. The bat species recorded within the solar PV development area are widespread throughout East Yorkshire and habitat of the same value to bats is present within the wider area. Furthermore, the operation phase is likely to involve the cessation of chemical use (i.e. fertilisers and pesticides), which may have beneficial effects for invertebrate populations and in turn benefit bats. Habitat creation and enhancement measures underneath the solar PV modules are also likely to improve the availability of invertebrate prey species for bats foraging within the solar PV development area. This has the potential to increase the foraging resources and is anticipated to be <b>beneficial</b> and <b>significant</b> at the <b>Local level</b>. Overall, given the potential adverse effects associated with displacement within the solar PV development area but also the potential beneficial effects associated with habitat creation and potential increase prey availability, the effects during the operation phase are considered to be <b>not significant</b>.</p> <p><b><u>Decommissioning</u></b></p> <p>The residual effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be detailed in and secured by the Outline DEMP.</p>

Receptor	Likely residual effects following additional mitigation measures
Water voles	<p>Water vole surveys are yet to be completed (refer to <b>Section 7.14</b>); however, based on their conservation status within the East Riding of Yorkshire and presence of potentially suitable habitats within the draft Order Limits, water voles (if confirmed to be present) are considered likely to be of <b>County</b> ecological importance.</p> <p><b><u>Construction</u></b></p> <p>Taking into account the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to habitat degradation, loss of small areas of suitable habitat and injury/mortality (if present). With regards to habitat degradation, the implementation of standard environmental protection measures to protect water quality during construction, such as pollution prevention (including a bentonite breakout plan), and biosecurity measures to avoid the spread of invasive species will be detailed in and secured by the Outline CEMP. Security fences will ensure provision of buffers during construction and monitoring throughout works would ensure compliance and implementation of pollution prevention measures and buffers are maintained.</p> <p>In relation to habitat loss and injury/mortality, pre-construction surveys would be undertaken prior to undertaking any in-channel works which. If presence of water vole was confirmed and avoidance was not possible, works which directly impact water vole habitat would be undertaken through a Natural England water vole displacement licence.</p> <p>Based on the current understanding of the draft Order Limits, the potential impact pathways identified and the embedded and additional mitigation measures outlined above, it is considered the residual effects upon water voles during construction would be <b>not significant</b>. However, the final assessment of residual effects will be informed by the results of water vole surveys, which would also inform the detail of any additional mitigation measures which might be required. Residual effects will be fully assessed in the ES, once the survey data is available and the mitigation measures (if required) are finalised.</p> <p><b><u>Operation</u></b></p> <p>The embedded mitigation measures will ensure the majority of the existing habitat suitable for water voles (if present) will be retained throughout the operation phase. As such, residual effects during operation are considered to be <b>not significant</b>.</p> <p><b><u>Decommissioning</u></b></p> <p>The likely effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be outlined in the Outline DEMP.</p>

Receptor	Likely residual effects following additional mitigation measures
Otters	<p>Otter surveys are yet to be completed (refer to <b>Section 7.14</b>); however, based on their conservation status within the East Riding of Yorkshire, and presence of potentially suitable habitats within the draft Order Limits, otters (if present) are considered likely to be of <b>County</b> ecological importance.</p> <p>The draft Order Limits are in close proximity/hydrologically connected to nearby designated sites for which the otters are a qualifying feature/reason for designation. Given their large home ranges (up to 20km), if otter are present within the draft Order Limits, they are likely to be associated with the designated site populations. As such, the assessment of residual effects for otters is included for designated sites above and has not been repeated here.</p>
Badgers	<p>Badgers are considered to be of <b>Local</b> ecological importance.</p> <p>Taking into consideration the embedded mitigation measures, no likely adverse effects during construction, operation or decommissioning were identified and no additional mitigation measures have been considered necessary. As such, no residual effects have been identified during either construction, operation or decommissioning and therefore residual effects are <b>not significant</b>.</p> <p>Pre-construction badger surveys would be undertaken prior to commencement of construction, which would inform the requirement for additional mitigation measures, should any new setts be recorded.</p> <p>Habitat creation and enhancement measures underneath the solar PV modules are likely to improve the availability of invertebrate prey species for species that will make use of the solar PV development area, such as badgers. This is anticipated to be <b>beneficial</b> and <b>significant</b> at the <b>Local level</b>.</p>
Other species of principal importance	<p>Other species of principal importance are considered to be of <b>Local</b> ecological importance.</p> <p><b><u>Construction</u></b></p> <p>Taking into consideration the embedded mitigation measures, the preliminary assessment identified the need for additional mitigation measures in relation to injury/mortality of species of principal importance during habitat clearance.</p> <p>Such measures would include sensitive timing of clearance of habitat which is suitable for hibernating small mammals such as hedgehog, avoiding the hibernation period (October to April), and undertaking two-stage vegetation clearance using hand-tools, and supervision by an Ecological Clerk of Works. As such, residual effects are anticipated to be <b>not significant</b>.</p>

Receptor	Likely residual effects following additional mitigation measures
	<p><b><u>Operation</u></b>                      The embedded mitigation measures will ensure the majority of the existing habitat suitable for other species of principal importance will be retained throughout the operation phase. As such, residual effects are anticipated to be <b>not significant</b>.</p> <p>Habitat creation and enhancement measures underneath the solar PV modules are likely to improve the availability of invertebrate prey species for species that will make use of the solar PV development area, such as hedgehogs. This will also provide secure, undisturbed habitat for brown hare. This is anticipated to be <b>beneficial</b> and <b>significant</b> at the <b>Local level</b>.</p> <p><b><u>Decommissioning</u></b>                      The residual effects of the decommissioning phase are expected to be similar to those for the construction phase. Additional mitigation measures will be detailed in and secured by the Outline DEMP.</p>
Invasive non-native species	<p>Invasive species are not considered to be of conservation value. Additional mitigation measures which would avoid/minimise the potential for spread of invasive species during construction and decommissioning include: pre-construction invasive flora species surveys within the draft Order Limits and biosecurity control measures to reduce the risk of invasive non-native species being introduced and/or spread within the draft Order Limits, which will be detailed in and secured by the Outline CEMP. Biosecurity control measures will also be implemented during habitat management during the operation phase. In addition, prior to any non-standard maintenance works, invasive species surveys will be undertaken to determine presence or absence, assess the risk of impacts, and establish appropriate control, or management. As such, residual effects from the spread of invasive non-native species are anticipated to be <b>not significant</b>.</p>

## 7.12 What opportunities are there for environmental enhancement?

- 7.12.1 Where possible, non-developed land within the solar PV development area not used for biodiversity mitigation will be enhanced for biodiversity. These areas are expected to offer significant opportunities for enhancement over and above the required mitigation. The Outline LEMP will identify ecological enhancement measures to be incorporated into the solar PV development area. Outlined below are examples of potential environmental enhancement measures; however, such measures are yet to be finalised and will be informed by ongoing surveys and consultation.
- 7.12.2 Flower rich grassland (being mindful of any existing high nutrient levels which would dictate the level of floristic enhancement that can be achieved) would be created within fields smaller than five hectares which do not contain solar PV modules or other above ground infrastructure associated with Mylen Leah Solar Farm. This would improve carrying capacity of the solar PV development area for nesting birds, as well benefit a range of wildlife species including invertebrates.
- 7.12.3 A percentage of field margins would be sown with a winter seed mix for foraging birds with the rest of the margins sown to a similar legume rich grass mix to underneath the solar PV modules. The percentage of field margins to be sown with a winter seed mix will be determined by the results of the ongoing bird surveys (refer to **Section 7.14**) which will be presented in the ES.
- 7.12.4 Locally sourced native tree, species rich hedgerow and native scrub would be planted within appropriate areas of the solar PV development area. This would benefit a range of wildlife species, improve carrying capacity of the solar PV development area for nesting birds and provide non-ground nesting birds additional nesting habitat once established.
- 7.12.5 Existing hedgerows would be gapped up and allowed to grow up without intensive cutting back. An ecological sensitive management schedule of existing and proposed hedgerows would ensure hedgerows fulfil their biodiversity potential. A range of species would benefit from this measure including nesting birds, amphibians, reptiles, invertebrates and mammals.
- 7.12.6 A variety of bat boxes would be installed on suitable trees across the solar PV development area to improve bat roosting availability.
- 7.12.7 Barn owl and other appropriate bird of prey boxes would be installed within suitable habitat within the solar PV development area to improve bird of prey nesting opportunities.
- 7.12.8 Bird boxes designed to be used by species likely to be present or recorded in the solar PV development area would be installed across the solar PV development area to improve non-ground nesting bird opportunities.
- 7.12.9 Reptile and amphibian refugia and hibernacula would be created within appropriate locations within the solar PV development area.
- 7.12.10 Incidental records of American mink (*Neovison vison*) found during the further surveys detailed in **Section 7.14** will be recorded. American mink control measures would be detailed and secured within the Outline LEMP submitted in support of the DCO application. Mink control, if assessed as

appropriate, would provide a beneficial impact on many native species, in particular water voles.

7.12.11 Whilst not an enhancement measure, the operation phase is likely to involve the cessation of chemical use (i.e. fertilisers and pesticides), if currently used in fields where solar PV modules are proposed. This is also likely to increase the number of invertebrates, as well as improve water quality from reduced chemical and nutrient run-off. This could benefit a range of species, including invertebrates.

7.12.12 The ecological enhancement measures will assist in delivering a minimum 10% net gain in biodiversity, although Mylen Leah Solar Farm is expected to substantially exceed this. All habitat and enhancement measures will be assessed in a Biodiversity Net Gain Assessment and Calculation that will be submitted in support of the DCO application.

### **Wider landscape and research opportunities**

7.12.13 Mylen Leah Solar Farm has the opportunity to provide measures which are likely to benefit biodiversity.

7.12.14 The proposed seeding underneath the solar PV modules, as well as proposed areas for environmental mitigation and enhancement, would create significantly greater opportunities for biodiversity than the existing arable farmland.

7.12.15 Mylen Leah Solar Farm has the potential to improve soil health, reduce soil erosion and allow invertebrates including pollinators to thrive, therefore resulting in biodiversity enhancement within the solar PV development area and within the wider surrounding landscape.

7.12.16 Mylen Leah Solar Farm also has the opportunity to be used as part of studies into the impact of solar PV modules on biodiversity. Environmental studies have the potential to inform mitigation and enhancement strategies for future solar projects. Regular monitoring could help establish the efficacy of the mitigation and enhancement measures proposed, for example.

### **7.13 What difficulties and uncertainties have been encountered in this preliminary biodiversity assessment?**

7.13.1 The information provided in this PEIR is preliminary and is based on the information available at the time of writing (April 2026). A full assessment of likely significant effects of Mylen Leah Solar Farm will be reported in the ES.

7.13.2 This preliminary biodiversity assessment is partly based on ecological surveys undertaken of the solar PV development area which have changed through the project design process. The survey areas undertaken to date do not include all areas of the draft Order Limits, such as the underground grid connection corridor. Some receptor surveys such as the breeding and non-breeding bird surveys (**Appendices 7.3 to 7.5 in Volume 3**) have included fields now outside the draft Order Limits, therefore providing greater baseline information of land adjacent to the solar PV development area.

7.13.3 The background data search provided by the North and East Yorkshire Ecological Records Centre provided data with an accuracy between 100m and 1km. The background data search provided by the British Trust of

Ornithology provides records with a 2km accuracy. Therefore, the interpretation of the background data has taken into account the location accuracy of the species records.

- 7.13.4 Non-breeding and breeding bird surveys conducted to date exclude the underground grid connection corridor and a small number of fields within the solar PV development area. Therefore, a final assessment cannot be made until further non-breeding and breeding bird surveys are completed in 2026 and 2027. It is anticipated that non-breeding bird surveys within the underground grid connection corridor will not be completed until January 2027; however, all bird surveys of the solar PV development area will be completed during 2026. As the work within the underground grid connection corridor is short term and temporary in nature, it is not anticipated the ongoing surveys post submission of the DCO application will materially change the assessments presented within the ES.
- 7.13.5 Targeted surveys such as habitat assessments for water vole, otter and aquatic surveys have not been conducted to date, as these will be determined on the location of specific works such as cable crossing points and access routes. The final assessment for such targeted species and animal groups will be presented within the ES.
- 7.13.6 The badger surveys conducted to date do not include all the solar PV development area or a 30m survey radius around the solar PV development area. The final assessment for badgers will be presented within the ES, informed by the results of ongoing surveys (refer to **Section 7.14**).
- 7.13.7 Ecological surveys of Fields 7h, 7i and 7j, as well as a small area of Field 12h, have not been conducted to date for the relevant receptors detailed in **Table 7.2**. Appropriate ecological surveys of these fields will be undertaken to inform the DCO application, with the results presented in the ES.
- 7.13.8 Notwithstanding the above, the survey data collected to date, in addition to the receptor desktop studies, forms a robust baseline in which to inform this preliminary assessment.

#### **7.14 What further work is required to inform the full biodiversity assessment in the DCO application?**

- 7.14.1 The surveys listed below will be completed to inform the DCO application. Surveys required outside the draft Order Limits are dependent on land access agreement.
- Preliminary ecological appraisal (including UK Habitat Classification survey) of the draft Order Limits, including areas which have already been surveyed (due to the age of the survey data). This will include the identification of hedgerows potentially deemed to be 'important' under The Hedgerows Regulations 1997;
  - Modular River Physical survey of appropriate watercourses within the draft Order Limits to inform habitat condition for the biodiversity net gain assessment;
  - Specialist botanical surveys and rare plant species (including arable weeds) of the draft Order Limits;

- Macrophyte surveys of all the watercourse crossing points within the draft Order Limits;
- Freshwater macroinvertebrate surveys of all the watercourse crossing points within the draft Order Limits, including both Spring and Summer surveys, of the watercourses scoped in under the Water Framework Directive assessment (refer to **Chapter 15: Water** in **Volume 1**);
- Freshwater macroinvertebrate surveys of the ponds within the solar PV development area;
- Aquatic habitat walkover surveys of all watercourses within the draft Order Limits which are directly impacted by watercourse crossings. These will include an assessment of suitability for fish;
- Natural England District Level Licence habitat assessment of ponds within 250m of the draft Order Limits which have not been surveyed to date. If suitable for great crested newt eDNA sampling, eDNA surveys of ponds which have not been surveyed to date within the draft Order Limits;
- Reptile habitat assessment of the draft Order Limits;
- Breeding bird surveys of the section of Pocklington Canal SSSI within the draft Order Limits and a 100m wider survey area surrounding the section of Pocklington Canal SSSI within the draft Order Limits;
- Non-breeding bird surveys, including Spring and Autumn passage and wintering bird surveys, of the underground grid connection corridor between February 2026 and January 2027. It is therefore possible that these surveys may not be completed by time the DCO application is submitted;
- Non-breeding bird surveys of the solar PV development area;
- Bat daytime walkover survey of trees within the underground grid connection corridor;
- Water vole habitat assessment surveys within and up to 150m upstream and downstream from the watercourse crossing points;
- Otter habitat assessment surveys within 200m of the watercourse crossing points, including both suitable riparian and terrestrial habitat; and
- Updated badger surveys within 30m of the draft Order Limits.

7.14.2 Invasive non-native species will be recorded as incidental records during the surveys listed above.

7.14.3 Further consultation with appropriate stakeholders will be undertaken to confirm the data gathered to date, as well as proposed surveys, is sufficient to provide a full biodiversity assessment in support of the DCO application. Further consultation will also ensure any ecological mitigation and enhancements consider cumulative effects of other existing and/or approved developments.

- 7.14.4 An electromagnetic field assessment report will be completed to allow a full assessment of the potential for disturbance of fish species as a result of electromagnetic fields from the underground grid connection corridor and interconnecting underground cables during operation to be undertaken (refer to **Chapter 18: Other Environmental Considerations** in **Volume 1**).
- 7.14.5 A biodiversity net gain assessment and calculation will also be undertaken to inform the design of Mylen Leah Solar Farm and will be submitted in support of the DCO application.

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<sup>2</sup> European Union (1992) 'Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora'. Available online: [Directive - 92/43 - EN - Habitats Directive - EUR-Lex](#)

<sup>3</sup> Conservation of Habitats and Species Regulations 2017 (as amended). Available online: [The Conservation of Habitats and Species Regulations 2017](#)

<sup>4</sup> Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Available online: [The Conservation of Habitats and Species \(Amendment\) \(EU Exit\) Regulations 2019](#)

<sup>5</sup> Wildlife and Countryside Act 1981 (as amended). Available online: [The Conservation of Habitats and Species Regulations 2017](#)

<sup>6</sup> Countryside and Rights of Way Act 2000. Available online: [Countryside and Rights of Way Act 2000](#)

<sup>7</sup> Environment Act 2021. Available online: [Environment Act 2021](#)

<sup>8</sup> Natural Environment and Rural Communities Act 2006. Available online: [Natural Environment and Rural Communities Act 2006](#)

<sup>9</sup> The Hedgerows Regulations 1997. Available online: [The Hedgerows Regulations 1997](#)

<sup>10</sup> Protection of Badgers Act 1992. Available online: [Protection of Badgers Act 1992](#)

<sup>11</sup> The Invasive Alien Species (Enforcement and Permitting) Order 2019. Available online: [The Invasive Alien Species \(Enforcement and Permitting\) Order 2019](#)

<sup>12</sup> Department for Energy Security and Net Zero (December 2025, published January 2026). Overarching National Policy Statement for Energy (EN-1). Available online: [Overarching National Policy Statement for energy \(EN-1\), 2025 - GOV.UK](#)

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<sup>16</sup> HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment. Available online: [25-year-environment-plan.pdf](#)

- <sup>17</sup> HM Government (2023) Environmental Improvement Plan 2023: First revision of the 25 Year Environment Plan. Available online: [Environmental Improvement Plan](#)
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- <sup>21</sup> Natural England and Department for Environment, Food & Rural Affairs (published 2022, updated 2026) Great crested newts: district level licensing schemes for developers, ecologists and landowners. Available online: [Great crested newts: district level licensing schemes for developers, ecologists and landowners - GOV.UK](#)
- <sup>22</sup> Scoping Report submitted to the Secretary of State on 08 January 2025. Available online: [EN0110002-000004-Mylen Leah Solar Farm Scoping Report.pdf](#)
- <sup>23</sup> Scoping Opinion adopted by the Planning Inspectorate (on behalf of the Secretary of State) on 18 February 2025. Available online: [EN0110002-000035-Secretary of State Scoping Opinion - Proposed Mylen Leah Solar Farm 18 February 2025.pdf](#)
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