EAST YORKSHIRE SOLAR FARM

East Yorkshire Solar Farm EN010143

Environmental Statement

Volume 2, Appendix 8-3: Extended Phase 1 Habitat Survey Report

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Executive Summary

- ES1 East Yorkshire Solar Farm Limited commissioned AECOM to undertake an ecological desk study and extended Phase 1 habitat survey for the proposed East Yorkshire Solar Farm.
- ES2 The objective of the desk study and extended Phase 1 habitat survey, reported in this document, was to identify ecological features relevant to the Scheme and occurring within the wider potential zone of influence.
- ES3 The desk study identified sites designated for nature conservation and records of protected and/or notable habitats and species (ecology features) and invasive non-native species that are relevant to the Scheme.
- The Phase 1 habitat survey was undertaken in accordance with the standard survey method, developed by the Joint Nature Conservation Committee. The survey identified the habitats present within and up to 50 metres from the Order limits (where accessible), including any notable or potentially notable (where further detailed survey is required) habitats which may constrain or influence the design and implementation of the Scheme. An appraisal was also undertaken of the potential suitability of the habitats present to support protected and notable species of plants or animals. The presence of any scheduled invasive non-native species was also recorded when present and visible.
- No detailed surveys were carried out for any particular species, with the exception of badger (*Meles meles*). The badger survey methodology is detailed in **Appendix 8-8: Badger Survey Report, ES Volume 2**[EN010143/APP/6.2]. Owing to the sensitivities of detailing information on the location of badger setts, the badger survey results are provided confidentially to key stakeholders only.
- The desk study identified ten international statutory sites for nature conservation within the relevant 10km Study Area (Special Areas of Conservation, Special Protection Areas and Ramsar sites). No Special Areas of Conservation designated for bats were identified within 30km of the Site and no proposed Ramsar sites, possible Special Areas of Conservation, or potential Special Protection Areas are present within the 10km Study Area. Ten other statutory designated sites for nature conservation (national designations: Sites of Special Scientific Interest, National Nature Reserves, Local Nature Reserves) are present within the 5km Study Area (presented in Table 2 and shown in Figure 8-1, ES Volume 3 [EN010143/APP/6.3]). Two of these statutory designated sites, the River Derwent Special Areas of Conservation and Site of Special Scientific Interest, lie within the Grid Connection Corridor.
- ES7 Given the proximity of the Scheme to internationally designated sites, a Habitats Regulations Assessment has been undertaken to determine whether the Scheme will result in Likely Significant Effects on the designated features, as presented in the Habitat Regulations Assessment Report [EN010143/APP/7.12], prepared for the Development Consent Order Application.

- There are 13 non-statutory sites designated for nature conservation identified within the 2km Study Area (presented in **Table 3** and shown on **Figure 8-2, ES Volume 3 [EN010143/APP/6.3]**).
- ES9 Two of these local non-statutory designated sites lie within the Site. Tottering Lane, Gribthorpe Local Wildlife Site lies within the Interconnecting Cable Corridor between Solar PV Areas 1a, 1b and 1e. Wressle Verge Local Wildlife Site is located in both the Interconnecting Cable and Grid Connection Corridors and runs north to south between Solar PV Areas 3a and 3b (along Wood Lane) and east to west along the northern boundary of Area 3b (along Brind Lane).
- ES10 The extended Phase 1 habitat survey has identified that the land within the Order limits is predominantly arable farmland, with boundary features including watercourses/ditches (wet and dry) and hedgerows. Areas of poorsemi-improved grassland are found within the Site, mostly associated with field margins and road verges. Areas of higher quality grassland are found within Tottering Lane, Gribthorpe Local Wildlife Site and Wressle Verge Local Wildlife Site.
- ES11 Other habitat (see **Table 5**) within the Site includes improved grassland fields, mature trees, small areas of woodland and ponds (mostly dry or holding shallow water at the time of survey). Veteran and ancient trees are also present within the Site.
- ES12 The desk study and extended Phase 1 habitat survey has identified the potential presence of protected and notable species within the Order limits and wider zone of influence.
- Where the status of a species or the potential value of the Site for species/species groups could not be fully determined without additional survey, a summary of the further surveys undertaken is provided in **Table 7**. Further surveys were undertaken in 2022 and 2023 to seek to collate sufficiently robust ecological baseline information to inform the ecological impact assessment for the Scheme. Details of the survey methodologies, results and any limitations are presented in the associated survey reports within **Appendices 8-2 to 8-9, ES Volume 2 [EN010143/APP/6.2]**.

1. Introduction

1.1 Background

- 1.1.1 East Yorkshire Solar Farm (the 'Applicant') commissioned AECOM to undertake an ecological desk study and extended Phase 1 habitat survey for the proposed East Yorkshire Solar Farm (the 'Scheme').
- 1.1.2 The Scheme will comprise: the installation of solar photovoltaic (PV) generating panels (the 'Solar PV Site'), associated grid connection (comprising the 'Interconnecting Cable Corridor' and 'Grid Connection Corridor'), access points ('Site Accesses') and 'Ecology Mitigation Area' collectively referred to as the 'Site'. The boundary of the Site is referred to as the 'Order limits'.
- 1.1.3 During the construction phase, temporary construction compounds will be required as well as temporary roadways to facilitate access to all land within

- the Solar PV Site. In areas around the solar PV panels and on other land within the Solar PV Site, opportunities for landscaping, biodiversity enhancements and habitat management have been explored.
- 1.1.4 The landscape features within the Site consist predominately of agricultural fields with areas of woodland, grassland, waterbodies and boundary features including hedgerows, tree lines and watercourses/ ditches. There are several woodlands located adjacent to the Site and surrounding area, including deciduous woodland Priority Habitat.
- 1.1.5 Further information on the Scheme and Site is provided in **Chapter 2: The Scheme**, **ES Volume 1** [**EN010143/APP/6.1**].
- 1.1.6 This report is presented as a technical appendix to accompany **Chapter 8: Ecology, ES Volume 1 [EN010143/APP/6.1]** for the DCO Application and provides baseline information, as of September 2023. This report has been provided as part of the DCO submission, to provide context as to the Scheme's evolution and design progress and the process followed to determine the scope and extent of ecological survey work.

1.2 Aims and Objectives

- 1.2.1 The objective of the desk study and extended Phase 1 habitat survey, reported in this document, was to identify ecological features relevant to the Scheme and occurring within the wider potential zone of influence (ZoI). The ZoI was defined with reference to the Order limits, as presented in Figures 8-1 and 8-2, ES Volume 3 [EN010143/APP/6.3] and the type of development, as detailed in Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1].
- 1.2.2 The desk study and extended Phase 1 habitat survey were undertaken to:
 - Identify and categorise habitats present within the Order limits and any areas immediately outside of the Order limits where there may be potential for direct or indirect effects (the ZoI);
 - b. Carry out an appraisal of the potential of the habitats recorded to support protected or notable species of fauna and flora; and
 - c. Provide information on any potential ecological constraints and opportunities in the ZoI that should be addressed to inform and support the DCO Application for the Scheme, including the identification (where relevant) of any requirements for follow-up habitat and species surveys.
- 1.2.3 The desk study identified sites designated for nature conservation and records of protected and/or notable habitats and species (ecology features) and invasive non-native species (INNS) that are relevant to the Scheme.
- 1.2.4 The extended Phase 1 habitat survey identified the habitats present within and up to 50 metres (m) from the Order limits (where accessible), including any notable or potentially notable (where further detailed survey is required) habitats which may constrain or influence the design and implementation of the Scheme. An appraisal was also undertaken of the potential suitability of the habitats present to support protected and notable species of plants or animals. The presence of any scheduled INNS was also recorded when present and visible.

1.2.5 Additional details on the methods used are provided in Section 2.

1.3 Relevant Legislation, Policy and Guidance

Legislation

- 1.3.1 The following wildlife legislation was considered when undertaking the desk study and extended Phase 1 habitat survey:
 - a. Wildlife and Countryside Act (WCA) 1981 (as amended) (Ref. 1);
 - b. Countryside and Rights of Way (CRoW) Act 2000 (Ref. 2);
 - c. Natural Environment and Rural Communities (NERC) Act 2006 (Ref. 3);
 - d. The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) (Ref. 4);
 - e. The Protection of Badgers Act 1992 (Ref. 5);
 - f. The Hedgerow Regulations 1997 (Ref. 6);
 - g. The Water Environment (Water Framework Directive) [WFD] (England and Wales) Regulations 2017 (Ref. 7);
 - h. Invasive Alien Species (Enforcement and Permitting) Order 2019 (Ref. 8); and
 - i. Regulation (EU) 1143/2014 on the introduction and spread of invasive alien species (Ref. 9).
- 1.3.2 Compliance with the above legislation may require the attainment of relevant protected species licences prior to the implementation of the Scheme.
- 1.3.3 Further information on the requirements of the above legislation is provided in Appendix 8-1: Legislation, Policy and Guidance relating to Ecology, ES Volume 2 [EN010143/APP/6.2].

National Policy

- 1.3.4 The following national policies have been considered:
 - a. Overarching National Policy Statement (NPS) for Energy (EN-1) (2011) (Ref. 10);
 - b. Draft NPS for Energy (EN-1) (2023) (Ref. 11);
 - c. NPS for Renewable Energy Infrastructure (EN-3) (2011) (Ref. 12);
 - d. Draft NPS for Renewable Energy (EN-3) (2023) (Ref. 13);
 - e. NPS for Electricity Networks Infrastructure (EN-5) (2011) (Ref. 14);
 - f. Draft NPS for Electricity Networks Infrastructure (EN-5) (2023) (Ref. 15); and
 - g. National Planning Policy Framework (NPPF) (2023) (Ref. 16).

Local Policy

- 1.3.5 The following local policies have been considered:
 - a. East Riding Local Plan Strategy 2012–2029 adopted April 2016 (Ref. 17);

- East Riding Local Plan Update 2020 2039 Draft Strategy Document Update (Ref. 18);
- c. East Riding Local Plan, Lower Derwent Valley Supplementary Planning Document (Ref. 19);
- d. Selby District Local Plan (2005) saved local policies (Ref. 20);
- e. Selby District Core Strategy Local Plan Policy (October 2013) (Ref. 21);
 and
- f. Emerging Selby Local Plan, Publication Version Consultation 2022 (Ref. 22).
- 1.3.6 Further information on the requirements of the above national and local policies is provided in Appendix 8-1: Legislation, Policy and Guidance relating to Ecology, ES Volume 2 [EN010143/APP/6.2].

Guidance

- 1.3.7 The following guidance documents have been considered:
 - a. Environmental Improvement Plan 2023 (Ref. 23);
 - b. Natural England and Department for Environment, Food and Rural Affairs (Defra) Standing Advice (protected species) (Ref. 24);
 - c. UK Post-2010 Biodiversity Framework (Ref. 25);
 - d. Birds of Conservation Concern (BoCC) (Ref. 26);
 - e. East Riding of Yorkshire Biodiversity Action Plan (ERYBAP) Strategy; (Ref. 27);
 - f. Selby BAP (Ref. 28);
 - g. The International Union for Conservation of Nature (IUCN) Red List of Threatened Species (Ref. 29);
 - h. UKHab (2018–2022). The UK Habitat Classification System (Ref. 30).
- 1.3.8 Further information on the above guidance is provided in **Appendix 8-1:** Legislation, Policy and Guidance relating to Ecology, ES Volume 2 [EN010143/APP/6.2].

2. Methods

2.1 Desk Study

- 2.1.1 A desk study was undertaken to identify nature conservation designations and protected or notable habitats and species potentially relevant to the Scheme.
- 2.1.2 A stratified approach was taken when defining the desk study area, based on the likely ZoI of the Scheme on different ecological receptors; and an understanding of the maximum distances typically considered by statutory consultees. Accordingly, the desk study identified the following:
 - a. Statutory designated sites of international nature conservation value (e.g., Special Areas of Conservation [SAC], Special Protection Areas

- [SPA] and Ramsar sites, as well as proposed or potential sites) up to 10 kilometres (km) from the Order limits (referred to as the '10km Study Area)'. This is extended to 30km for SACs designated for bats (referred to as the '30km Study Area');
- b. Other statutory designated sites of national nature conservation value (e.g., Sites of Special Scientific Interest [SSSI], National Nature Reserves [NNR] and Local Nature Reserves [LNR] up to 5km from the Order limits (referred to as the '5km Study Area');
- c. Non-statutory sites for conservation (e.g., Local Wildlife Sites [LWS], Sites of Importance for Nature Conservation [SINC]), ancient woodland [AW] and other notable habitats (e.g., Priority habitats) within 2km of the Order limits (referred to as the '2km Study Area'); and
- d. Protected and notable species records within 2km of the Order limits (forming the same 2km Study Area).
- 2.1.3 The desk study was undertaken using the data sources detailed in **Table 1**. Protected and notable habitats and species include those listed under Schedules 1, 5 and 8 of the WCA 1981 (as amended) (Ref. 1); Schedules 2 and 4 of the Habitats Regulations (Ref. 4); species and habitats of principal importance (HoPI) for nature conservation in England listed under Section 41 (S41) of the NERC Act (Ref. 3); and other species that are Nationally Rare, Nationally Scarce or listed in national or local Red Data Lists and BAPs.
- 2.1.4 Only records up to ten years old are considered, as any records older than ten years are unlikely to be still representative of species presence in the local area.

Table 1. Desk study data sources

Data Source	Accessed	Data Obtained
The Multi-Agency Geographic Information for the Countryside (MAGIC) website (Ref. 31)	July 2023	Statutory designated sites, locations of Priority habitats and protected species licences.
North and East Yorkshire Ecological Data Centre (NEYEDC)	August 2023	Non-statutory designated sites and records of protected and notable species.

2.1.5 The NEYEDC was contacted in July 2022 and again in August 2023 to gain information on pre-existing ecological information. This included locations of non-statutory sites designated for nature conservation and records of protected, notable and invasive non-native species within the 2km Study Area.

2.2 Field Survey

2.2.1 The Phase 1 habitat survey was undertaken in accordance with the standard survey method, developed by the Joint Nature Conservation Committee (JNCC) (Ref. 32). Phase 1 habitat survey is a standard method of environmental audit and involves categorising different habitat types and habitat features within a given survey area. The Phase 1 Survey Area comprised the Site and 50m buffer (where accessible) from the Order limits.

The information gained from the survey can be used to determine the likely ecological value of a site, and to direct any more specific survey work which may need to be carried out prior to the submission of a planning/DCO application. The standard Phase 1 habitat survey method can be 'extended' to record target notes on protected, notable and invasive species.

2.2.2 Information on the presence of veteran and ancient trees within the Site was gained through a separate arboricultural survey, which is detailed in Appendix 10-5: Arboricultural Impact Assessment and Tree Protection Report, ES Volume 2 [EN010143/APP/6.2].

2.3 Appraisal of the Potential Suitability of Habitats for Protected and Notable Species

- 2.3.1 An appraisal was made of the potential suitability of the habitats present to support protected and notable species of plants or animals (as defined by legislation and planning policy in Section 1.3 of this appendix). Field signs, habitat features with potential to support protected species and any sightings or auditory evidence were recorded when encountered, but no detailed surveys were carried out for any particular species, with the exception of badger (*Meles meles*). The badger survey methodology is detailed in Appendix 8-8: Badger Survey Report, ES Volume 2 [EN010143/APP/6.2]. Owing to the sensitivities of detailing information on the location of badger setts, the badger survey results are provided confidentially to key stakeholders only.
- 2.3.2 In addition, attention was given to identifying invasive non-native plant species that are listed under Schedule 9 of the WCA 1981 (as amended) (Ref. 1) and those 'widespread species' listed in the Invasive Alien Species (Enforcement and Permitting) Order 2019 (Ref. 8). Locations of plants or stands of any such invasive non-native plant species, if found, were recorded.
- 2.3.3 Habitat condition assessment data was also captured alongside the Phase 1 habitat data, for those habitats inside the Site (including boundary habitats, such as hedgerows). Existing Phase 1 habitat and condition assessment data has been used to inform the Biodiversity Net Gain (BNG) Assessment. The surveys undertaken in 2022 to inform the BNG Assessment were carried out using Biodiversity Metric 3.1 Habitat Condition Assessment criteria (Ref. 34); however, Biodiversity Metric 4.0 (Ref. 35) was issued on 28 March 2023. Therefore, Biodiversity Metric 4.0 has been used for the BNG Assessment and habitat condition information collected in the field surveys has been translated into the Biodiversity Metric 4.0 Habitat Condition Assessment criteria. All information relating to the BNG Assessment, including the collation of data, is detailed in the BNG Assessment Report [EN010143/APP/7.11], which forms part of the DCO Application.

2.4 Limitations

2.4.1 The aim of a desk study is to help characterise the baseline context of a scheme and provide valuable background information that would not be captured by a single site survey alone. Information obtained during the course of a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of

records for a particular habitat or species does not necessarily mean that the habitats or species do not occur in a given study area. Likewise, the presence of records for particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of a proposed development.

- 2.4.2 Where habitat boundaries coincide with physical boundaries recorded on OS maps, the resolution is as determined by the scale of mapping. Elsewhere, habitat mapping is as estimated in the field and/or recorded by hand-held devices such as Samsung tablets using Collector software. Where areas of habitat are given, they are approximate and should be verified by measurement on-site where required for design or construction. While indicative locations of trees are recorded, this does not replace requirements for detailed specialist arboriculture survey to British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction (Ref. 36).
- 2.4.3 Some areas of the 50m Site buffer were inaccessible during the Phase 1 habitat survey. These areas were viewed as far as possible from adjacent accessible land; however, it cannot be guaranteed that all habitats and other notable ecological features have been recorded in these areas. However, all areas within the Site were covered, and good coverage was achieved overall within the 50m buffer.

3. Results

3.1 Sites Designated for Biodiversity Importance

Statutory Designated Sites for Biodiversity Importance

- 3.1.1 There are ten international statutory sites (comprising SACs, SPAs and Ramsar sites) for nature conservation within the relevant 10km Study Area. No SACs designated for bats were identified within the 30km Study Area and no proposed Ramsar sites, possible SACs, or potential SPAs are present within the 10km Study Area.
- 3.1.2 Ten other statutory designated sites for nature conservation (national designations: SSSIs, NNRs, LNRs) are present within the 5km Study Area. The Site is also within the Impact Risk Zone (IRZ) of the River Derwent SSSI. Solar farm projects with a footprint >0.5ha and underground cable projects are listed on the qualifying criteria whereby the relevant local planning authority would be required to consult with Natural England regarding potential effects.
- 3.1.3 The locations of these statutory sites, relevant to the Site, are presented in Figure 8-1, ES Volume 3 [EN010143/APP/6.3], and designation details of all statutorily designated sites are summarised in Table 2 in ascending order, with those closest to the Site listed first.

Table 2. Statutory sites designated for nature conservation within 10km (international) and 5km (national) of the Order limits

Site Name Description Location

River Derwent SAC

Annex I of the Habitats Directive habitats present as a qualifying feature, but not a primary reason Grid for selection of this site:

• Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachio* vegetation.

Annex II of the Habitats Directive species that are a primary reason for selection of this site:

River lamprey (Lampetra fluviatilis). The Derwent is one example of river lamprey populations
which inhabit the many rivers flowing into the Humber estuary in eastern England. Only the
lower reaches of the Derwent are designated, reflecting the spawning distribution of the
species in the Derwent system.

Annex II of the Habitats Directive species present as a qualifying feature, but not a primary reason for site selection:

- Sea lamprey (Petromyzon marinus);
- Bullhead (Cottus gobio); and
- Otter (Lutra lutra).

River Derwent SSSI

The Yorkshire Derwent is considered to represent one of the best British examples of the classic river profile. This lowland section, stretching from Ryemouth to the confluence with the River Ouse, supports diverse communities of aquatic flora and fauna (e.g., a rich assemblage of invertebrates, including dragonfly, and diversity of fish species), many elements of which are nationally significant. The riverine habitat also supports an excellent breeding bird community including common sandpiper (*Actitis hypoleucos*), dipper (*Cinclus cinclus*), kingfisher (*Alcedo atthis*), and yellow and grey wagtails (*Motacilla flava* and *Motacilla cinerea*). During the winter the Lower Derwent is important in maintaining the internationally important population of Bewick's swans (*Cygnus columbianus bewickii*) association with the adjacent Derwent Ings. The River

Connection Corridor crosses this SAC

Grid Connection Corridor crosses this SAC

Site Name	Description	
	Derwent is also one of the few rivers in lowland Britain which still supports a breeding population of otters.	
Barn Hill Meadows SSSI	The site comprises of seven fields lying in the flood plain of the Old Derwent. The site is important for its herb-rich, unimproved, neutral grassland. The fields have been traditionally managed for hay. Boundary hedgerows and ditches form an integral part of the site.	
Eastrington Ponds LNR	The site is a former brickworks and railway line with borrow pits from the construction of the railway. The large pond supports birds such as ducks, geese and great crested grebe (<i>Podiceps cristatus</i>), as well as invertebrates such as water beetles, pond skaters, dragonflies and damselflies. Daubenton's (<i>Myotis daubentonii</i>) bats fly over the water to hunt and water vole is present. The meadow areas support small mammals, including harvest mouse (<i>Micromys minutus</i>). Wildflowers include orchid species.	
Howden Marsh LNR	_NR The site is an old fenland marsh much of which has never been drained. It is particularly rich in water beetles and supports water vole (<i>Arvicola amphibius</i>).	
Lower Derwent Valley	Annex I Habitats Directive habitats that are a primary reason for selection of this site:	1.30km north-
SAC	 Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis). 	west of the Site
	Annex I Habitats Directive habitats present as a qualifying feature, but not a primary reason for site selection:	Cito
	 Alluvial forests with alder (Alnus glutinosa) and ash (Fraxinus excelsior) (Alno-Padion, Alnion incanae, Salicion albae). *priority feature 	
	Annex II species present as a qualifying feature, but not a primary reason for site selection:	
	Otter.	
Lower Derwent Valley Ramsar	The site is designated for: Ramsar Criterion 1: The site represents one of the most important examples of traditionally managed species-rich alluvial flood meadow habitat remaining in the UK. The river and flood	1.30km north- west of the Site

Site Name Description Location

meadows play a substantial role in the hydrological and ecological functioning of the Humber Basin

Ramsar Criterion 2: The site has a rich assemblage of wetland invertebrates including 16 species of dragonfly and damselfly, 15 British Red Data Book wetland invertebrates as well as a leafhopper, (*Cicadula ornate*) for which Lower Derwent Valley is the only known site in Great Britain.

<u>Ramsar Criterion 4</u>: The site qualifies as a staging post for passage birds in spring. Of particular note are the nationally important numbers of ruff (*Philomachus pugnax*) and whimbrel (*Numenius phaeopus*).

<u>Ramsar Criterion 5</u>: Assemblages of international importance – Species with peak counts in winter.

Species with peak counts in winter: 31,942 waterfowl (5 year peak mean 1998/99-2002/2003).

<u>Ramsar Criterion 6</u>: Species/populations occurring at levels of international importance – Species with peak counts in winter: Wigeon (*Anas penelope* – now *Mareca penelope*); and Teal (*Anas crecca*).

Species currently occurring at levels of national importance: Higher Plants; *Lathyrus palustris, Sium latifolium, Oenanthe silaifolia, Persicaria laxiflora and Potamogeton trichoides.*

Species regularly supported during the breeding season; black-necked grebe (*Podiceps nigricollis*), bittern (*Botaurus stellaris*), garganey (*Anas querquedula*), common quail (*Coturnix coturnix*), spotted crake (*Porzana porzana*) and black-headed gull (*Larus ridibundus*).

Species with peak counts in winter: whooper swan (*Cygnus cygnus*), gadwall (*Anas strepera*), mallard (*Anas platyrhynchos*), northern pintail (*Anas acuta*), northern shoveler (*Anas clypeata* – now *Spatula clypeata*) (*Anas clypeata*), water rail (*Rallus aquaticus*), golden plover (*Pluvialis apricaria*) and ruff (*Philomachus pugnax*).

Lower Derwent Valley SPA

The site qualifies under Article 4.1 by regularly supporting nationally important winter numbers of the following Annex I species:

Bewick's swan:

1.30km northwest of the Site

Site Name

Description

Location

- · Golden plover; and
- Ruff

The site qualifies under Article 4.2 by regularly supporting a breeding population of:

Shoveler.

The site qualifies under Article 4.2 as an area of international importance to waterfowl by regularly supporting over 20,000 waterfowl in winter. Within this number the site holds internationally important numbers of:

- Teal; and
- Wigeon.

The site also supports nationally important numbers of the following migratory species:

- · Shoveler; and
- Ruff.

Breighton Meadows SSSI

The site supports nationally, and internationally important alluvial flood meadow plant community and its outstanding assemblage of breeding birds associated with lowland damp grasslands. Breighton Meadows forms part of a complex of similarly species-rich alluvial flood meadow sites in the Lower Derwent Valley which include the Derwent Ings, Melbourne and Thornton Ings and Newton Mask. Together these four sites represent one of the most important examples of agriculturally unimproved species-rich alluvial flood meadow habitat remaining in the UK. The site is important as a habitat for a range of breeding wetland bird species. Breeding waders include: snipe (*Gallinago gallinago*), lapwing (*Vanellus vanellus*), redshank (*Tringa tetanus*) and curlew (*Numenius arquata*). Breeding wildfowl include: shoveler, mallard and teal. Other breeding birds include: yellow wagtail and reed, sedge, and grasshopper warblers (*Acrocephalus scirpaceus*, *Acrocephalus schoenobaenus* and *Locustella naevia*). National breeding wader populations on wet grasslands are now very small and in further decline. The largest numbers of

1.30km northwest of the Site

Site Name	Description	
	waders are now found on a relatively few exceptional sites, one of which is the Lower Derwent Valley complex of species-rich alluvial flood meadows, and which includes Breighton Meadows.	
Lower Derwent Valley NNR	The site is comprised of a series of flood meadows, pastures and woodlands. The reserve supports a rich diversity of plant species and populations of breeding and wintering birds.	1.47km north- west of the Site
Derwent Ings SSSI	The site consists of a series of neutral alluvial flood meadows, fen and swamp communities and freshwater habitats lying adjacent to the River Derwent between Sutton upon-Derwent and Menthorpe. The site is important as a habitat for a wide range of breeding wetland bird species and important wintering bird populations. Breeding wildfowl include: shoveler, shelduck (<i>Tadorna tadorna</i>), mallard, teal, pintail, gadwall and garganey. Breeding waders include: snipe, lapwing, redshank and curlew. Other breeding birds include: quail, barn owl, kingfisher, yellow wagtail and reed, sedge and grasshopper warblers. In winter, the lngs support internationally important concentrations of waterfowl (>20,000 individuals) together with nationally important numbers (>1% British wintering population) of Bewick's swan teal wigeon, mallard, pochard, golden plover and ruff. Nationally important numbers of whimbrel occur in late April and early May. The freshwater dyke system of the lngs supports a rich diversity of plant species including two nationally scarce species, greater water-parsnip (<i>Sium latifolium</i>) and flat-stalked pondweed (<i>Potamogeton freisii</i>). The site has an outstanding assemblage of invertebrates with species associated with the dykes and the fen and swamp habitats being particularly significant. These include up to 16 species of damselflies and dragonflies, together with a variety of species of other invertebrate groups and including three nationally rare species: snail killing fly (<i>Sciomyza dryomyzina</i>), freshwater snail (<i>Lymnaea glabra</i>) and Ptilid beetle (<i>Acrotrichis subcognata</i>).	1.47km north- west of the Site
Eskamhorn Meadows SSSI	Eskamhorn Meadows SSSI is a nationally important site for species-rich neutral grassland. The relevant National Vegetation Classification (NVC) types are predominantly MG4 meadow foxtail (<i>Alopecurus pratensis</i>) – great burnet (<i>Sanguisorba officinalis</i>) grassland, and a community transitional between this type and the MG5 crested dog's-tail (<i>Cynosurus cristatus</i>)	2.42km south of the Site

Site Name	Description	
	 common knapweed Centaurea nigra grassland. The site also supports small areas of MG5 and MG13 creeping bent (Agrostis stolonifera) – marsh foxtail (Alopecurus geniculatus grassland. In addition, small numbers of curlews and lapwings breed in the meadows. 	
Humber Estuary SAC	Annex I habitats that are a primary reason for selection of this site:	3.42 km south
	Estuaries; and	of the Site
	 Mudflats and sandflats not covered by seawater at low tide. 	
	Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:	
	 Sandbanks which are slightly covered by sea water all the time; 	
	Coastal lagoons (*priority feature);	
	Salicornia and other annuals colonizing mud and sand;	
	Atlantic salt meadows (Glauco-Puccinellietalia maritimae);	
	Embryonic shifting dune;	
	 "Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")"; 	
	 "Fixed coastal dunes with herbaceous vegetation ("grey dunes")" "Priority feature; and 	
	Dunes with Hippopha rhamnoides.	
	Annex II species present as a qualifying feature, but not a primary reason for site selection:	
	Sea lamprey;	
	River lamprey; and	
	Grey seal (Halichoerus grypus).	
Humber Estuary SPA	The site comprises extensive wetland and coastal habitats.	3.42km south of the Site

Site Name Description Location

The site qualifies under Article 4.1 by regularly supporting the following Annex 1 species in any season:

- Avocet (Recurvirostra avosetta) (wintering and breeding);
- Bittern (wintering and breeding);
- Hen harrier (Circus cyanea) (wintering);
- Golden plover (wintering);
- Bar-tailed godwit (Limosa lapponica) (wintering);
- Ruff (passage);
- Marsh harrier (Circus aeruginosus) (breeding); and
- Little tern (Sternula albifrons) (breeding).

The site qualifies under Article 4.2 of the Directive (79/409/EEC) as it is used regularly by the following regularly occurring migratory species other than those listed in Annex I) in any season:

- Shelduck (wintering);
- Knot (Calidris canutus) (wintering and passage);
- Dunlin (Calidris alpina) (wintering and passage);
- Black-tailed godwit (Limosa limosa) (wintering and passage); and
- Redshank (wintering and passage).

Assemblage qualification: The site qualifies under Article 4.2 of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season:

Dark-bellied brent goose (*Branta bernicla*), shelduck, wigeon, teal, mallard, pochard(*Aythya ferina*), scaup (*Aythya marila*), goldeneye (*Bucephala clangula*), bittern, oystercatcher (*Haematopus ostralegus*), avocet, ringed plover (*Charadrius hiaticula*), golden

Site Name	Description		
	plover, grey plover (<i>P. squatarola</i>), lapwing, knot, sanderling (<i>Calidris alba</i>), dunlin (<i>Calidris alpina</i>), ruff, black-tailed godwit, bar-tailed godwit (<i>Limosa lapponica</i>), whimbrel, curlew, redshank, greenshank (<i>Trimga nebularia</i>) and turnstone (<i>Arenaria interpres</i>).		
Humber Estuary Ramsar	The site is designated for: Ramsar Criterion 1: The site is a representative example of a near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons. Ramsar Criterion 3: The Humber Estuary Ramsar site supports a breeding colony of grey seals at Donna Nook. Dune slacks at Saltfleetby-Theddlethorpe on the southern extremity of the Ramsar site are the most north-easterly breeding site in Great Britain of the natterjack toad (<i>Bufo calamita</i>). Ramsar Criterion 5: Assemblages of international importance — non-breeding season: 153,934 waterfowl, non-breeding season (5-year peak mean 1996/97-2000/2001) and (5 year peak mean 1998/99-2002/2003). Ramsar Criterion 6: Species/populations occurring at levels of international importance: Golden plover (passage and wintering); Red knot (passage and wintering); Black-tailed godwit (passage and wintering);	3.42km south of the Site	
	 Redshank (passage and wintering); Shelduck (wintering); and 		
	 Bar-tailed godwit (wintering). Ramsar Criterion 8: The Humber Estuary acts as an important migration route for both river lamprey and sea lamprey between coastal waters and their spawning areas. 		

Site Name	Description	Location
Humber Estuary SSSI	The site contains nationally important habitats; the estuary itself (with its component habitats of intertidal mudflats and sandflats and coastal saltmarsh) and the associated saline lagoons, sand dunes and standing waters. The estuary supports nationally important numbers of wintering waterfowl, passage waders, and a nationally important assemblage of breeding birds of lowland open waters and their margins. It is also nationally important for a breeding colony of grey seals, river lamprey and sea lamprey, a vascular plant assemblage and an invertebrate assemblage.	3.42 km south of the Site
Barlow Common LNR	R The site has a mosaic of woodland, wetland, reedbeds and four large ponds. Two ponds attract wildfowl and migrating waders including shelduck, greenshank (<i>Tringa nebularia</i>) and sandpiper 140 species of birds have been recorded on site. The woodland also supports birds. The colonised tip supports a rich flora and diversity of invertebrates (including 21 species of butterflies). Water vole (and other small mammals) have been recorded at the site.	
Skipwith Common	Annex I habitats that are a primary reason for selection of this site are:	
SAC	 Northern Atlantic wet heaths with cross-leaved heath (<i>Erica tetralix</i>); and European dry heaths. 	west of the Site
Thorne and Hatfield Moors SPA	The site is used regularly by 1% or more of the Great Britain population of nightjar (<i>Caprimulgus europaeus</i>). The site also supports small numbers (at non-qualifying levels) of other Annex 1 species. Hen harrier (<i>Circus cyaneus</i>), merlin (<i>Falco columbarius</i>) and short-eared owl (<i>Asio flammeus</i>) hunt over the site in winter and at least one pair of hobbies (<i>Falco subbuteo</i>) feed over the site in summer. Also notable are nightingales (<i>Luscinia megarhynchos</i>) breeding at one of their most northerly regular sites in Britain.	9.24 km south of the Site
Thorne Moor SAC	The Annex I habitat that is a primary reason for selection of this site is degraded raised bogs still capable of natural regeneration.	9.24 km south of the Site

Non-statutory Designated Sites for Biodiversity Importance

- 3.1.4 There are 13 non-statutory sites designated for nature conservation identified within the 2km Study Area.
- 3.1.5 These sites have been designated as LWSs, SINCs and Candidate LWS for their biodiversity value at a local level and are known to have supporting value to a wide variety of protected and ecologically important species and/or habitats. One of the non-statutory designated sites is a 'Historic LWS'. In an email received from NEYEDC on 17 July 2023 it was clarified that Historic LWS have not been surveyed under the current local wildlife sites system (i.e., since 2007), but unlike a Candidate LWS these sites lack evidence that the site is of any substantive value, but equally lack compelling evidence to support their deletion. These sites will stay at this status until such a time that a survey can be completed. Deleted LWSs have been surveyed and their value does not meet the LWS guidelines. Historic LWSs have never been surveyed, but the habitat in question appears to still exist from examining aerial photography. However, the quality of the habitat is unknown. It is also noted that Candidate LWS have not yet been designated, but are considered within this chapter, along with Historic LWS, as they are being considered for designation and may become so within the life time of the Scheme.
- 3.1.6 These sites are shown on **Figure 8-2**, **ES Volume 3 [EN010143/APP/6.3]** and are summarised in **Table 3**. The data provided by NEYEDC also identified three 'deleted SINCs' and 17 'deleted LWS's within the 2km Study Area. These sites are not included in **Table 3** and are not shown on **Figure 8-2** due to their deleted and therefore not current status.
- 3.1.7 The non-statutory sites detailed in **Table 3** are listed in ascending order, with those closest to the Site listed first.

Table 3. Non-statutory designated sites within the 2km Study Area

Site Name	Description	Location
Wressle Verge LWS	Good quality established semi-natural verge, with hedgerows. Much of this verge contains common wayside grasses and herbs, typical of MG1 grassland in the NVC system. The south-west facing verge of Brind Lane contains enclaves of species interest. Data received from NEYEDC shows that this LWS is also an 'East Yorkshire Roadside Verge', which also extends further south along Wood Lane, down to Station Road. ¹	The LWS is located in both the Interconnecting Cable and Grid Connection Corridor and runs north to south between Solar PV Areas 3a and 3b (along Wood Lane) and east to west along the northern boundary of Solar PV Area 3b (along Brind Lane).

¹ Information received from NEYEDC informs that these verges were identified for their potential wildlife interest, but did not meet the guidelines for a LWS. Over time, some have

Site Name	Description	Location
Tottering Lane, Gribthorpe LWS	Good quality established semi-natural verge. This hedgerow and verge runs north to south along a minor road between the villages of Foggathorpe and Spaldington. The verge is a mosaic of neutral grassland and marshy grassland with widespread tall fescue (Schedonorus arundinaceus) and reed canarygrass (Phalaris arundinacea). Data received from NEYEDC shows that this LWS is also an 'East Yorkshire Roadside Verge'1.	The LWS lies within the Interconnecting Cable Corridor between Solar PV Areas 1a, 1b and 1e.
Bubwith to Holme-on- Spalding- Moor Disused Railway Line LWS	The former railway between Bubwith and Holme-upon-Spalding-Moor is a c.12km linear grassland and scrub site that has been divided into six shorter sections that have each had their own botanical survey. Habitats present include scrub, tall ruderals, hedgerows, trees, bracken and ephemeral/short perennial.	50m north-west of the Site
Old Clay Pits, Highfield – Historic LWS	No information provided.	50m south-west of the Site
North Howden Fish Ponds LWS	The LWS contains nutrient rich standing water, noted for its water-violet (<i>Hottonia palustris</i>). This wetland comprises two adjacent large ponds/lakes used for fishing, with two smaller ponds on the south-east side, which are surrounded by dense scrub.	440m west of the Site
Brockholes SINC	The SINC is a large fishing lake, surrounded by quite dense scrub and tree cover of a variety of species. The open water zone contains quite widespread algae and various emergent plants.	920m south-east of the Site
Yarmshaw Plantation LWS	A good quality mixed fen site, containing broad-leaved semi-natural woodland (willow carr).	1.02km south-west of the Site

been surveyed and found to meet LWS standards and as such have since been designated separately in the LWS system. The North Yorkshire verge systems are not utilised in planning.

Site Name	Description	Location
Ponds on W Bank of River Derwent near Woodall Farm SINC	Old, established semi-natural neutral/calcareous grassland and nutrient-rich standing water. This site is a borrow pit excavated during flood bank construction. The resultant pond is moderately deep and steep-sided with aquatic vegetation featuring water starworts (<i>Callitriche spp.</i>) and amphibious bistort (<i>Persicaria amphibia</i>). The margins of the burrow pit support a mixture of fern and neutral grassland flora, with scattered scrub.	1.04km north-west of the Site
Eastrington Ponds LWS	Eastrington Ponds LWS contains a variety of habitats and land use features which, in total, provides considerable wildlife/natural history interest. As well as one large and several small open water zones, the latter variably colonised by swamp and tall herb-fen vegetation leading to willow-alder carr, the area also includes semi-mature broadleaved woodland running in a narrow strip along the disused railway. Dense scrub cover characterises several boundaries of the site; while one area of neutral quite species-rich grassland is found, along with areas of amenity grassland.	1.17km south-east of the Site
Barnhill Candidate LWS	Semi-improved grassland.	1.30km south-east of the Site
Howden Marsh LWS	The principal habitats present within the LWS are open water (ponds); extensive swamp communities, drier tall ruderal habitats and dense scrub/carr.	1.72km south-east of the Site
Aughton Common, Bubwith LWS	Good quality established semi-natural verge.	1.93km north of the Site
Hagg Lane Green SINC	Nutrient rich standing water. Fine- leaved water-dropwort (<i>Oenanthe</i> <i>aquatica</i>) and water violet are found here, which are noted to be very uncommon plants in North Yorkshire.	1.93 km north-west of the Site

3.1.8 Priority habitats that are shown as present within the 2km Study Area (Ref. 31) are presented in **Table 4** and are presented on **Figure 8-2**, **ES Volume 3** [**EN010143/APP/6.3**]. There are no areas of ancient woodland present within the 2km Study Area.

Table 4. Priority habitats within the 2km Study Area

Priority habitat	Reason for conservation interest	Location
Coastal and floodplain grazing marsh	Priority Habitat Inventory (NERC Act S41)	This habitat is mapped within the Grid Connection Corridor, slightly encroaching into Solar PV Area 2b. It is also mapped adjacent to Solar PV Areas 2d, 2e, 2f and 2g.
Deciduous woodland	Priority Habitat Inventory (NERC Act S41)	Within the Grid Connection Corridor, east of National Grid Drax Substation and within the Solar PV Area 3b. Also adjacent to the west of Solar PV Area 1a, south-east of Solar PV Area 1e, west of Area 2a, south of Solar PV Area 2b, east and west of Solar PV Area 2e, north of Area 2g and west of Solar PV Area 3a. It is also adjacent to a Site Access, to the west of Rowlandhall Lane.
Traditional orchard	Priority Habitat Inventory (NERC Act S41)	Immediately adjacent to the west of Grid Connection Corridor, in Brackenholme and approximately 15m south-east of Solar PV Area 3b.
Lowland fens	Priority Habitat Inventory (NERC Act S41)	Within the Grid Connection Corridor, east of Brackenholm adjacent to the River Derwent.
Mudflats	Priority Habitat Inventory (NERC Act S41)	Within the Grid Connection Corridor, along both banks of the River Ouse.
Good quality semi- improved grassland	Priority Habitat Inventory (NERC Act S41)	215m north-east of Solar PV Area 3c.
Reedbeds	Priority Habitat Inventory (NERC Act S41)	1.3km south-east of the Site.
Lowland meadows	Priority Habitat Inventory (NERC Act S41)	1.01km south-east of the Site.

Priority habitat	Reason for conservation interest	Location
'No main habitat but additional habitats present'	Priority Habitat Inventory (NERC Act S41)	Between Solar PV Areas 2f and 2g, inside the Interconnecting Cable Corridor, along Featherbed Lane.

3.2 Habitats

- 3.2.1 The Phase 1 Survey Area encompassed all safely accessible parts of the Site and adjacent habitats to a maximum distance of 50m, where access permission had been granted in advance of survey, or the land was visible from within the Site or from public rights of way (PRoW), or other publicly accessible areas.
- 3.2.2 Typical and notable plant species were recorded for different habitat types and reflect the conditions at the time of survey. This was not intended to be a detailed inventory of the plant species present in the Phase 1 Survey Area, as this is not required for the purposes of Phase 1 habitat survey.
- 3.2.3 The Phase 1 habitat survey was undertaken over numerous site visits between April and September 2022 and between April and September 2023 by suitably experienced AECOM ecologists who recorded and mapped all habitat types present within the Phase 1 Survey Area, along with any associated relevant ecological receptors observed. The Phase 1 habitat map is presented in **Figure 8-3-1** (**Annex A**). Where relevant ecological receptors were present, target notes were recorded and the positions of these, where recorded, are also presented in **Figure 8-3-1**. The Solar PV Area references are provided on **Figure 8-2** and **Figure 8-3**.
- 3.2.4 Target notes and associated reference photographs are provided in **Annex B.** Summary descriptions of the habitats within the Phase 1 Survey Area are provided below. The broad habitat types present within the Site are presented in **Table 5**.

0 = 0

Table 5. Broad habitat types within the Order limits

парітат туре	Solar PV Site/ nterconnecting Cable Corridor	Grid Connection Corridor	(ha)/ Length (km)
A1.1.1 – Broadleaved woodland – semi-natural	✓	✓	3.15ha
A1.1.2 – Broadleaved woodland – plantation	✓	✓	22.87ha
A1.3.1 – Mixed woodland – semi-natural	✓		0.27ha
A1.3.2 – Mixed woodland – plantation		✓	0.03ha
A2.1 – Scrub – dense/continuous	✓	✓	3.92ha

Hahitat tyne

Total Area

Habitat type	Solar PV Site/ Interconnecting Cable Corridor	Grid Connection Corridor	Total Area (ha)/ Length (km)
A2.2 – Scrub - scattered	✓		0.45km
A3.1 – Broadleaved parkland/scattered trees	✓	✓	5.12km
A3.2- Coniferous parkland/scattered trees		✓	0.05km
A3.3- Mixed parkland/scattered trees		✓	0.02ha
B2.2 – Neutral grassland – semi-improved	✓	✓	1.06ha
B4 – Improved grassland	✓	✓	47.78ha
B6 – Poor semi-improved grassland	✓	✓	80.37ha
C3.1 – Other tall herb and fern – ruderal	✓	✓	0.16ha
F2.1 – Marginal and inundation – marginal vegetation	✓		0.20ha
G1 – Standing water	✓	✓	1.03ha
G2 – Running water	✓	✓	1.24ha (area) and 13.28km (linear)
G2.1 – Running water – eutrophic	✓		0.39km
J1.1 – Cultivated/disturbed land – arable	✓	✓	1100.83ha

✓

✓

✓

J1.2 - Cultivated/disturbed land - amenity

J2.1.1 – Intact hedge – native species rich

J2.3.1 – Hedge with trees – native species-rich

J2.1.2 – Intact hedge – species poor

J2.2.2 – Defunct hedge – species-poor

J2.3.2 – Hedge with trees – species-poor

grassland

J3.6 – Buildings

J4 - Bare ground

J2.4 - Fence

Hardstanding

J2.6 – Dry ditch

0.03ha

0.45km

18.97km

2.44km

9.05km

43.2km

0.10ha

1.08ha

1.32km

24.39km

12.27ha

J1.1 - Cultivated/disturbed land - arable

Solar PV Site and Interconnecting Cable Corridor

3.2.5 Agricultural land comprising mainly of intensively farmed arable fields is the most predominant habitat type within the Solar PV Site and Interconnecting Cable Corridors. This includes cereal crops such as wheat and also grassland used for silage.

Grid Connection Corridor

3.2.6 As above, the arable fields are the most prevalent habitat type by area within the Grid Connection Corridor typically with intact species poor hedgerows separating them from adjacent land.

B2.2 - Neutral grassland - semi-improved

Solar PV Site and Interconnecting Cable Corridors

- 3.2.7 Small areas of higher quality semi-improved neutral grassland are present within the Solar PV Site east of Gribthorpe along Tottering Lane and east of Spaldington in the field margin of an arable field. In general, these habitats have higher floral diversity compared to what is present within most improved/ poor semi-improved grassland areas. However, due to extensive mowing there are no favourably managed verges, or the community is of more biodiversity value is located to the rear of the verge where it looks to receive less regular management. The grassland of particular note in the Solar PV site is present within Tottering Lane, Gribthorpe LWS.
- 3.2.8 The general species composition within Tottering Lane LWS includes tall fescue (*Schedonorus arundinaceus*), common couch (*Elytrigia repens*), curled dock (*Rumex crispus*), false oat-grass (*Arrhenatherum elatius*), Yorkshire fog (*Holcus lanatus*), cow parsley (*Anthriscus sylvestris*), meadow foxtail (*Alopecurus pratensis*), rough meadow-grass (*Poa trivialis*), wood dock (*Rumex sanguineus*), cut-leaved crane's-bill (*Geranium dissectum*), soft brome (*Bromus hordeaceus*), hogweed (*Heracleum sphondylium*), meadow vetchling (*Lathyrus pratensis*), creeping thistle (*Cirsium arvense*), upright hedge parsley (*Torilis japonica*), common nettle (*Urtica dioica*) and crosswort (*Cruciata laevipes*).
- 3.2.9 Areas of higher diversity also include species such as common knapweed (Centaurea nigra), sorrel (Rumex acetosa), compact rush (Juncus conglomeratus), lesser stitchwort (Stellaria graminea), tufted hair grass (Deschampsia cespitosa), red fescue (Festuca rubra), agrimony (Agrimonia eupatoria), meadow buttercup (Ranunculus acris), white clover (Trifolium repens), false brome (Brachypodium sylvaticum), wild angelica (Angelica sylvestris), tufted vetch (Vicia cracca), bush vetch (Vicia sepium) and false fox-sedge (Carex otrubae).

Grid Connection Corridor

3.2.10 Small areas of higher quality semi-improved neutral grassland are also present within the Grid Connection Corridor west of Brind along Brind Lane and Wood Lane. These road verges are broadly consistent throughout, although there are localised areas of relatively low herb diversity. Additionally, as above this verge has been extensively mown for visibility

- splay and therefore communities of greater biodiversity value are to the rear of the verge. The grassland of particular note is present within Wressle Verge LWS.
- 3.2.11 The north west verge along Brind Lane comprises of species including wild angelica, meadow foxtail, rough meadow-grass, meadow buttercup, white clover, black medic (*Medicago lupulina*), ragwort (*Jacobaea vulgaris*), cow parsley, common knapweed, meadowsweet (*Filipendula ulmaria*), Yorkshire fog, creeping cinquefoil (*Potentilla reptans*), hogweed, soft brome, wood dock, cut-leaved crane's-bill, red clover (*Trifolium pratense*), common mouse-ear (*Cerastium fontanum*), meadow fescue (*Schedonorus pratensis*), meadow vetch, false oat-grass, creeping thistle, lesser stitchwort, tufted vetch, sorrel, crosswort, goat's-bead (*Tragopogon pratensis*), hoary ragwort (*Jacobaea erucifolius*), red fescue, smooth tare (*Vicia tetrasperma*), beaked hawk's-beard (*Crepis vesicaria*), cowslip (*Primula veris*), false fox-sedge, compact rush, bush vetch, agrimony, oxeye daisy (*Leucanthemum vulgare*) and yellow oat-grass (*Trisetum flavescens*).
- 3.2.12 The species composition within the south-east verge along Wood Lane include the above-mentioned species as well as cock's-foot (*Dactylis glomerata*), self-heal (*Prunella vulgaris*), perennial ryegrass (*Lolium perenne*), germander speedwell (*Veronica chamaedrys*), greater stitchwort (*Stellaria holostea*), glaucous sedge (*Carex flacca*), cuckoo flower (*Cardamine pratensis*), quacking grass (*Briza media*) and bird's-foot trefoil (*Lotus corniculatus*).

B4 – Improved grassland and B6 – poor semi-improved grassland

Solar PV Site and Interconnecting Corridors

- 3.2.13 Within the Solar PV Site there are areas of improved grassland present in paddocks occasionally grazed by livestock as well as field margins within arable fields. In general, these habitats have a lower floral diversity due to grazing cattle, intense management and have been affected by drift of agricultural fertilisers and insecticides. The improved grassland within the Solar PV Site is dominated by species such as timothy (*Phleum pratense*), perennial ryegrass, nettle, creeping thistle, creeping buttercup (*Ranunculus repens*), common dandelion (*Taraxacum officinale*), sorrel, cow parsley, curled dock, red clover, white clover, meadow vetchling, cleavers (*Galium aparine*), broad-leaved dock (*Rumex obtusifolius*), cock's-foot, bird's-foot trefoil, Yorkshire fog, meadow buttercup, broadleaf plantain (*Plantago major*) and crested dog's-tail (*Cynosurus cristatus*).
- 3.2.14 Poor semi-improved grassland is present throughout the Solar PV Site along road verges, field margins and less frequently grazed paddocks. The grassland typically comprises of species such as Yorkshire fog, false oat grass, cock's-foot, rough meadow-grass, creeping thistle, wood dock, creeping bent grass, soft brome, bristly oxtongue, meadow foxtail, meadow vetchling, creeping buttercup, meadow buttercup, knapweed, common bird's foot trefoil, timothy, crested dog's-tail, oxeye daisy, curled dock, cut-leaved crane's-bill, white clover, broad-leaved dock, perennial ryegrass, red clover, lesser trefoil (*Trifolium dubium*), cow parsley, common nettle, common

dandelion, spear thistle (*Cirsium vulgare*), broadleaf plantain, ribwort plantain (*Plantago lanceolata*), scented mayweed (*Matricaria chamomilla*) and hogweed.

Grid Connection Corridor

- 3.2.15 Improved grassland is present in small sections of the Grid Connection Corridor mainly around south of Willitoft and south of Wressle. Improved grassland in this section is found in paddocks and field margins of arable field, dominated by species such as perennial rye grass, red fescue, nettle, broad-leaved dock, curled dock, cocksfoot, hogweed, common dandelion, creeping thistle, cow parsley, cleavers, broadleaf plantain, crosswort (*Cruciata laevipes*), spear thistle, cut-leaved crane's-bill, ragwort, ribwort plantain, white dead nettle and red dead nettle (*Lamium purpureum*).
- 3.2.16 Areas of poor semi-improved grassland are present throughout the Grid Connection Corridor along road verges, river embankments and field margins. Typically, the poor semi-improved grassland is of uniform height short grasses and herbs comprising perennial rye grass, cow parsley, red clover, white clover, cuckoo flower, broad-leaved dock, curled dock, lesser celandine (*Ficaria verna*), creeping buttercup, meadow vetchling, hogweed, yarrow (*Achillea millefolium*), common nettle, common dandelion, bramble (*Rubus fruticosus* agg.), meadowsweet, timothy, rosebay willowherb (*Chamaenerion angustifolium*), white dead nettle, ragwort, cut-leaved crane's-bill, germander speedwell, shepherd's purse (*Capsella bursapastoris*), red dead nettle, cleavers, bluebell (*Hyacinthoides sp.*) and herb robert (*Geranium robertianum*).

C3.1 – Other tall herb and fern – ruderal

Solar PV Site and Interconnecting Corridors

- 3.2.17 Within the Solar PV Site tall ruderal habitat is not very common, there is a small section of tall ruderal south of Commonend Drain (also known as 'Featherbed Drain') within the 50m buffer of the Site. This area comprises species such as common fleabane (*Pulicaria dysenterica*), rosebay willow herb, ragwort, self-heal, creeping thistle, bramble, tufted hair grass, ribwort plantain, sorrel, bristly oxtongue, willow sapling, oak sapling, scattered willow scrub, creeping buttercup, common mouse-ear, common centaury (*Centaurium erythraea*) and spear thistle.
- 3.2.18 Additionally, tall ruderal habitat is present along sections of the River Foulness along the eastern edge of the Order limit in Solar PV Area 1e. This area comprises species such as hogweed, cow parsley, sorrel, bramble, rosebay willow herb, common nettle and common dandelion, with reed sweet grass (*Glyceria maxima*) present along the edge of the watercourse.

Grid Connection Corridor

3.2.19 Small areas of tall ruderal vegetation are present within the Grid Connection Corridor, typically in edge habitats of semi-improved grassland and along the river embankments. These are typically dominated by rank species such as cock's-foot, timothy, false oat-grass and rosebay willowherb, with frequent hogweed, creeping buttercup, cow parsley, broad-leaved dock, curled dock, common nettle and occasional creeping thistle, spear thistle, common reed

(*Phragmites australis*) and ribwort plantation. These areas of tall ruderal are associated with encroaching scrub species such as bramble, willow sp. (*Salix* sp.) and hawthorn (*Crataegus monogyna*).

A1 – Woodland (semi-natural/plantation)

3.2.20 There are small areas of woodland scattered infrequently throughout the Phase 1 Survey Area, typically isolated within the arable landscape. They are mainly semi-natural broadleaved woodland and broadleaved plantation woodland, with occasional semi-natural mixed woodlands and mixed and coniferous plantation woodland. The majority of woodland recorded during the Phase 1 habitat survey lies within the 50m buffer outside of the Order limits.

Solar PV Site and Interconnecting Corridors

- 3.2.21 Broadleaved plantation woodland is present in small sections within the Solar PV Site in Solar PV Areas 1a and 1e, with a large area of commercial willow plantation in Solar PV Area 3c used for biofuels to the north-east of Newsholme. Additionally, broadleaved plantation woodland is present within the 50m buffer north and west of Solar PV Area 1a, south-west of Solar PV Area 1e, east of Solar PV Area 2a, north-east of Solar PV Area 2d, and in small sections surrounding Solar PV Area 2g. Apart from the large commercial plantation, these small woodland parcels are often semi-mature to mature and vary in composition with species including ash (Fraxinus excelsior), English oak (Quercus robur), willow sp. (Salix sp.), silver birch (Betula pendula), alder (Alnus glutinosa), wild cherry (Prunus avium) and common beech (Fagus sylvatica) with the field layer typically comprising bramble, bare ground, tall ruderal and nutrient rich species including curled dock, common dandelion, creeping thistle, perennial ryegrass, common nettle, bramble, cleavers and cow parsley. Some plantations also contain coniferous species such as Scot's pine (Pinus sylvestris) and Douglas fir (Pseudotsuga menziesii).
- 3.2.22 Semi-natural broadleaved woodland is mainly present within the 50m buffer of the Solar PV Site with one small area located in Solar PV Area 1e. These woodlands range from semi-mature to mature in character and generally consist of oak, willow sp., ash, sycamore (*Acer pseudoplatanus*), wild cherry and poplar sp. (*Populus* sp.), with a shrub layer of hawthorn, blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*) and young sycamore and ash. The field layer typically comprises bramble, ivy, nettle, and bare ground with some areas containing lesser celandine, cleavers, cowslip, bluebell and cow parsley.
- 3.2.23 Semi natural mixed woodland is only present within the Solar PV Site in Solar PV Area 3b, with several areas within the 50m buffer, including north and east of Solar PV Area 1b, west of 1a and extending outside of Solar PV Area 3b. typically, these woodlands consist of species including oak, ash, Scot's pine, willow sp., beech, Douglas fir, *Malus* sp. and silver birch. With a shrub layer of hawthorn, blackthorn, elder, and hazel (*Corylus avellana*) and field layer of bramble, cleavers, hogweed, and perennial ryegrass. The woodland present within the Solar PV Area 3b is mapped on MAGIC (Ref. 31) as Priority Habitat Inventory Deciduous Woodland.

Grid Connection Corridor

- 3.2.24 There is only one section of semi-natural broadleaved woodland that falls within the Grid Connection Corridor which is located south of Carr Lane east of National Grid Drax Substation. This woodland is mapped on MAGIC as Priority Habitat Inventory Deciduous Woodland. Within the 50m buffer, there are two small areas of semi-natural broadleaved woodland located north of the A63 at Brackenholme. These woodlands are semi-mature to mature with similar composition of species including sycamore, willow sp., English oak, and ash with a shrub layer of hawthorn, willow sp., sycamore, and ash a field layer of mainly bramble, ivy and nettle.
- 3.2.25 Small sections of broadleaved plantation woodland are present in the Grid Connection Corridor south of Pear Tree Avenue and Wren Hall Lane east of National Grid Drax Substation. Within the 50m buffer there are several small patches of broadleaved plantation woodland south of the River Ouse, north of the River Derwent, and north of the A65 at Brackenholme. The broadleaved plantation woodlands are young to semi mature in character with species including silver birch, common lime (*Tilia x europaea*), willow sp., sycamore, ash and English oak with a shrub layer of hawthorn, sycamore, wych elm (*Ulmus glabra*), alder and ash. The field layer are typically dominated by bramble, ivy, nettle, cow parsley with large areas of bare ground.
- 3.2.26 A small area of young mixed plantation woodland is present inside the Grid Connection Corridor to the east of Rowlandhall lane, south of the railway. Mixed plantation woodland is also present within the 50m buffer of the Grid Connection Corridor north-east of National Grid Drax Substation along New Road. These woodlands are generally dominated by ash with frequent Scot's pine, Corsican pine (*Pinus nigra*), western hemlock pine (*Tsuga heterophylla*), wild cherry, field maple (*Acer campestre*) and sycamore with a shrub layer of hornbeam (*Carpinus betulus*), wild cherry and elder. Field layer species include hogweed, perennial ryegrass, bramble, oak, sycamore sapling and hawthorn.

A2 – Scrub – dense/continuous and A2.2 Scrub - scattered Solar PV Site and Interconnecting Corridors

3.2.27 Small amounts of dense and continuous scrub habitat are present within the Solar PV Site, including in arable fields in Solar PV Area 1a and Ecology Mitigation Area 1g and within the 50m buffer along field boundaries east of Solar PV Area 2e. Species included bramble, hawthorn and blackthorn. Scattered scrub was recorded along a fence line in Solar PV Area 2a, including dog rose (*Rosa canina*), hawthorn, willow (*Salix* sp), blackthorn, elder and young oak (*Quercus* sp.)

Grid Connection Corridor

3.2.28 Dense and continuous scrub habitat is present in small amounts along the embankments of the River Ouse and bordering the railway south of Solar PV Area 3b, inside the Grid Connection Corridor. Generally, the scrub consists of willow sp., hawthorn, elder, dog rose and bramble with the ground layer typically consisting of poor semi-improved grassland where present, with

species including common nettle, meadowsweet, common dandelion, clover, creeping buttercup, lesser celandine, meadow vetchling and yarrow.

G1 – Standing water

Solar PV Site and Interconnecting Corridors

3.2.29 Standing water habitat is present within the Solar PV Site in Solar PV Areas 1a, 1e, 3b and 3c and Ecology Mitigation Area 1g. There are several areas within the 50 m buffer where standing water habitat is present including east of Solar PV Area 1a, south of Solar PV Area 1d, south-east of Solar PV Area 1e, north-west of Solar PV Area Solar PV Area 1f, east of Solar PV Area 2b, south-east of Solar PV Area 2e, north of Solar PV Area 2f, south-west of Solar PV Area 3a and east of Solar PV Area 3b. These water bodies vary in size, water quality, macrophyte cover, and in the diversity of aquatic marginal and emergent vegetation. In some rare cases, swamp habitat in the 50m buffer north of Solar PV Area 2f dominated by common reed (*Phragmites australis*) and bulrush (*Typha* sp.) with bittersweet around the margins, and marginal vegetation habitat in areas Solar PV Areas 1a and 1e including species such as reed sweet-grass, common reed, and bullrush. Drainage ditches within the arable landscape are frequent throughout, but those that were surveyed were typically of poor quality or dry at the time of the survey.

Grid Connection Corridor

3.2.30 Standing water habitat is present in several areas of the Grid Connection Corridor, in particular to the east and northeast of Drax power station and west and east of Rowlandhall Lane south of the railway. Additionally, there is standing water habitat scattered throughout the 50m buffer of the Site. Again, these waterbodies vary in size and are, in general, the result of poor drainage. They range in water quality and diversity of aquatic marginal and emergent vegetation and macrophyte cover. A small number of drainage ditches holding standing water are present in the arable landscape.

G2 - Running water

3.2.31 Running water is present in several rivers, streams and drains throughout the Site, most notably the River Ouse, the River Derwent within the Site, and the River Foulness within the 50m buffer. There are also notable smaller watercourses within the Site such as Commonend Drain (also known as 'Featherbed Drain'), Hall Dyke and Great Committee Drain as well as notable watercourses within the 50m buffer including Seller Dike, Sewer Dike, Near Drain, Fleet Dike, Londesborough Drain, Bubwith and Harlthorpe Drain.

Solar PV Site and Interconnecting Corridors

3.2.32 The River Foulness is located within the 50m buffer of the Order limits and is roughly four metres wide, with high turbidity and banks 2m high which slope gradually down to the water level. The banks are occasionally bare but characteristically have short grasses and a low diversity of herbs, with emergent common reed in places at the margins. There are low amounts of macrophytes and marginal vegetation, but where present, it was patchy and of low diversity.

Grid Connection Corridor

- 3.2.33 The River Ouse is located within the Grid Connection Corridor and is approximately 75m wide at the crossing point adjacent to where the River Derwent joins. The River Ouse has a turbid, rippled channel, bank toe and a set-back embankment on either side for flood defence. The bank tops are poor semi-improved short grasses and herbs as well as some areas of tall ruderal along the marginal areas. The channel margins and banks on both sides of the river have scattered willow sp. scrub.
- 3.2.34 The River Derwent also lies within the Grid Connection Corridor. The watercourse is approximately 25m wide at the crossing point adjacent to Station Road, with similar characteristics to the River Ouse including a setback embankment, turbid water, bank toe and rippled channel. The bank sides are poor semi-improved grassland with a low diversity of herbs and small areas of tall ruderal in the margins.

J2 – Hedgerows

Solar PV Site and Interconnecting Corridors

- 3.2.35 Two intact species-rich hedgerows were recorded within the Solar PV Site, located on the north boundary of Solar PV Area 1c and west boundary of Solar PV Area 2g. Both hedgerows are dominated by hawthorn and blackthorn, the hedgerow in Solar PV Area 1c also includes occasional young ash, crab apple (*Malus sylvestris*) and young English oak and additional species in hedgerow in Solar PV Area 2c include field maple, elder and dog rose.
- 3.2.36 Intact species-poor hedgerows occur in Solar PV Areas 1a, 1b 1e, 2b, 2c, 2d, 2e, 2f, 3a, 3b and 3c, and in Ecology Mitigation Areas 1g and 1h. These are mainly dominated by hawthorn and blackthorn, with occasional crab apple, dog-rose, oak, elder, sycamore, honeysuckle (*Lonicera periclymenum*), willow sp., ash, field maple, hazel, elm, common lime, and holly (*Ilex aquifolium*).
- 3.2.37 Defunct species-poor hedgerows are present within Solar PV Areas 1a, 1b, 1e, 2b, 2c, 2d, 3a and within the Interconnecting Cable Corridor. Hawthorn and blackthorn are typically the dominant species throughout, with additional species including dog rose, sycamore, oak, field maple, and ash.
- 3.2.38 Species-rich hedgerow with trees occurs within Solar PV Areas 1a, 1b, 1e, 2a, 2b, 2f and 3b. Typically, these hedgerows are dominated by hawthorn and include species such as blackthorn, willow sp., dog rose, crab apple, elm, hazel, elder with stands of English oak, ash, field maple, goat willow (Salix caprea), grey willow (Salix cinerea), wild cherry and crack willow (Salix fragilis).
- 3.2.39 Species-poor hedgerows with trees are scattered throughout the Solar PV site and Interconnecting Corridors at Solar PV Areas 1a, 1b, 1c, 1d, 1e, 1f, 2a, 2b, 2d, 2e, 2f, 2g, 3a, 3b and 3c, and also Ecology Mitigation Areas 1g and 1h. These are typically dominated by hawthorn or blackthorn and occasionally include species such as willow sp., dog rose, crab apple, wild privet (*Ligustrum vulgare*), poplar sp., elm, hazel, holly, elder with stands of

English oak, ash, field maple, wych elm, sycamore, goat willow, grey willow, wild cherry, and crack willow.

Grid Connection Corridor

- 3.2.40 Species-poor hedgerows are mainly in the north of the Grid Connection Corridor and are typically dominated by hawthorn with occasional species of willow, elder, field maple, wayfaring tree (*Viburnum lantana*) and blackthorn.
- 3.2.41 There is one section of defunct species-poor hedgerow located in the central Grid Connection Corridor adjacent to River Derwent comprising only hawthorn.
- 3.2.42 Species-poor hedgerow with trees are mainly north and south of Grid Connection Corridor and are generally dominated by hawthorn or blackthorn and occasionally include species such as elder, English oak, ash, willow sp., dog rose, field maple, honeysuckle, and wild privet.

Other habitat types

- 3.2.43 The remaining habitat types include hardstanding (tracks, paths, farmyards etc.), bare ground (typically access tracks and yard), individual and lines of mature and semi-mature broadleaved and coniferous trees, and buildings (farmsteads, industrial buildings and residences).
- 3.2.44 The arboricultural survey identified a total of 204 features as likely veteran with seven of these also meeting the criteria for ancient. Detailed results and locations of these trees are presented in Appendix 10-5: Arboricultural Impact Assessment and Tree Protection Report, ES Volume 2 [EN010143/APP/6.2].

3.3 Protected and notable species

3.3.1 **Table 6** identifies species that are of potential relevance to the Site based on information gathered through a combination of desk study and observations made during the extended Phase 1 habitat survey.

Table 6. Protected and Notable species relevant to the Scheme

Species (or species group)	Source	Supporting comments
Bats	Desk Study	The desk study returned 33 bat records within the 2km Study Area (within the last 10 years, up to 2023). None of these are within the Site. These included 19 common pipistrelle (<i>Pipistrellus pipistrellus</i>) records, three noctule (<i>Nyctalus noctula</i>) records, two soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) records, three brown long-eared bat (<i>Plecotus auritus</i>) records, one natterer's bat (<i>Myotis nattereri</i>) five <i>Myotis sp.</i> records. The closest record is approximately 305m south-west the Order limits and relates to a common pipistrelle roost near Newsholme. A review of MAGIC (Ref. 31) indicates there were three previously approved NE bat mitigation licences within the 2km Study Area. The closest of these granted licenses (dated 2013-2016) is approximately 600m north-west of the Grid Connection Corridor and was for the following species: brown long-eared (<i>Plecotus auritus</i>), Daubenton's (<i>Myotis daubentonii</i>), common pipistrelle and Natterer's (<i>Myotis nattereri</i>).
	Field Survey	The Phase 1 habitat survey has identified numerous trees within the Order limits as having bat roost suitability. These trees mostly form tree lines or hedgerows along field boundaries (shown on Figure 8-7-18 in Annex A of Appendix 8-7: Bat Survey Report, ES Volume 2 [EN010143/APP/6.2]). Trees within the woodland areas (excluding areas of young plantation) are also likely to offer suitability for roosting bats. Additionally, there are pockets of suitable habitat for foraging and commuting bats within and adjacent to the Site; this includes intact hedgerows along field margins, along woodland edges, semi-improved grassland, areas of standing water, ditches, and woodlands. Appropriate buffers have been applied to woodland and trees in order to ensure these are retained where possible. Those unavoidably affected have been assessed for their suitability for use by bats and the design adjusted to retain trees identified as having moderate or high potential, with the exception at this stage of one horse chestnut (Aesculus hippocastanum) tree within the Grid Connection Corridor that has moderate bat roost suitability (as detailed in Appendix 8-7: Bat Survey Report, ES Volume 2 [EN010143/APP/6.2]). This will be addressed during detailed design to adjust the taper of the access bellmouth in order to retain the tree.

Species (or species group)	Source	Supporting comments
		The buildings located within Solar PV Area 1e (at Johnson's Farm) are the only known buildings that will be impacted by the Scheme. These buildings were subject to a preliminary bat roost appraisal in August 2022 and were assessed as having negligible suitability for roosting bats.
Badger (Meles meles)	Desk Study	The desk study returned 22 badger records within 2km of the Order limits dated within the last 10 years. None of these records fall within the Site. The closest record is approximately 1km south-west from the Order limits.
	Field Surveys	Active badger setts were identified within the Solar PV Site and 50m buffer as well as signs of badger including latrines, snuffle hole, hairs, and paths. Owing to the sensitivities of detailing information on the location of badger setts, this information will be provided confidentially to key stakeholders only. Broadleaved plantation, semi-natural woodland, and ditch embankments within the survey area, as well as embankments along the railway lines have potential as badger sett-building and foraging habitats. Additionally, arable land, permanent pastures and semi-improved grasslands within the Survey Area also provide potential foraging habitat for badger. Foraging activity within the Site by badger is considered likely.
Otter	Desk Study	The desk study did not return any records of otter within the 2km Study Area.
	Field Surveys	No otter field signs were present during the initial extended Phase 1 habitat surveys, however suitable habitat with connectivity to other areas of good habitat for otter was noted in several watercourses, including the River Ouse and River Derwent in particular, along with other smaller drains and ditches (Target Notes [TN] 1, 2, 3, 4, 5, 6, 7, 8, 9, 11 and 12).
Water vole	Desk Study	The desk study returned six water vole records within the 2 km Study Area, dated within the last 10 years. None of these records fall within the Order limits; the closest record is associated with National Grid Drax Substation approximately 752m from the Site. Water vole has been recorded in Howden Marsh LNR and Eastrington Ponds LNR, both LNR's lie within approximately 1km of the Site.
	Field Surveys	The River Derwent amongst other smaller drains and ditches, were all areas identified during the Phase 1 surveys as potentially suitable for water vole (TNs 1, 2, 3, 4, 6, 7, 9, 10, 11 and 12).

Species (or species group)	Source	Supporting comments
Great Crested Newt (GCN) (<i>Triturus cristatus</i>)	Desk Study	The desk study returned 17 records of GCN with the most recent record dated from 2019 with one record located within the Site in Newsholme. A review of MAGIC (Ref. 31) indicates there were four previously approved Natural England GCN licences within the Study Area. There are also records of GCN class licence returns within the Study Area, the closest being approximately 70m south of Solar PV Area 3c. The GCN eDNA Habitat Suitability Index Pond Surveys for District Level Licensing 2017-2019 data displayed on MAGIC also shows records for GCN presence (dated 2018) within 250m (or just outside of 250m) of the Site at six locations. Although, one of these locations is on the far side of the River Foulness, which would act as a barrier to GCN movement, if present.
	Field Surveys	During the Phase 1 habitat surveys there were ponds and ditches recorded within and close to the Site that are suitable for supporting GCN. The Site also offers suitable terrestrial habitats for GCN in the form of hedgerows, scrub, semi-improved grassland, and woodland. There are also records of brash/log piles present within the Solar PV Site in area 1a that have potential to be used by GCN (and other amphibians) as refugia (TNs 13, 16 and 17). On receipt of consent, the Scheme will apply for a GCN District Level Licence The Scheme currently holds a provisional Impact Assessment and Conservation Payment Certificate (IACPC) from Natural England, which will be submitted as part of the DCO application as Appendix 8-10: Great Crested Newt District Level Licensing Impact Assessment and Conservation Payment Certificate, ES Volume 2 [EN010143/APP/6.2]. The Applicant is in the process of obtaining the full IACPC and will update the above appendix when it is in place. Proceeding with the DLL route negates the requirement to undertake full GCN presence/ likely absence and population size surveys on all relevant waterbodies within a suitable Zol. Natural England undertake an impact assessment, the outcome of which is documented in the IACPC. The IACPC provides detail including information on the Scheme's impact on GCN and the appropriate compensation required. As such, significant effects on GCN populations as a result of the Scheme will be avoided.

Species (or species group)	Source	Supporting comments
Reptiles	Desk Study	The desk study returned 10 grass snake (<i>Natrix helvetica</i>) records within the 2km Study Area, dated within the last 10 years. None of these records fall within the Site; the closest record is associated with Breighton approximately 550m west of the Site.
	Field Surveys	No surveys were undertaken for reptiles within the Site. However, the Site does offer some areas of suitable habitat for reptiles, which can be found within semi-improved grassland along field margins, hedgerow bases, ditch banks and woodland edges. In the Solar PV Site there notes of potential reptile refugia present in 1a (TNs 13, 16 and 17).
		The majority of the Survey Area comprised arable land and permanent grazed pasture that does not provide the mosaic of grassland, scrub and bare ground habitats to provide refuges, hibernation sites and terrestrial foraging habitat for reptile species.
		During the Phase 1 surveys, a local resident reported seeing grass snake in the field north of the railways west of Wood Lane.
		Additionally, during the water vole surveys an individual grass snake recorded just outside of the 50m buffer along the Grid Connection Corridor was found basking on top of the bankside of a ditch to the west of the River Derwent (TN 18).
Birds	Desk Study	The desk study returned 150 records of birds within the 2km Study Area, dated within the last 10 years. Of these records 76 fall within the Site associated with the Spaldington area and 12 of these records are of either Annex 1 or Schedule 1 birds.
		The records include the following Annex I species; peregrine (<i>Falco peregrinus</i>), golden plover (<i>Pluvialis apricaria</i>), kingfisher (<i>Alcedo atthis</i>), little egret (<i>Egretta garzetta</i>) and red kite (<i>Milvus milvus</i>). The records include the following Schedule 1 species; barn owl (<i>Tyto alba</i>), brambling (<i>Fringilla montifringilla</i>), fieldfare (<i>Turdus pilaris</i>), green sandpiper (<i>Tringa ochropus</i>), greylag goose (<i>Anser anser</i>), marsh harrier (<i>Circus aeruginosus</i>) and redwing (<i>Turdus iliacus</i>).
	Wintering	The majority of habitats within the Survey Area comprised arable and pasture fields, interspersed with hedgerows and a small number of woodlands, ponds and larger waterbodies and watercourses such as the River Derwent and River Ouse. These areas provide some habitats for resident and migratory

Species (or species group)	Source	Supporting comments
		bird species in the winter months. The Solar PV Site is dominated by arable fields that are potentially suitable for wintering bird species to forage on.
	Breeding	There is an abundance of suitable habitat for nesting birds within the Survey Area and in habitats within the Solar PV Site and Grid Connection Corridor. There are also areas of woodland within the Survey Area that provide good quality habitat for breeding birds. During the Phase 1 Habitat surveys, incidental records of nesting birds were observed as follows: Lapwing (TNs 19 and 20); Yellowhammer (Emberiza citrinella [TN 21]); Little owl (Athene noctua); Stock dove (Columba oenas [TN 22]); Hobby (Falco Subbuteo); Barn owl; Curlew; Red kite (Milvus milvus); and Wood pigeon (Columba palumbus) nest (TN 24).
Polecat	Desk Study	The desk study returned one polecat record dated from 2014 approximately 211m from the Site. The source of this record is cited as The Vincent Wildlife Trust Surveys. A document issued by The Vincent Wildlife Trust in 2016 (Ref. 37) states that "records in Yorkshire were concentrated in the eastern Yorkshire Dales, between Ripon and Harrogate, on the boundaries of vice counties Mid-west Yorkshire and North-west Yorkshire. The verifiable records were a combination of true polecats and polecat-ferrets" and "A small number of records were received from North-east Yorkshire, and these were all unverifiable." This therefore indicates that the 2014 record received from the record centre may not be a verified true polecat during the Phase 1 Habitat survey. However, The Site does
	Field Surveys	There were no observations of polecat during the Phase 1 Habitat survey. However, The Site does offer suitable habitat for polecat, which can be found in farmland, with hedgerows and woodland

Species (or species group)	Source	Supporting comments
		areas present. However, it is considered unlikely that polecat is present within the Site as this species is not commonly recorded in this area of the UK, but presence cannot be ruled out.
Harvest mouse	Desk Study	The desk study did not return any records for this species dated within the last 10 years. However, two historic records (most recent dated 2007) were returned within the 2km Study Area. This species has also been associated with the meadows of Eastrington Ponds LNR, which is located approximately 1km from the Site.
	Field Surveys	There were no observations of harvest mouse during the Phase 1 Habitat survey. However, the Site does offer suitable habitat for this species, which can be found in tall grassland, farmland and hedgerows.
Terrestrial Invertebrates	Desk Study	The desk study returned two records of terrestrial invertebrates within the 2km Study Area, dated within the last 10 years. None of these records fall within the Site; the closest record is of <i>Isochnus foliorum</i> beetle associated with Bubwith, approximately 575m west of the Site. Small heath was also recorded 1.2km west of the Grid Connection Corridor, associated with National Grid Drax Substation. One of the last remaining populations of the nationally scarce tansy beetle (<i>Chrysolina graminis</i>) (also a UK BAP species [Ref. 33] and protected under the WCA, 1981 [Ref. 1]) is known to be present along the River Ouse. The beetle is a priority species under the Selby BAP (Ref. 28). The River will be crossed using HDD technique, therefore retaining associated riparian habitat that could be used by this beetle.
	Field Surveys	During the Phase 1 Habitat surveys there was an observation recorded of small heath (TN 25) within the Solar PV Area 2e. The most suitable habitats recorded during the Phase 1 habitat survey within the Solar PV Site include areas of poor semi-improved and neutral grassland (e.g. along field margins and woodland areas). The Solar PV Site, where permanent land take is required, is dominated by agricultural fields which are unlikely to support notable invertebrate assemblages. During the Phase 1 habitat surveys there were over 100 butterflies along the poor semi-improved grassland margins adjacent to the willow plantation woodland, mainly speckled wood species but red admiral and large white species were also observed (TN 26).

Species (or species group)	Source	Supporting comments
		Additionally, beehives were noted as present along an arable field margin in the Interconnecting Corridor northwest of Solar PV Site Area 2e (TN 27).
Aquatic Macroinvertebrates	Desk Study	The desk study did not return any records of protected aquatic macroinvertebrate species. Specifically, there were no records of white-clawed crayfish (<i>Austropotamobius pallipes</i>) within the last ten years. Furthermore, the INNS American signal crayfish (<i>Pacifastacus leniusculus</i>) was recorded in 2017, thus the former species can be considered likely absent.
		The desk study did return two notable species records of <i>Ceraclea senilis</i> caddis fly one record lies within the Site and is associated with the River Derwent.
		The River Derwent supports a diverse assemblage of macroinvertebrates including the UK BAP Priority species mayfly (<i>Heptagenia longicauda</i>), thus it is possible that watercourses within and hydrologically connected to the Site support notable species.
		Several aquatic beetles are included in the Selby BAP (Ref. 28), including <i>Agabus ulignosus</i> , <i>Acilius canaliculatus</i> , <i>Agabus labiatus</i> , <i>Helophorus strigifrons</i> and <i>Dryops auriculatus</i> . The rare depressed river mussel (<i>Pseudanodonta complanata</i>) is also listed in the BAP.
	Field Surveys	There were no observations of notable aquatic macroinvertebrate species during the Phase 1 Habitat survey. However, the Site does offer suitable habitat for aquatic macroinvertebrate species within the River Derwent, River Foulness and the River Ouse, along with smaller drains and ponds.
Aquatic macrophytes	Desk Study	The desk study return one records of notable aquatic macrophyte within the 2km Study Area, dated within the last 10 years. This record is of greater water-parsnip (<i>Sium latifolium</i>) associated with Bubwith approximately 1.4km from the Site.
		Several macrophyte species are included in the Selby BAP (Ref. 28). These include tasteless water pepper (<i>Persicaria mitis</i>), pillwort (<i>Pilularia globulifera</i>) and greater water-parsnip (<i>Sium latifolium</i>).
	Field Surveys	There were no observations of notable aquatic macrophyte species during the Phase 1 habitat survey. However, the Site does offer suitable habitat for aquatic macrophyte species within the River Derwent, River Foulness and the River Ouse, along with smaller drains and ponds.

Species (or species group)	Source	Supporting comments
Fish	Desk Study	The desk study returned a record of spined loach (<i>Cobitis taenia</i>) within 2km of the Study Area within the last 10 years. This record is associated with the River Foulness approximately 1.9km from the Site. The River Derwent is also likely supports sea lamprey (<i>Petromyzon marinus</i>), bullhead and river lamprey (<i>Lampetra fluviatilis</i>) (species included in the citation for the SAC). The Humber Estuary SAC citation also lists Atlantic salmon (<i>Salmo salar</i>) and river lamprey, with the estuary being an important migratory corridor, and the Ouse tributaries providing breeding grounds for the two species. Several notable fish species are also listed in the Selby BAP (Ref. 28): Atlantic salmon, bullhead, sea and river lamprey, allis shad (<i>Alosa alosa</i>) and grayling (<i>Thymallus thymallus</i>).
	Field Surveys	There were no observations of notable fish species during the Phase 1 habitat survey. However, The Site does offer suitable habitat for notable fish species within the River Derwent, River Foulness and the River Ouse, along with smaller drains that connect to these main watercourses.
Protected/notable flora (see also aquatic macrophytes above)	Desk Study	The desk study returned 24 records of the following protected/notable species within the 2km Study Area, rye brome (<i>Bromus secalinus</i>), chamomile (<i>Chamaemelum nobile</i>), chicory (<i>Cichorium intybus</i>), bluebell (<i>Hyacinthoides non-scripta</i>), field scabious (<i>Knautia arvensis</i>), lesser spearwort (<i>Ranunculus flammula</i>), ragged-robin (<i>Silene flos-cuculi</i>), greater water-parsnip (<i>Sium latifolium</i>), wild strawberry (<i>Fragaria vesca</i>) and marsh stitchwort (<i>Stellaria palustris</i>). The closest record is of field scabious associated with Spaldington, approximately 154 m from the Order limits.
	Field Surveys	Bluebell have been recorded on Site during the Phase 1 Habitat surveys (TNs 28 and 29). However, it is not certain whether these records are of native bluebell or of Spanish or hybrid bluebell. Additionally, orchids (<i>Dactylorhiza</i> sp) have been noted on Site (TNs 30 and 31).
Invasive non- native species	Desk Study	The data search returned records of several aquatic and terrestrial INNS within 2km of the Site and within the last 10 years. These included records of Himalayan balsam (<i>Impatiens glandulifera</i>), giant hogweed (<i>Heracleum mantegazzianum</i>), <i>Rhododendron ponticum</i> , and Nuttall's waterweed (<i>Elodea nuttallii</i>). The closest record is of Himalayan balsam associated with Brackenholme near Loftsome bridge and lies within the Order limits.

Species (or species group)	Source	Supporting comments
		There were also records of the non-native but non-invasive cherry laurel (<i>Prunus laurocerasus</i>).
	Field Surveys	Himalayan balsam has been recorded in small numbers within the Site (TNs 32, 33 and 34) during the Phase 1 habitat surveys and is mainly associated with ditches. The records for Himalayan balsam are located within the Interconnecting Corridor north-east of Solar PV Area 2c associated with ditch adjacent to road; within the Grid Connection Corridor east of New Road associated with the ditch adjacent to the broadleaved woodland east of National Grid Drax Substation and in a ditch west of the River Derwent. Himalayan balsam was also recorded c.130m north of the Grid Connection Corridor, along a dry ditch. Additionally, Crassula (<i>Crassula helmsii</i>) was recorded in the Grid Connection Corridor in the woodland near Drax (TN 35).
Other notable species	Desk Study	Amphibians – The desk study returned four common frog records, 13 common toad records, and five smooth newt records within the 2km Study Area (dated within the last 10 years). No records were returned within the Site. Hedgehog – The desk study did not return any recent hedgehog records. Brown hare – The desk study returned five brown hare records within the 2km Study Area (dated within the last 10 years). None of these records are within the Site. The closest record is approximately 239m from the Site.
	Field Surveys	Amphibians – During the Phase 1 Habitat surveys there were ponds and ditches recorded within and close to the Site that are suitable for supporting common amphibian species. The Site also offers suitable terrestrial habitats for amphibians in the form of hedgerows, scrub, semi-improved grassland and woodland.
		Hedgehog – An assessment of the mix of hedgerow, woodland, scrub and grassland habitat present within the Site and likelihood for hedgehog to occur, has concluded that hedgehog is likely to be present within the Site.
		Brown hare – This species was recorded in arable land within the Solar PV Site during the Phase 1 Habitat surveys (TNs 36 to 43) and when considering the habitat quality within the Site, an assumption has been made that this species is likely to be present across the Site.

4. Summary and Conclusion

- 4.1.1 The primary purpose of this report is to provide baseline information on ecological features (designated sites, habitats and protected and notable species) relevant to the Scheme and wider potential Zol to inform Chapter 8: Ecology, ES Volume 1 [EN010143/APP/6.1]. An assessment of potential impacts (considering embedded mitigation), any additional mitigation and residual effects has been undertaken and is included within Chapter 8: Ecology, ES Volume 1 [EN010143/APP/6.1].
- 4.1.2 The desk study identified ten international statutory sites for nature conservation within the relevant 10km Study Area (SACs, SPAs and Ramsar sites). No SACs designated for bats were identified within 30km of the Site and no proposed Ramsar sites, possible SACs, or potential SPAs are present within the 10km Study Area. Ten other statutory designated sites for nature conservation (national designations: SSSIs, NNRs, LNRs) are present within the 5km Study Area (presented in Table 2 and shown in Figure 8-1, ES Volume 3 [EN010143/APP/6.3]). Two of these statutory designated sites, the River Derwent SAC and SSSI, lie within the Grid Connection Corridor.
- 4.1.3 Given the proximity of the Scheme to internationally designated sites, a Habitats Regulations Assessment (HRA) has been undertaken to determine whether the Scheme will result in Likely Significant Effects (LSE) on the designated features, as presented in the HRA Report [EN010143/APP/7.12], prepared for the DCO Application.
- 4.1.4 There are 13 non-statutory sites designated for nature conservation identified within the 2km Study Area (presented in **Table 3** and shown on **Figure 8-2, ES Volume 3 [EN010143/APP/6.3]**).
- 4.1.5 Two of these local non-statutory designated sites lie within the Site. Tottering Lane, Gribthorpe LWS lies within the Interconnecting Cable Corridor between Solar PV Areas 1a, 1b and 1e. Wressle Verge LWS is located in both the Interconnecting Cable and Grid Connection Corridors and runs north to south between Solar PV Areas 3a and 3b (along Wood Lane) and east to west along the northern boundary of Area 3b (along Brind Lane).
- 4.1.6 MAGIC (Ref. 31) indicates the presence of Priority coastal and floodplain grazing marsh habitat immediately adjacent to the Solar PV Site, slightly encroaching into Solar PV Area 2b (Figure 8-2, ES Volume 3 [EN010143/APP/6.3]). The Phase 1 habitat survey recorded the area within Solar PV Area 2b as arable, bordered by a species-poor hedgerow with trees and a ditch (dry at the time of the Phase 1 habitat survey but later identified as a wet ditch during a Modular River Physical (MoRPh) Survey to inform the BNG Assessment Report [EN010143/APP/7.11]). An area of Priority coastal and floodplain grazing marsh habitat is also shown inside the Grid Connection Corridor, in a field adjacent to Solar PV Area 2b, along the verges of Wood Lane, and inside a field to the west of Wood Lane. The two fields were recorded to be improved grassland during the Phase 1 habitat survey, with poor semi-improved grassland recorded along Wood Lane. A small area of lowland fen Priority habitat is shown on MAGIC inside the Grid

- Connection Corridor, next to the River Derwent and Priority mudflat habitat is mapped along the banks of the River Ouse, inside the Grid Connection corridor (Figure 8-2, ES Volume 3 [EN010143/APP/6.3]).
- 4.1.7 A single area of Priority deciduous woodland habitat is mapped within the Solar PV Site, in Solar PV Area 3b, other areas of Priority deciduous woodland are present adjacent to the Solar PV Site, as shown on **Figure 8-2, ES Volume 3 [EN010143/APP/6.3]**.
- 4.1.8 Three areas of Priority deciduous woodland habitat are also present within the Grid Connection Corridor, close to National Grid Drax Substation (**Figure 8-2, ES Volume 3 [EN010143/APP/6.3]**). Priority orchard habitat is also mapped adjacent to the Grid Connection Corridor, to the north-west of the A63 and to the east of Solar PV Area 3b.
- 4.1.9 The extended Phase 1 habitat survey has identified that the land within the Order limits is predominantly arable farmland, with boundary features including watercourses/ ditches (wet and dry) and hedgerows. Areas of poorsemi-improved grassland are found within the Site, mostly associated with field margins and road verges. Areas of higher quality grassland are found within Tottering Lane, Gribthorpe LWS and Wressle Verge LWS (Figure 8-2, ES Volume 3 [EN010143/APP/6.3]), which were surveyed in more detail (i.e., species lists with abundance ratings) for notable species and species composition. The grassland verges appear to be mowed regularly (most likely for safety reasons) and areas of botanical interest and biodiversity value are located to the rear of the verges where it looks to receive no regular management.
- 4.1.10 Other habitat (see **Table 5**) within the Site includes improved grassland fields, mature trees, small areas of woodland and ponds (mostly dry or holding shallow water at the time of survey). Veteran and ancient trees are also present within the Site. The surrounding habitat is mainly arable with boundary hedgerows and watercourses/ditches, with areas of woodland and water bodies also present. There are individual and clusters of residential properties located adjacent to the Site. There are farm buildings present within Solar PV Area 1e at Johnson's Farm.
- 4.1.11 The desk study and extended Phase 1 habitat survey has identified the potential presence of protected and notable species within the Order limits and wider Zol. **Table 7** summarises the species scoped into the Ecological Impact Assessment (EcIA) for the Scheme provided as **Chapter 8: Ecology, ES Volume 1 [EN010143/APP/6.1]**.
- 4.1.12 Where the status of species or the potential value of the Site for species/species groups could not be fully determined without additional survey, a summary of the further surveys undertaken is provided in **Table 7**. Further surveys were undertaken in 2022 and 2023 to seek to collate sufficiently robust ecological baseline information to inform the EcIA for the Scheme. Details of the survey methodologies, results and any limitations are presented in the associated survey reports within **Appendices 8-2 to 8-9**, **ES Volume 2 [EN010143/APP/6.2]**.
- 4.1.13 The Scheme is applying for a GCN District Level Licence (DLL), negating the requirement to undertake full GCN presence/likely absence and population

size surveys on all relevant waterbodies within a suitable Zol of the Scheme. Natural England has undertaken an impact assessment, the outcome of which is documented in the provisional IACPC, which is being submitted as part of the DCO application as **Appendix 8-10**: **Great Crested Newt District Level Licensing Impact Assessment and Conservation Payment Certificate, ES Volume 2 [EN010143/APP/6.2]**. The Applicant is in the process of obtaining the full IACPC and will update the above appendix when it is in place. The IACPC provides information on the Scheme's impact on GCN and the appropriate compensation required. As such, significant effects on GCN populations as a result of the Scheme will be avoided. Therefore, GCN are not considered in the EcIA. The full DLL is applied for once a DCO is granted.

Table 7. Requirements for further species surveys, cross-referenced to the relevant survey report

Species/ species group	Further survey required	Relevant technical appendix
Breeding birds	Yes	Appendix 8-5: Survey Report for Breeding Birds, ES Volume 2 [EN010143/APP/6.2]
Non-breeding (wintering and passage) birds	Yes	Appendix 8-6: Survey Report for Non- Breeding Birds, ES Volume 2 [EN010143/APP/6.2]
Bats	Yes	Appendix 8-7: Bat Survey Report, ES Volume 2 [EN010143/APP/6.2]
Badger	Yes	Appendix 8-8: Badger Survey Report, ES Volume 2 [EN010143/APP/6.2]
Riparian mammals (otter and water vole)	Yes	Appendix 8-9: Riparian Mammals Survey Report, ES Volume 2 [EN010143/APP/6.2]
GCN	No – additional data not needed to inform assessment/ legal compliance	N/A
Reptiles	No – additional data not needed to inform assessment/ legal compliance	N/A
Polecat	No – additional data not needed to inform assessment/ legal compliance	N/A

Species/ species group	Further survey required	Relevant technical appendix
Harvest mouse	No – additional data not needed to inform assessment/ legal compliance	N/A
Terrestrial Invertebrates	No – additional data not needed to inform assessment/ legal compliance	N/A
Aquatic Macroinvertebrates	Yes	Appendix 8-2: Aquatic Ecology Report, ES Volume 2 [EN010143/APP/6.2]
Aquatic macrophytes	Yes	Appendix 8-2: Aquatic Ecology Report, ES Volume 2 [EN010143/APP/6.2]
Fish	No – additional data not needed to inform assessment/ legal compliance	N/A
INNS	Yes	Data presented in Chapter 8: Ecology, ES Volume 1 [EN010143/APP/6.1]

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Abbreviations

Abbreviation	Definition
BAP	Biodiversity Action Plan
BNG	Biodiversity Net Gain
ВоСС	Birds of Conservation Concern
BS	British Standard
CRoW	Countryside and Rights of Way
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
DLL	District Level Licence
EcIA	Ecological Impact Assessment
eDNA	Environmental Deoxyribonucleic Acid
ERYBAP	East Riding of Yorkshire Biodiversity Action Plan
ES	Environmental Statement
EU	European Union
GCN	Great crested newt
HDD	Horizontal directional drilling
НоРІ	Habitats of principal importance
HRA	Habitat Regulations Assessment
IACPC	Impact Assessment and Conservation Payment Certificate
INNS	invasive non-native species
IRZ	Impact Risk Zone
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee
KM	kilometres
LNR	Local Nature Reserve
LSE	Likely Significant Effects
LWS	Local Wildlife Sites
m	Metres
MAGIC	Multi-Agency Geographic Information for the Countryside
NE	Natural England
NERC	Natural Environment and Rural Communities

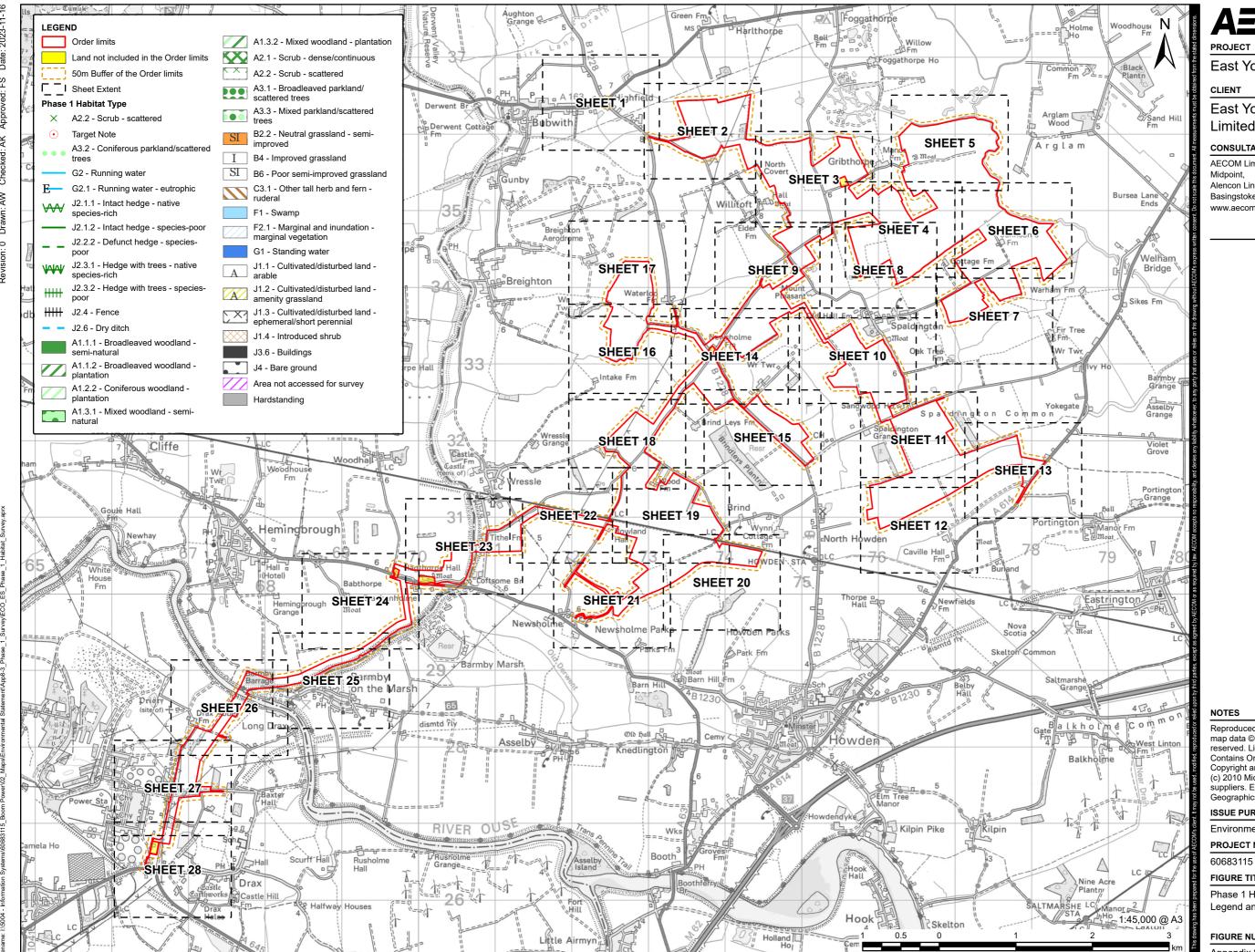
Abbreviation	Definition
NEYEDC	East Yorkshire Ecological Data Centre
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NVC	National Vegetation Classification
PV	Photovoltaic
SAC	Special Areas of Conservation
SINC	Sites of Importance for Nature Conservation
SPA	Special Protection Areas
SSSI	Site of Special Scientific Interest
TN	Target Note
WCA	Wildlife and Countryside Act
WFD	Water Framework Directive
Zol	Zone of Influence

Glossary

Term	Definition
Invasive non- native species	Those that are introduced, intentionally or unintentionally, outside of their natural geographic range, causing environmental, social and/or economic impacts.
Phase 1 habitat survey	The study of, identification and mapping of the important wildlife habitats that are found on a site and its surrounding areas.

Annex A – Figure

Figure 8-3-1 Phase 1 Habitat Survey Map



East Yorkshire Solar Farm

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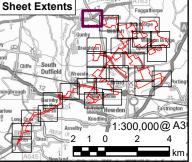
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50m Buffer of the Order limits

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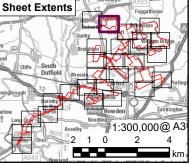
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50m Buffer of the Order limits

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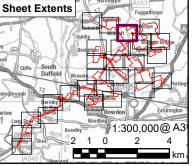
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LEGEND

Order limits

Land not included in the Order limit 50m Buffer of the Order limits

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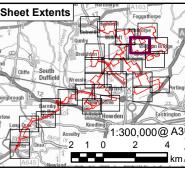
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Order limits

Land not included in the Order limit 50m Buffer of the Order limits

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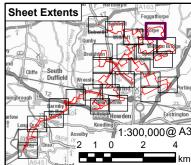
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Order limits

50m Buffer of the Order limits

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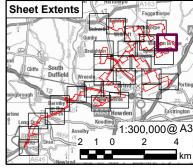
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Order limits

50m Buffer of the Order limits

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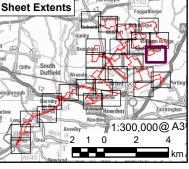
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50m Buffer of the Order limits

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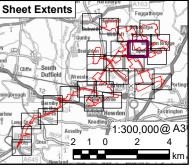
LEGEND



Order limits

50m Buffer of the Order limits

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ISSUE PURPOSE

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PROJECT NUMBER

60683115

FIGURE TITLE

Phase 1 Habitat Survey Sheet 8 of 28

East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

CONSULTANT

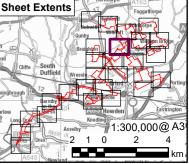
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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

CONSULTANT

AECOM Limited Midpoint, Alencon Link Basingstoke, RG21 7PP

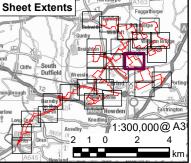
LEGEND



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East Yorkshire Solar Farm Limited

CONSULTANT

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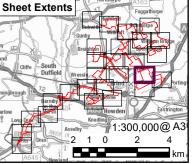
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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

CONSULTANT

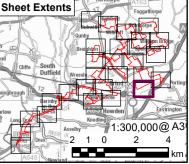
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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

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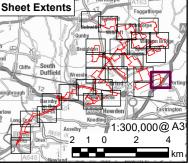
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Order limits

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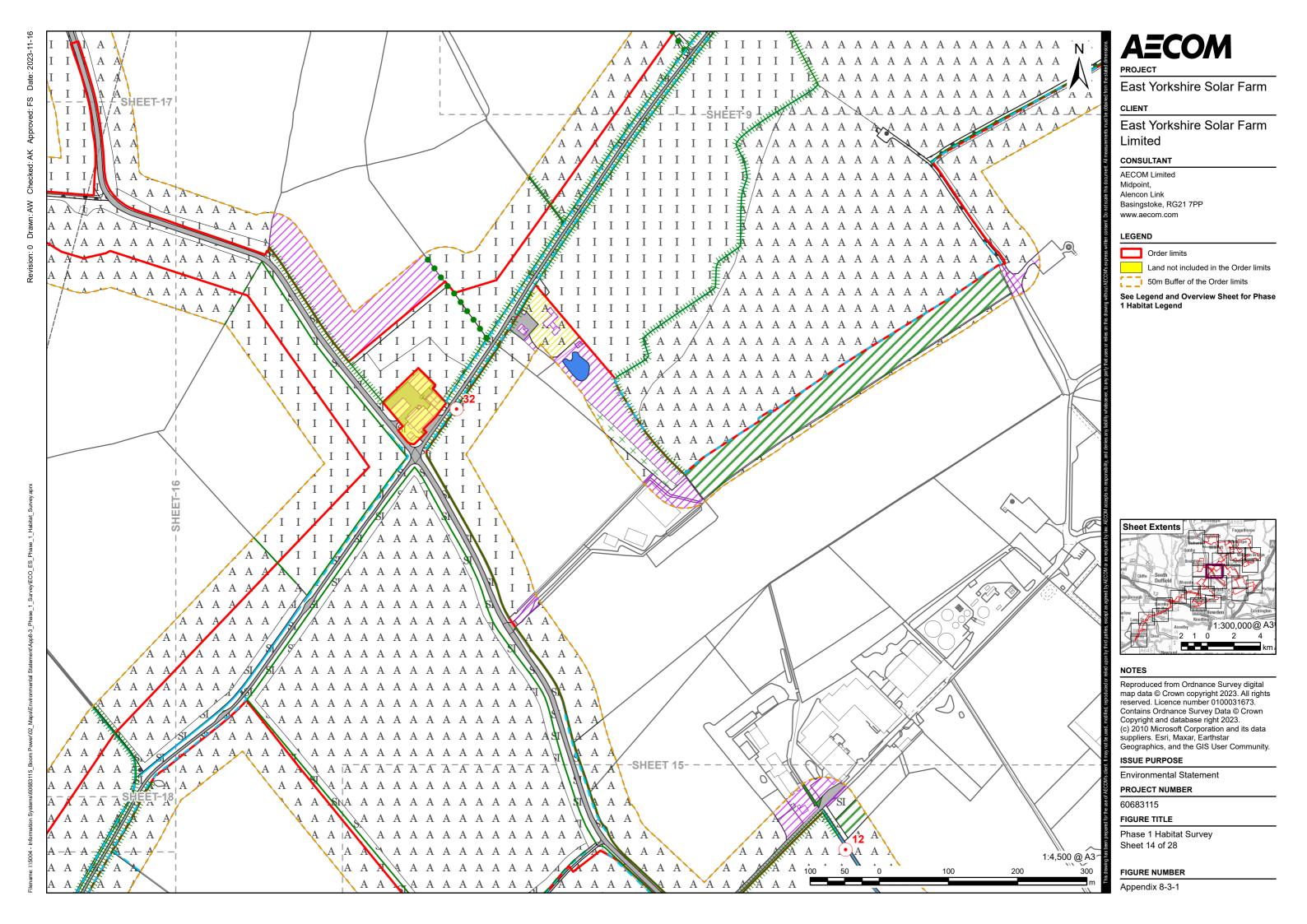
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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

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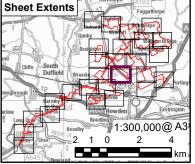
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Order limits

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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

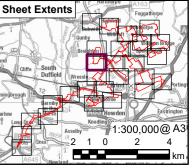
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FIGURE TITLE

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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

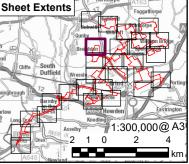
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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

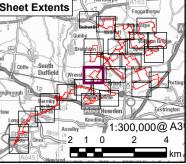
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East Yorkshire Solar Farm

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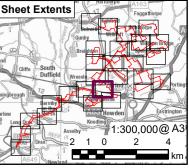
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Order limits

50m Buffer of the Order limits

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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

CONSULTANT

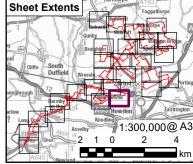
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Order limits

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FIGURE TITLE

Phase 1 Habitat Survey Sheet 20 of 28

East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

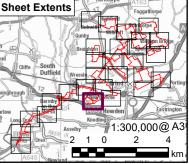
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Order limits

50m Buffer of the Order limits

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FIGURE TITLE

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East Yorkshire Solar Farm

East Yorkshire Solar Farm

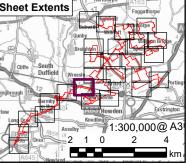
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50m Buffer of the Order limits

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FIGURE TITLE

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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

CONSULTANT

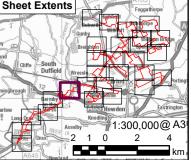
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Order limits

Land not included in the Order limits

50m Buffer of the Order limits

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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

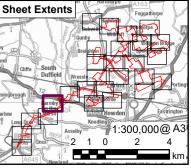
CONSULTANT

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Order limits

Land not included in the Order limits 50m Buffer of the Order limits

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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

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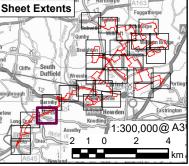
LEGEND



Order limits

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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

CONSULTANT

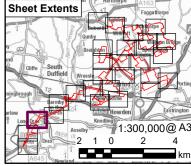
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50m Buffer of the Order limits

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East Yorkshire Solar Farm

East Yorkshire Solar Farm Limited

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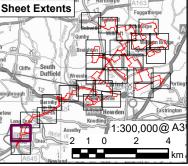
LEGEND



Order limits

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FIGURE TITLE

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Drawn: AW

vision: 0

AECOM

East Yorkshire Solar Farm

CLIENT

East Yorkshire Solar Farm Limited

CONSULTANT

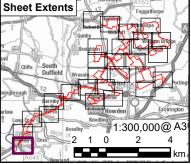
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LEGEND

Order limits

Land not included in the Order limits 50m Buffer of the Order limits

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Annex B – Target Notes

Target Note Description

Photographs

1

(TN)

Ditch which may offer suitability for water vole and otter.



2 Ditch which may offer suitability for water vole and otter.



Photographs

Ditch which may offer suitability for water vole and otter.



Ditch which may offer suitability for otter and water vole.



Photographs

5 River Derwent with potential for otter.



Ditch with standing water and submerged and floating leaved vegetation suitable for otter and water vole.



Photographs

7

Otter and water vole suitability, emergent vegetation present and vegetated verges, connection to river Ouse.



8

River Foulness with potential for otter.



Photographs

9

Ditch 1.5m wide with potential for otter and water vole, vegetated banks that are roughly 45°.



10 Ditch which may offer suitability for water vole.





Photographs

11

Otter and water vole potential along ditch with 45° banks that are heavily vegetative with suitable feeding vegetation, some emergent vegetation and a sluggish water flow.



12

Wet ditch 1.5m wide with 2m tall steep sloped banks of poor semi-improved grassland. Low turbidity, likely 50cm deep, silty bottom, no emergent vegetation, or INNS. No damage present with vegetation along entire stretch and not shaded. No water vole or otter signs observed but suitable for both species.



Photographs

Brash pile with potential for reptiles, amphibians and nesting birds.



Potential pond – Area of reeds and a depression in field that might be pond but no access to the field to confirm.



Photographs

15

Potential pond – Area of reeds present in a depression adjacent to track that may have water present.



Large brash piles suitable for nesting birds, amphibians and reptiles.



Target Note (TN)	Description	Photographs
17	Deadwood, suitable for reptiles, amphibians, birds and hedgehog throughout the woodland.	
18	Grass snake (male) basking at the top of drain bank near to the River Derwent.	No photograph available.
19	Four lapwings observed in middle of the arable field, displaying and flying.	No photograph available.
20	Lapwings present in arable field and observed flying and displaying.	

Target Note Description Photographs (TN)

Yellowhammer observed flying around and perching in the brash pile.



22 Stock dove nesting in oak cavity beside ditch along the field boundary.



Photographs

23 Line of mature oak and ash trees



24 Disused wood pigeon nest.



Target Note (TN)

Description

Photographs

25

Small heath butterfly, a Priority species (Ref. 3) in poor semi-improved grassland margin of arable field.



26

Over 100 butterflies along the poor semi-improved grassland margins adjacent to plantation woodland and hedgerow. Mainly speckled wood, some red admiral, large white.



Target Note (TN)	Description	Photographs
27	Beehives present along arable field margin with lots of activity.	
28	Bluebell observed on roadside verge associated with hedgerow.	No photograph available.
29	Bluebell observed on roadside verge associated with hedgerow.	No photograph available.
30	Area of grassland along field boundary with orchids.	

Target Note Description **Photographs** (TN) 31 Collection of orchids along field boundary. 32 Himalayan balsam. 33 No photograph available. Himalayan balsam.

Photographs

34

Himalayan balsam patch approximately 2m x 4m by ditch.



35

Crassula throughout open area which was likely to be a former pond in woodland. Ash and alder seedlings (a) with bogbean (*Menyanthes* sp) (r).



36	2 brown hares.	No photograph available.
37	Brown hare.	No photograph available.
38	Brown hare.	No photograph available.
39	Brown hare.	No photograph available.
40	Brown hare.	No photograph available.
41	Brown hare.	No photograph available.
42	Brown hare.	No photograph available.
43	Brown hare.	No photograph available.

Target Note Description Photographs (TN)

Himalayan balsam present (approximately 10 plants)

