EAST PARK ENERGY

East Park Energy

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Preliminary Environmental Information Report
Volume 2 – Technical Appendices

Appendix 7-1: Ecological Baseline Report

September 2024

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CONTENTS

1.0 Introduction 2
1.1 Background 2
2.0 Methodology 3
2.1 Desk Study 3
2.2 Field Surveys 4
2.3 Limitations 9
3.0 Baseline 11
3.1 Designated Sites for Nature Conservation 11
3.2 Priority Habitats – Existing Records 17
3.3 Ancient and Irreplaceable Habitats 18
3.4 Extended Habitat Survey 18
3.5 Protected and Notable Species 27
3.6 Invasive Non-native Species 37
Annex 1 39

1.0 INTRODUCTION

1.1 Background

1.1.1 This Technical Appendix has been prepared to accompany ***PEIR Volume 1 Chapter 7***: *Ecology and Nature Conservation* of the East Park Energy Preliminary Environmental Information Report (PEIR)

1.1.2 The objectives of this report are to:

- Provide baseline information on the current habitats and ecological features both within the Site and in the immediately surrounding area;
- Identify the proximity of any designated sites for nature conservation interest; and,
- Identify the presence or potential presence of any protected species or habitats.

1.1.3 The report has been informed by desk-based review of relevant ecological information, extended habitat survey, badger survey, breeding bird survey, wintering bird survey and great crested newt eDNA surveys. Reference is made to relevant legislation, planning policy and guidance, as appropriate.

1.1.4 Consideration has been given to the potential presence of rare, protected, or notable habitats and species, and the location of nearby features including designated sites for nature conservation.

1.1.5 Throughout this report, common names for species are favoured over scientific names unless there is potential for confusion and in which case scientific names are also presented.

2.0 METHODOLOGY

2.1 Desk Study

2.1.1 A desk study was undertaken to identify existing information on the presence of designated sites for nature conservation, protected and notable species and habitats within proximity to the Site as follows:

- Statutory designated sites for nature conservation, within 5km of the Site, extending to 10km for internationally protected sites, or 30km for internationally protected sites with bat qualifying features;
- Non-statutory designated sites for nature conservation within 2km of the Site; and,
- Existing records of priority habitats and protected and notable faunal species (dated within the last 10 years), within 2km of the Site.

2.1.2 The following key sources were consulted:

- Natural England and Joint Nature Conservation Committee (JNCC) websites[1];
- The Multi Agency Geographic Information for the Countryside (MAGIC) website[2];
- District Level Licencing Data[3];
- The Natural England Open Data Geoportal[4];
- The Woodland Trust Ancient Tree Inventory website[5];
- National Biodiversity Network (NBN) Atlas[6] (white clawed crayfish data with licence types CC0, CC-BY and OGL covering commercial use only);

[1] http://jncc.defra.gov.uk/
[2] https://magic.defra.gov.uk/MagicMap.aspx
[3] https://naturalengland-defra.opendata.arcgis.com/datasets/great-crested-newts-edna-pond-surveys-for-district-level-licensing-england?geometry=-1.451%2C51.749%2C-1.002%2C51.823
[4] https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::peaty-soils-location-england/explore?location=53.163227%2C-0.801927%2C10.71
[5] https://ati.woodlandtrust.org.uk/
[6] https://nbnatlas.org/

- Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC)[7]; and,
- Cambridgeshire and Peterborough Environmental Records Centre (CPERC)[8].

2.1.3 Reference was also made to Ordnance Survey maps of the wider area and online aerial images (www.google.co.uk/maps) in order to determine any features of nature conservation interest in the wider area, including potential ponds and watercourses.

2.2 Field Surveys

Extended Habitat Survey

2.2.1 The majority of the Site was initially included in a walkover survey that comprised an extended Phase 1 habitat survey between 11th and 13th April 2022 by K Love MSc, a suitably competent and qualified ecologist. The survey followed UK industry standard Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Methodology and with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM), Technical Guidance Series Guidelines for Preliminary Ecological Appraisal.

2.2.2 Remaining areas not included in the initial habitat survey were surveyed in an extended habitat survey on 26th and 27th July 2022 by K. Love MSc and K Ward MSc, following the UK industry standard UKHab methodology (UK Habitat Classification Working Group. 2020[9]) (Version 1.0) with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017)[10].

[7] https://www.bedscape.org.uk/BRMC/newsite/
[8] https://www.cperc.org.uk/
[9] https://ukhab.org/ukhab-documentation/
[10] *CIEEM. (2017). Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.*

2.2.3 Previously surveyed habitats following Phase 1 methodology were updated using UKHab methodology (Version 1.0) between 22nd and 24th March 2023 by J Stevens BSc (Hons) and K Ward MSc.

2.2.4 The extent of the Site and habitats as surveyed is shown on ***PEIR Volume 3 Figure 7-3*** with accompanying photographs in Annex 1 of this Appendix.

2.2.5 All habitats were mapped and described using a series of 'target notes' (TNs) to the highest level of UK habitat classification as possible, with each individual habitat feature being assigned to a primary habitat and then described with secondary codes if applicable. The surveys were extended to include the additional recording of specific features indicating the presence, or likely presence, of protected species, invasive species and other species of conservation significance.

2.2.6 On-site buildings were assessed externally, and where access was available, internally, for their suitability to support roosting bats by way of preliminary roost assessment (PRA). Suitability of structures for roosting bats was classified in accordance with Bat Conservation Trust guidance as follows (from Collins et al., 2023, Table 4.1[11]):

- Negligible: No obvious habitat features on site likely to be used by roosting bats, however, a small element of uncertainty remains as bats can small and apparently unsuitable features on occasion.
- Low: A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. Structures that do not provide enough space, shelter, protection, appropriate conditions and/or suitability surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).

[11] Collins et al. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines. 4th edition, BCT: London

- Moderate: A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
- High: A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity or classic cool/stable hibernation site.

2.2.7 Trees within the Site were assessed for their suitability to support roosting bats by way of Ground Level Tree Assessment in accordance with Bat Conservation Trust guidance (Collins, 2023[12]). Suitability for roosting bats was classified as follows (from Tables 4.2 and 6.2):

- None: Either no Potential Roost Feature (PRF) in the tree or highly unlikely to be any
- FAR: Further assessment required to establish if PRF's are present in the tree
- PRF: A tree with at least one PRF present
- PRF- I: PRF is only suitable for individual bats or very small numbers of bats due to size or lack of suitable surrounding habitats.
- PRF- M: PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Bat Activity Survey

2.2.8 The following surveys relating to baseline bat activity have been completed:

- Habitat Suitability Assessment;

[12] *Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust, London.*

- Manual Bat Activity Surveys; and,
- Automated Bat Activity Surveys.

2.2.9 Bat activity survey effort was determined with reference to BCT guidance (Collins, 2023) applicable at the time of survey following an assessment of Moderate habitat suitability overall.

2.2.10 Consequently, walked transects (i.e., manual bat activity surveys) were undertaken on a seasonal basis during spring, summer and autumn periods.

2.2.11 Static surveys (i.e., automated bat activity surveys) were undertaken on a monthly basis throughout the bat activity period, ranging from April until October.

2.2.12 Methodologies relating to each specific bat activity survey are described below.

Manual Bat Activity Surveys

2.2.13 A manual activity survey of the Site, consisting of a Night-time Bat Walkover (NBW) was designed and implemented in reference to BCT guidance, and informed by prior walkover surveys

2.2.14 The NBW was designed to cover approximately 5km in length, and designed to be completed within 2-3 hours after sunset. Transect routes were also designed to cover a representative range of habitats and ecologically important features present (EIF), including those which might be impacted by the Proposed Development.

2.2.15 In line with a Moderate habitat suitability assessment A total of three NBW have been undertaken, on a seasonal basis (i.e., one survey in each of Spring, Summer and Autumn), and have been conducted during periods of suitable weather conditions conducive for bat activity (i.e., mild and dry, with relatively low wind speeds).

2.2.16 NBW surveys were undertaken within a team of two surveyors commencing at sunset, and incorporated an initial 30-60 minute vantage point observation period commencing at sunset during which potential bat activity was observed and recorded; vantage points per transect were informed by a prior appraisal of the Site, and were decided relative to a potential roost source or EFI (should emergence activity or large numbers of directionally commuting bats be observed, surveyors were encouraged to investigate possible emergence locations via back tracking).

2.2.17 Post-vantage observation, ecologists walked a pre-determined walkover route per transect within pairs, utilizing a full spectrum Wildlife Acoustics Touch 2 Pro detector and night vision aid equipment; equipment allowed for both acoustic recordings and observations of activity to be recorded, allowing for bat identification and a time-stamped narrative of activity to be spatially logged per transect.

2.2.18 During each NBW, particular emphasis was placed on recording observed activity (e.g., numbers of bats, behaviour, habitat) for the purpose of understanding how bats are using the Site, and to help further inform a response to proposed impacts; whilst routes were pre-determined, flexibility was enabled relative to observed activity to better record activity, permitting some deviation from baseline transect routes on some occasions.

Automatic Bat Activity Surveys

2.2.19 Eight automated monitoring stations (MSs) were deployed within the Site as shown on ***PEIR Volume 3 Figure 7-6***. MS locations were chosen to sample activity from a representative range of habitats considered to be ecologically important for bats, or potentially subject to development impact, present within the Site.

2.2.20 MS detector types deployed during each automatic activity survey consisted either a SM Mini or SM4 full spectrum detector attached to a 1m high stake or suitable on-Site feature. Monitoring was undertaken between time periods

spanning approximately thirty minutes before sunset to thirty minutes after sunrise, with detectors set to record simultaneously.

2.2.21 Where possible, bat activity was sampled for a minimum of five consecutive nights of suitable weather, following a monthly survey effort (i.e., April-October), in line with the minimum recommended survey effort prescribed for sites with Moderate habitat suitability (Collins, 2023).

2.2.22 Data analysis and interpretation of results will follow the principles presented in the BCT guidance (Collins, 2023). Bat sound analysis will been undertaken by suitably experienced ecologists.

2.2.23 Bat detectors recorded data onto digital media for subsequent analysis using Kaleidoscope Pro (Wildlife Acoustics) software. All data will be processed through Kaleidoscope Pro to separate associated noise files. The remaining sonograms were then automatically identified by the software. A selection of sonograms from each species or species group was manually checked with particular attention given to non-pipistrelle species.

2.3 Limitations

2.3.1 Limitations regarding specific protected species surveys (if any) are detailed separately in the relevant corresponding appendices.

Desk Study

2.3.2 A desk study does not identify a comprehensive account of all species and features of ecological importance within the study area, however it improves the understanding of the Site's ecological value and the likely species and habitats within the area.

Extended Habitat Survey

2.3.3 Some areas of the Site included an updated extended habitat survey in March 2023, and therefore marginally outside the optimal period for botanical

surveys (approximately April to September). However, with additional data gathered in the optimal botanical survey period during the initial extended habitat survey visits in April 2022 and July 2022, it is considered that the timing of the survey is not a limitation to the assessment.

2.3.4 An extended habitat survey does not constitute a detailed botanical survey or faunal species list or provide a full protected species survey, but enables competent ecologists to ascertain an understanding of the ecology of the Site in order to:

- Broadly identify the nature conservation value of a site and assess the significance of any potential impacts on habitat/species recorded; and/or,
- Confirm the need and extent of any additional specific ecological surveys that are required to identify the true nature conservation value of a site (if any).

2.3.5 All habitats within the Site, including previously surveyed habitats, are being surveyed in 2024 in line with UKHab V2.01.

Bat Activity survey

Sonogram Analysis

2.3.6 Analysing bat sonograms using Kaleidoscope can often clearly identify certain species. However, some genus groups (such as *Myotis spp and Nyctalus spp*) can be difficult to determine to species level due to their similar calls. In addition, it can be difficult to determine species or even genus in some circumstances, due to partial calls being heard or due to distortion from external sources (e.g., passing cars, rain or wind). In cases when it is not possible to identify a bat call to genus, it is labelled as an unknown bat. If the genus can be identified but not the species, the call is labelled by the genus group only.

2.3.7 The detectability of some bat species, such as brown long-eared bat, is lower than that of, for example, noctule and pipistrelle species. The echolocation

calls of brown long-eared bats are comparatively more difficult to detect with bat detectors, and their particular hunting strategies take them into less open habitats, where survey transect routes may not venture. Careful interpretation has been applied when comparing survey results across species.

2.3.8 It should also be noted that physical and environmental factors as well as a bat's age, sex or behaviour can all influence the echolocation calls (e.g., a social call of a soprano pipistrelle has been known to display similar characteristics to a low clarity noctule call).

2.3.9 Therefore, professional judgement has been used and in some cases it is not possible to safely assign an individual bat call to a species. In cases when it is not possible to identify a bat call to genus, it is labelled as an unknown bat. If the genus can be identified but not the species, the call is labelled by the genus group only. The identification of those calls assigned to individual species is done so on the basis of judgement and experience

3.0 BASELINE

3.1 Designated Sites for Nature Conservation

Statutory Designated Sites

3.1.1 No international statutory designated sites for nature conservation were identified within 10km of the Scheme Boundary.

3.1.2 Seven national statutory designated sites for nature conservation are located within 5km of the Site, the closest being Swineshead Wood Site of Special Scientific Interest (SSSI), located approximately 900m north. A summary of these statutory designated sites is provided in Table 3.1.

3.1.3 The review of MAGIC identifies that the Site is located within a SSSI Impact Risk Zone (IRZ), however the Scheme does not meet the criteria whereby the LPA should consult with Natural England regarding potential risks to the applicable SSSI and/or other associated statutory designated sites.

3.1.4 This Section should be read with reference to ***PEIR Volume 3 Figure 7-1***.

Table 3.1: Statutory designated sites

SSSI: Site of Special Scientific Interest; LNR: Local Nature Reserve; SAC: Special Area of Conservation.

Site Name	Approximate Distance and Direction from Site	Description
Swineshead Wood SSSI	900m north	An ancient ash/maple woodland with structural and biological diversity. Historically managed as coppice with standards. Contains a rich flora.[13]
St. Neot's Common SSSI	1.57km east	A riverside common with alluvial grassland and associated ponds, ditches and willow carr. The grassland remains under the traditional management and has a species-rich sward. Contains diverse invertebrate and amphibians populations. [14]
Little Paxton Wood SSSI	1.58km north-east	A wet ash-maple woodland, which have undergone a significant national decline. Historically managed as a coppice-with-standards. Has extremely diverse flora which includes one nationally restricted species (spiked star-of-Bethlehem *Ornithogalum pyrenaicum*), as well as a number of species which are of very local occurrence in Cambridgeshire. [15]
Perry Woods SSSI	1.84km north	An ash-maple ancient woodland. Supports diverse floral and invertebrate diversity. [16]
Grafham Water SSSI	2.83km -north	An extensive reservoir that can support nationally important numbers of summer moulting mute swan and wintering great crested grebe, tufted duck and coot. It is also an important site for passage migrants, wintering and breeding birds. A small pond also supports GCN. [17]
Little Paxton Pits LNR	3.11km -north-east	An extensive area of flooded gravel workings, with a diverse vegetation structure. The pits are of national importance for wintering wildfowl and an important stopping point for migrants. Notable use by wintering gadwall with over 1% of

13 https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1001520&SiteName=swine&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

14 https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1002239&SiteName=st.%20neot&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

15 https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000864&SiteName=little%20paxton&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

16 https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1002166&SiteName=perry%20wood&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

17 https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1002330&SiteName=grafham&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

Site Name	Approximate Distance and Direction from Site	Description
		the British wintering population. The invertebrate fauna is extremely rich and includes a number of national rarities including a number of flies (Diptera) (*Spilogona scutulata, Limnophora scrupulosa, Dolichopus andulusiacus* and *Lispocephala falculata*) and the leaf-hopper (Homoptera) *Idiocerus herrichi*. Other notable species present include common spotted-orchid, bee orchid, blue fleabane, hare's-foot clover and knotted clover.[18]
Little Paxton Pits SSSI	3.12km north-east	An extensive area of flooded gravel workings, with a diverse vegetation structure. The pits are of national importance for wintering wildfowl and an important stopping point for migrants. Notable use by wintering gadwall with over 1% of the British wintering population. The invertebrate fauna is extremely rich and includes a number of national rarities including a number of flies (Diptera) (*Spilogona scutulata, Limnophora scrupulosa, Dolichopus andulusiacus* and *Lispocephala falculata*) and the leaf-hopper (Homoptera) *Idiocerus herrichi*. Other notable species present include common spotted-orchid, bee orchid, blue fleabane, hare's-foot clover and knotted clover.[19]
Eversen and Wimpole Woods SAC	17.4km south-east	Annex II species that are a primary reason for selection of this site: 1308 Barbastelle Barbastella barbastellus The site comprises a mixture of ancient coppice woodland (Eversden Wood) and high forest woods likely to be of more recent origin (Wimpole Woods). A colony of barbastelle Barbastella barbastellus is associated with the trees in Wimpole Woods. These trees are used as a summer maternity roost where the female bats gather to give birth and rear their young. Most of the roost sites are within tree crevices. The bats also use the site as a foraging area. Some of the woodland is also used as a flight path when bats forage outside the site.

Non-statutory Designated Sites

3.1.5 Data provided by CPERC and BLBRMC indicate that no non-statutory designated sites for nature conservation are located within the Site, however

18 https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1009006&SiteName=Little%20Paxton%20Pits%20&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

19 https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1002350&SiteName=Little%20Paxton%20Pits%20&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

one County Wildlife Site (CWS) Moor Road Marshy Fields CWS is located immediately adjacent to the Scheme Boundary.

3.1.6 A further 17 non-statutory designated sites for nature conservation, all CWS are located within 2km of the Site.

3.1.7 Details of these non-statutory designations are provided in Table 3.2. This Section should be read with reference to ***PEIR Volume 3 Figure 7-2***.

Table 3.2: Non-statutory designated sites.

CWS: County Wildlife Site; RNR: Roadside Nature Reserve.

Site Name	Approximate Distance and Direction from Site	Description
Huntingdon Wood CWS	Adjacent Site	The site is a woodland listed in the Cambridgeshire Inventory of Ancient Woodland which retains more than 25% semi-natural cover.
Kangaroo Meadow CWS	Adjacent Site	Recognised for the presence of neutral grassland. A small triangular area of unimproved neutral grassland which can be inundated in winter.
High Wood CWS	115m south	The site is a woodland listed in the Cambridgeshire Inventory of Ancient Woodland which retains more than 25% semi-natural cover.
Moor Road Marshy Fields CWS	255m south	The site supports at least 0.5ha of NVC community S7 Lesser Pond-sedge swamp.
The Elms Paddock CWS	315m north-east	The site supports frequent numbers of at least 8 neutral grassland indicator species,
Staploe and Honeydon RNR	355m south-west	Recognised for supporting nationally scarce Spiked Star of Bethlehem or Bath Asparagus (Ornithogalum pyrenaicum), Sulphur Clover (Trifolium ochroleucon) and Crested Cow-wheat (Melampyrum cristatum)
Cemetery North of Churchyard CWS	375m north	The site supports frequent numbers of at least 8 neutral grassland indicators, at least 3 of these are strong indicators.
Willow Pollards West of Sharps Barn CWS	465m east	The site supports at least 5 mature pollard willows in association with other semi-natural habitat.

Site Name	Approximate Distance and Direction from Site	Description
Meagre Wood CWS	565m north-east	The site is a woodland listed in the Cambridgeshire Inventory of Ancient Woodland which retains more than 25% semi-natural cover.
Swineshead Wood CWS	900m north-west	Recognised for the presence of ancient semi-natural woodland. The northern and western areas of the woodland comprise mixed plantation with open areas. The remainder of the site, designated also as a SSSI, is previously managed structurally and species diverse ancient semi-natural woodland on wet soils.
Sandye Lane CWS	910m north-west	Recognised for the presence of neutral grassland. A green lane linking Spanoak Wood and Tilbrook Bushes CWS with Swineshead CWS
River Great Ouse CWS (Cambridgeshire)	995m west	major river not grossly modified by canalisation or poor water quality; supports >0.5ha NVC S6 swamp; >0.5ha S4 swamp; >0.05ha MG13 grassland; a nationally scarce vascular plant (Nymphoides peltata); breeding populations of a nationally rare dragonfly (Libellula fulva)
Wyboston Pits CWS	1.03km west	The Site comprises a series of flooded disused gravel pits surrounded largely by amenity grassland with scattered trees and shrubs but with smaller areas of neutral and marshy grasslands and broadleaved plantation.
Agdengreen Wood CWS	1.07km north	The site is a woodland listed in the Cambridgeshire Inventory of Ancient Woodland which retains more than 25% semi-natural cover.
Tilbrook Bushes and Sandy Lane CWS	1.13km North-west	The site supports a population of a vascular plant species which is rare in the county and because it supports as least 500m of hedgerow of the requisite dimensions and species diversity that is allowed to flower and fruit.
Hook and Home Woods CWS	1.14km south	Recognised for the presence of ancient semi-natural woodland. The CWS comprises two discrete areas of woodland; Hook Wood semi-natural broadleaved woodland and the northern section of Home Wood, containing semi-natural broadleaved woodland, conifer plantation at the eastern end and a central area of dense scrub.
Midloe Woods CWS	1.20km north-east	The site is a woodland listed in the Cambridgeshire Inventory of Ancient Woodland which retains more than 25% semi-natural cover.

Site Name	Approximate Distance and Direction from Site	Description
Spanoak Wood and Tilbrook Bushes CWS	1.25km north-west	Recognised for the presence of ancient semi-natural woodland and marsh. An ancient woodland site, consisting mostly of young mixed planation of spruce and oak with a field layer of tall grasses and herbs. To the east of the site is an area of marshy neutral grassland.
Honeyhill Wood CWS	1.27km north	The site is a woodland listed in the Cambridgeshire Inventory of Ancient Woodland which retains more than 25% semi-natural cover.
Keysoepark Wood CWS	1.47km south	Recognised for the presence of ancient semi-natural woodland. A block of semi-natural broadleaved woodland with a mature canopy underplanted with conifers.
Melchbourne Woods CWS	1.58km west	Recognised for the presence of ancient semi-natural woodland. A large area of semi-natural broadleaved woodland and plantation, most of which is ancient woodland.
River Great Ouse CWS (Bedfordshire)	1.61km south-east	Designated for river habitats and adjacent habitats and features which are considered part of the river system
Horse Close CWS	1.63km north-east	The site supports frequent numbers of at least 8 neutral grassland indicator species, at least 3 of these are strong indicators. Additionally it supports a population of a Nationally Scarce vascular plant species.
Little Barford CWS	1.65km south-east	A complex of two semi-improved pastures to the east, an area of swamp vegetation in a poplar plantation to the west (not surveyed), a churchyard and the neighbouring section of the River Great Ouse.
Bushmead Meadows CWS	1.71km south	Recognised for the presence of neutral grassland. One of the largest and most species rich areas of CWS grassland (in Bedfordshire) north of Bedford.
Begwary Brook Pits CWS	1.87km south-east	Contains a diversity of habitats including marsh, neutral grassland, ponds, lakes, ditches and woodland. The River Great Ouse forms the eastern and northern boundaries of the County Wildlife Site.

3.2 Priority Habitats – Existing Records

3.2.1 A review of MAGIC, BLBRMC and CPERC data, Ordnance Survey Maps and aerial imagery identified nine habitats of Principal Importance (also known as priority habitats) under Section 41 of the NERC Act/UK Biodiversity Action Plan within 2km of the Site. Of these, the following five priority habitat were identified within the Site; hedgerows, streams, deciduous woodland and ponds.

3.2.2 Ten priority habitats listed under the Local Biodiversity Action Plans (LBAPs) were identified within 2km of the Site.

3.2.3 Information on priority habitats within 2km of the Site is presented in Table 3.3. Where numerous records of a particular habitat were recorded, only the closest record to the Site has been provided, in order to provide context for the Site and surrounding area.

Table 3.3: Priority habitats – existing records

NERC S.41: Natural Environment and Rural Communities (NERC) Act (2006); UKBAP: UK Biodiversity Action Plan Priority Habitat); LBAP: Local Biodiversity Action Plan Priority Habitat; AWI: Ancient Woodland Inventory.

Priority Habitat Name	Designation	Approximate Distance from Site
Hedgerows	NERC S.41, UKBAP, LBAP	Within the Site.
Deciduous woodland	NERC S.41, UKBAP, LBAP	Within the Site.
Ponds	NERC S.41, UKBAP, LBAP	Within the Site.
Coastal and floodplain grazing marsh	NERC S.41, UKBAP, LBAP	Immediately adjacent to the Scheme Boundary.
Traditional orchards	NERC S.41, UKBAP, LBAP	Immediately adjacent to the Scheme Boundary.
Ancient woodland	AWI, LBAP	Immediately adjacent to the Scheme Boundary (Huntingdon Wood).

Priority Habitat Name	Designation	Approximate Distance from Site
Lowland fen	NERC S.41, UKBAP	Immediately adjacent to the Scheme Boundary.
Lowland meadows	NERC S.41, UKBAP, LBAP	260m north-east
Wet woodland	NERC S.41, UKBAP, LBAP	890m south
Reedbed	NERC S.41, UKBAP, LBAP	1.63km south-east

3.3 Ancient and Irreplaceable Habitats

3.3.1 A review of MAGIC and the Natural England Open Data Geoportal identified no ancient or irreplaceable peat soil habitats within the Site or within 500m of the Scheme Boundary.

3.3.2 A review of MAGIC and data provided by CPERC and BLBRMC identified two ancient woodland parcels within 500m of the Scheme Boundary and fourteen within 2km of the Site. The closest ancient woodland is Huntingdon Wood, which is directly adjacent to the grid connection element of the Scheme Boundary.

3.3.3 Woodland Trust Ancient Tree Inventory identified no notable trees within the Site, or within 500m of the Scheme Boundary.

3.4 Extended Habitat Survey

3.4.1 This section should be read in conjunction with the UKHab Habitat Plan as presented in ***PEIR Volume 3 Figure 7-3***.

Site Description

3.4.2 The Site comprises four distinct areas (East Park Sites A to D) joined with access and cable corridors, as described below.

East Park Site A

3.4.3 East Park Site A, west of B660 Kimbolton road and B660 Pertenhall Road, predominantly consists of large arable fields planted with cereal crops at the time of survey. Fields are typically bounded by species-poor hedgerows dominated by hawthorn and blackthorn, but also variously including field maple, ash, oak, dog rose, sycamore, hazel.

3.4.4 Within the north of East Park Site A lies the Pertenhall Brook, while more natural at the western extent, the watercourse becomes more open and heavily modified towards the east of East Park Site A, including the straightening and deepening of the channel. At the western extent and along the southern bank in particular are mature tree lines of ash and willow, with unmanaged grassland in more open areas towards the east of the Site.

3.4.5 Habitats immediately beyond the East Park Site A boundary include further arable fields, blocks of plantation broadleaved woodland, as well as the existing Manor Farm solar array.

East Park Site B

3.4.6 East Park Site B, east of B660 Pertenhall Road, similarly comprises agricultural habitats consisting of cereal crops and non-cereal (legume) crops. Fields typically have modified grassland margins consisting of common species typical of agricultural landscapes.

3.4.7 Fields are bounded by hedgerows, typically species-poor and dominated by hawthorn and blackthorn but variously also containing oak, ash, willow, elder and sycamore. Ditches are also present, as well as some small streams that are tributaries of the Pertenhall Brook.

3.4.8 A few small areas of broadleaved woodland are located within the Site.

3.4.9 Habitats immediately beyond the East Park Site B boundary include further arable fields, with the village of Little Staughton to the South.

East Park Site C

3.4.10 East Park Site C surrounding New Wood consists predominantly of arable fields bounded by ditches and with modified grassland margins.

3.4.11 New Wood is located centrally in the parcel, which is an oak dominated woodland with evidence of use for gamebird rearing.

3.4.12 The River Kym bounds Site C to the north, a river approximately 5m wide and with banks modified by reprofiling. The river is lined with trees including ash and willow and grassland bank tops.

3.4.13 Habitats immediately beyond the East Park Site C boundary include further arable fields, with the village of Staughton Highway to the north.

East Park Site D

3.4.14 East Park Site D comprises predominantly arable fields with small blocks of woodland and scrub on the western boundary, as well as recent hedgerow planting. Field boundaries are less well established in this Site.

3.4.15 Habitats immediately beyond the East Park Site D boundary include further arable fields.

Cable Corridors

3.4.16 Cable routes located between East Park Site B and Site C, between Site C and Site D and between Site D and the Eaton Socon Substation are located predominantly within arable fields bounded by hedgerows. Between East Park Site D and the Eaton Socon Substation, the route crosses the South Brook and Duloe Brook. The Site also encompasses land surrounding the Eaton Socon Substation. Cable routes have not yet been surveyed in detail.

3.4.17 Habitats adjacent to the cable route consist predominantly of further arable land, but also includes Huntingdon Wood (ancient woodland).

Detailed Habitat Descriptions

3.4.18 Detailed description for each habitat types recorded across the scheme are in Table 3.4, target notes are presented in Table 3.5 and photographs are presented in Annex 1.

Table Error! No text of specified style in document.**.4: UKHab habitats summary (Bold indicates Habitat of Principal Importance)**

Habitat Code	Descriptions	Photo No
c1a8	Game bird mix strips and corners	-
c1c6	Game bird mix fields	-
c1c7	Other cereal crops	1
c1d	Non-cereal crops	-
g4	Modified grassland	2
h2a	Native hedgerow	3
h2a5	Native species rich hedgerow	
h3d	Bramble scrub	-
h3h	Mixed scrub	-
r1.191	Standing open water and canals – ditch	4
r1a.364	Ponds	-
r2a	River	5, 6
u1e	Built linear features	-
w1g6	Line of trees	-
w1f7	Other Lowland mixed deciduous woodland	-
w1g7	Other woodland broadleaved types	2

Arable (UKHab code: c1.73, c1a8, c1c7, c1c6, c1d)

3.4.19 Arable land was the dominant habitat of the Site with most fields comprising arable use at time of survey (Photograph 1). Fields primarily consisted of

wheat or barley cereal crops, with some including beans, oil seed rape, winter stubble and bare earth areas. Blocks and margins of a brassica / tall ruderal mix were scattered throughout the Site, which are considered likely to be used as wild bird seed or game cover mixes. Some of the fields had grass arable field margins and corners that primarily comprised species-poor modified grassland.

Grassland (UKHab code: g4)

3.4.20 Field margins and corners are frequently located throughout the Site and comprise modified grassland ranging between 1m to 30m wide (Photograph 2). Modified grassland field margins include various combinations of perennial rye-grass, cock's-foot, Yorkshire fog, false-oat grass, bent sp., meadow grass, soft brome and timothy. Additional herb species identified in field margins include nettle, hogweed, dandelion, bulbous buttercup, horsetail, white deadnettle, bindweed, cow parsley, chickweed, bristly oxtongue, creeping buttercup, cleavers, sorrel, creeping thistle, teasel, willowherb, common thistle, sow thistle, black knapweed, ribwort plantain, foxglove, garlic mustard, common daisy and docks sp.. Hawthorn, oak, apple, lime, ash and bramble scrub are occasionally scattered within grassland margins.

Hedgerows (UKHab code: h2a, h2a5)

3.4.21 Field boundaries consisted predominantly of hedgerows, often dominated by hawthorn and/or blackthorn (Photograph 3). Most hedgerows on-Site are species-poor. However, some species-rich hedgerows (h2a5) are also present. Hedgerows ranged between 0.5m to 5m tall by 1m to 5m wide, with both actively managed and neglected hedgerows present on-Site. Hedgerows are mostly intact. However, defunct hedgerows are also distributed throughout. Species-poor hedgerows include various assemblages of blackthorn, hawthorn, ash, elm, sycamore, field maple, ash, oak, elder, willow, bramble, dogrose, ivy, yew and apple. Species-rich hedgerows include species present within species-poor hedgerows, as well as varying

assemblages of hazel, dogwood, spindle, wayfaring tree, deadly nightshade and black bryony.

3.4.22 Multiple young, semi-mature and mature trees are also scattered along some of the on-Site hedgerows with most comprising oak or ash trees, although sycamore, hawthorn, willow and aspen are also present.

Scrub (UKHab code: h3h, h3d)

3.4.23 Dense scrub is located in discrete patches throughout the Site, being mostly present along field boundary features. Linear strips of bramble dominant scrub are located within the Site, as well as mixed scrub comprising varying assemblages of bramble, hawthorn, blackthorn, willow, hazel, elm and elder.

Ditches (UKHab code: r1.191)

3.4.24 The Site contains a network of ditches predominately along field boundaries (Photograph 4). Ditches are generally vegetated by grass or tall ruderal vegetation and vary between being wet and dry. The width of ditches varies between 0.5m and 2m wide, with most possessing shallow water depths considered below 30cm. Wet ditches vary with both static and flowing waters, with turbidity varying throughout the Site, with some ditches likely subject to nutrient enrichment.

Ponds (UKHab code: r1a.364)

3.4.25 Five ponds were identified within the Site (P13, P25, P31, P39 and P43) following review of aerial imagery. Ponds P13, P25 and P39 are located in East Park Site A, whilst pond P31 is located in East Park Site B and P43 located within the Cable Corridor.

3.4.26 Field observation identified pond P25 as a dry pond, whereas ponds P13, P31 and P39 contained water. Pond P13 is a large figure of eight shaped pond surrounded by tall herb, common reeds, scrub, trees. Pond P31 and P39 are both situated within woodland copses, with P31 located surrounded by willow

and dense hawthorn, whilst pond P39 comprises a small pond at the end of a ditch.

3.4.27 Full pond descriptions for ponds accessed during the GCN surveys are available in ***PEIR Volume 2 Appendix 7-5****: GCN Presence or Absence eDNA Report*.

Rivers (UKHab code: r2a)

3.4.28 Pertenhall Brook runs through the northern section of East Park Site A (Photograph 5, 11). At the western extent, the brook is lined with willow and ash and measures approximately 1.5-2m width and 0.5m depth, with a slow flow. Further east, the Brook becomes more open and more obviously modified, being straightened, approximately 2-3m wide with deep water of an unknown depth and tall, steep contains banksides at approximately 75° and 3m deep. The banksides are dominated by vegetation comprising false oat grass, nettle, comfrey and willowherb.

3.4.29 Within East Park Site B is an unnamed tributary of the Pertenhall Brook (Photograph 12), a stream approximately 1.5 - 2m wide with steep, grassy banks. The watercourse is heavily shaded with oak, ash and willow located along both banks.

3.4.30 The River Kym runs adjacent to the northern boundary of East Park Site C (Photograph 6). The river is 3-5m wide, with a north-western flow. The water depth varies along its length, with deep and shallow sections. The banksides are steep, although several shallow sections are present. Bank tops are dominated by grass and tall forbs.

3.4.31 Honeydon Brook / Colmworth Brook runs directly along the Scheme Boundary of the proposed grid connection route. The watercourse runs directly west and south of Eaton Socon substation situated within the Site and west of Eaton Socon. The proposed cable route also runs directly through Duloe Brook and South Brook, which also have not been subject to survey. South Brook also runs along the southern Scheme Boundary of East Park Site D. These

watercourses are planned to be included in subsequent extended habitat surveys scheduled in 2024.

Urban (UKHab code: u1b5, u1e.111, u1e.73.115, u1e.115)

3.4.32 The Site includes a network of existing fences, tracks and roads, as well as some buildings. Two buildings are located adjacent East Park Site A that comprise of barns with brick walls (TN16). One barn contains slate roofing and the other corrugated metal roofing. The barns contain many cracks between the brick mortar, and also contain gaps under the bargeboards. Roof tiles also include many gaps, which are also present between the tiles and roof tile ridge.

3.4.33 A second building is located within the Site located within East Park Site B comprising a log storage building that is open on one side (TN14). The storage building contains brick walls and a corrugated metal roof. The walls comprise a double layer of bricks with cracks present between the mortar. The building also contains wooden beams on the interior that also possess cracks.

3.4.34 A third barn is located within East Park Site C, however not noted as offering particular suitability for bat or barn owl.

Line of Trees (UKHab code: w1g6)

3.4.35 Tree lines are located throughout the Site and include both, immature, semi-mature and mature trees. The species assemblage present on-Site includes assemblages of elm, willow, ash, blackthorn, oak, sycamore and hawthorn.

Woodlands (UKHab code: w1f7.37, w1g7.36)

3.4.36 Woodlands were recorded within or directly adjacent to the Scheme Boundary (Photograph 2). Huntingdon Wood, which is an ancient woodland located directly adjacent to the proposed cable route Scheme Boundary, was not surveyed in the extended habitat surveys.

3.4.37 Woodlands within the Site include parcels consisting of mature, semi-mature and immature trees. A large woodland parcel lies within the centre of East Park Site C. This broadleaved woodland is dominated by oak and includes lime, blackthorn, hazel and willow. The woodland supports a game bird shelter within and includes and scattered bramble. The boundary is surrounded by a dry ditch, with sections of hedgerow. The ground flora includes areas of Spanish bluebells, with many fallen deadwood trees present.

3.4.38 Woodland within East Park Site A and B includes small broadleaved woodland plantation parcels. One woodland within East Park Site A comprises an ash and sycamore dominant plantation, with apple, hawthorn, white poplar, oak, Norway maple and willow also present. The woodland comprises of only semi-mature trees and has a hawthorn dominant hedgerow along the edge. Another woodland plantation within this land parcel includes a linear strip of ash, conifers, field maple, hazel, oak and blackthorn. Surrounding pond P39 in the same land parcel is another woodland plantation comprising oak, field maple, hawthorn, rowan, hazel, ash and Scott's pine, with an understory including scattered bramble and nettle.

Table 3.5: Target Notes

Map Ref.	Details
1	Stone surface used for storage for farming equipment and vehicles.
2	Dead tree with multiple cracks and holes. Outside Scheme Boundary and separated by a ditch. Negligible bat roost potential.
3	Dead tree with cracks and holes in a woodland. Negligible bat roost potential.
4	Single slightly leaning mature oak tree isolated in the field. No bat roost potential.
5	Ash tree on the edge of an off-Site woodland with multiple woodpecker holes. PRF-M.
6	Mature ash tree with many holes and cracks north of the brook. PRF-M. **(Photograph 7)**.
7	Mature willow tree with many cracks and broken limbs. PRF-M.

Map Ref.	Details
8	Mature oak tree located in a woodland coppice. Contains large dead limbs with cracks and several holes. PRF-M.
9	Area of woodland with lots of high bat roost potential trees due to woodpecker activity. Multiple log piles also present suitable as potential wildlife hibernacula.
10	Mature willow tree with multiple limb cracks. PRF-M.
11	Ash tree with a rot hole due to a missing branch. PRF-M
12	Two ash trees with PRF-M.
13	Barn owl box on a pole located adjacent to an unmanaged hedgerow (**Photograph 8)**.
14	Log storage building that is open on one side. Brick walls and corrugated metal roof with wooden beams inside. Walls comprise a double layer of bricks. Cracks are present in the mortar between bricks and within wooden beams. White wash down pillars are present with owl pellets. Moderate bat roost potential **(Photograph 9)**.
15	Dead standing tree with a large hole in the trunk. Possible owl nest present with some white wash down the trunk. PRF-M.
16	Two barns with brick walls. One barn contains slate roofing and the other corrugated metal roofing. The barns contain many cracks between the brick mortar, and also contain gaps under the bargeboards. Roof tiles also include many gaps, which are also present between the tiles and roof tile ridge. Breeding owl/raptor potential and high bat roost potential (**Photograph 10**).

3.5 Protected and Notable Species

Birds

Desk Study

3.5.1 The combined data search returned 5,903 bird records comprising 129 species within 2km of the Scheme Boundary during the last ten years. This included barn owl, bittern, black tern, brambling, Cetti's warbler, common scoter, crossbill, fieldfare, goldeneye, green sandpiper, greenshank, hobby, kingfisher, little ringed plover, Mediterranean gull, merlin, osprey, peregrine,

pintail, red kite, redwing, whimbrel and white-tailed eagle, which are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

3.5.2 Species returned in the 2km search area that are listed on Annex 1 of the Directive 2009/147/EC (Birds Directive) include barnacle goose, bar-tailed godwit, bittern, black tern, great white egret, kingfisher, little egret, Mediterranean gull, merlin, osprey, peregrine, red kite, smew and white-tailed eagle.

3.5.3 A total of 27 Natural Environment & Rural Communities (NERC) Act Section 41 Species were returned from the combined data return including bittern, bullfinch, common scoter, corn bunting, cuckoo, curlew, dunnock, European white-fronted goose, grasshopper warbler, grey partridge, hawfinch, herring gull, house sparrow, lapwing, lesser redpoll, lesser spotted woodpecker, linnet, marsh tit, reed bunting, skylark, song thrush, spotted flycatcher, starling, tree sparrow, turtle dove, yellow wagtail and yellowhammer.

3.5.4 The data search returned 37 BoCC Red List species and 47 BoCC Amber List species within 2km of the Scheme Boundary. Swift and barn owl are further listed under the Cambridgeshire and Peterborough Local Biodiversity Action Plan.

3.5.5 A review of the MAGIC shows that the Site is not allocated as an Important Bird Area.

3.5.6 As listed in Table 3.5, during the extended habitat surveys, several notable structures and tree were recorded within the Site which were considered to potentially support notable species of owl/raptor. These included TN13, TN14, TN15 and TN16.

3.5.7 TN13 comprised a barn owl box situated on a pole adjacent to an unmanaged hedgerow. Close inspection was not possible and therefore occupancy of the box is unknown. The box was recorded in East Park Site B.

3.5.8 TN14 included a log storage building within East Park Site B. The brick building was identified with white wash down the internal pillars, as well as owl pellets on the floor.

3.5.9 TN15 was identified as dead standing tree with a large hole in the trunk. The tree was considered to occupy a potential owl nest, with some white wash recorded down the side of the trunk.

3.5.10 TN16 comprised two barns immediately adjacent the boundary of East Park Site A that were considered to be suitable for a range of breeding owl and raptor species, including barn owl. The barns were not accessed during the survey, and as such, no evidence of breeding owl/raptor was recorded.

Field Survey

3.5.11 Results of field surveys, comprising wintering bird and breeding bird surveys are presented in ***PEIR Volume 2 Appendix 7-2 and 7-3***, respectively.

Bats

3.5.12 The combined data search returned 18 recent bat records comprising 12 species categories within 2km of the Site, dated within the last 10 years. These include an unknown bat species, brown long-eared bat, common pipistrelle, Daubenton's bat, lesser noctule, an unknown Myotis species, Nathusius's pipistrelle, noctule bat, pipistrelle bat species, serotine, soprano pipistrelle and Western barbastelle. No species of bat are listed as LBAP species. No records were returned within the Site itself, with the majority of records located in urban habitat within St. Neots.

3.5.13 A review of the MAGIC website identified one Natural England protected species licence for bats within 2km of the Site. This licence (case reference: EPSM2012-4493) granted the destruction of breeding and resting site for common pipistrelle and brown long-eared bat. The licence was active between 2013 and 2016 and was identified approximately 1.38km south of the Site.

Roosting Bats

3.5.14 During the habitat surveys eight trees within the Site were noted to have PRF-M suitability for roosting bats, as follows: TN5, TN6, TN7, TN8, TN10, TN11, TN12 and TN15. Further information is listed in Table 3.5.

3.5.15 One structure (TN14) was identified within East Park Site B which offered moderate suitability for roosting bats. In addition, two barns immediately outside of East Park Site A (TN16) offered high suitability for roosting bats. Target notes are listed in Table 3.5.

3.5.16 TN14 includes a log storage building in East Park Site B that is open on one side. The storage building contains a double layer of brick walls and a corrugated metal roof with internal wooden beams. Cracks are present in the mortar between bricks and within the wooden beams. The building was classified as with moderate bat roost potential.

3.5.17 TN16 comprises two barns adjacent to East Park Site A. One barn was identified with a slate roof, whilst the other barn contained a corrugated metal roof. The barns contained many cracks between the brick mortar, and also contained gaps under the bargeboards. Roof tiles included many gaps, which are also present between the tiles and roof tile ridge. Both barns were considered to have high bat roost potential.

Foraging and Commuting Bats

3.5.18 Habitats within the Site as a whole are considered to fit the description most closely for land of ‘moderate’ interest for foraging bats in accordance with Bat Conservation Trust (BCT) guidance, with continuous habitat connected to the wider landscape that could be used for commuting and foraging. However, the arable habitats, which the Site is dominated by, offer poor quality habitat for foraging and commuting bats.

3.5.19 Linear features within and around the Site such as tree lines, hedgerows, field margins, ditches, woodland edges and watercourses are considered to offer

the most favourable habitats for foraging/commuting bats, particularly the Pertenhall Brook and the River Kym.

3.5.20 Bat activity surveys to date have identified the following species utilising the Site (and predominantly the field boundary features): common pipistrelle, soprano pipistrelle, Nathusius' Pipistrelle brown long-eared bat, barbastelle, noctule and Myotis sp.

Amphibians

3.5.21 The combined data return included 27 records of amphibian within 2km of the Site during the last ten years. This comprised 17GCN, six common toad, two common frog and two smooth newts. No records were returned within the Site itself, however a GCN record was returned directly adjacent to Scheme Boundary of East Park Site D (pond P44; see ***PEIR Volume 3 Figure 7-7***). This GCN record was made in 2019 and comprised a positive eDNA result from a pond situated adjacent to the Site's northern access track that connects to the B645. Remaining records were distributed throughout all habitats of the wider landscape.

3.5.22 A review of MAGIC identified no granted Natural England licences for GCN within 2km of the Site.

3.5.23 Further review of MAGIC identified five GCN Class Survey Licence Returns in three locations, all of which had confirmed presence of GCN in 2015. The closest of these was identified 1.35km north-east of the East Park Site C.

3.5.24 Five ponds were identified within the Site and a further 21 ponds were identified within 250m of the Site from OS and aerial mapping.

3.5.25 A total of three ponds are located within the Site with a further 23 ponds located within 250m of the Site. The results of GCN Habitat Suitability Assessment and eDNA surveys are presented in ***PEIR Volume 2 Appendix 7-5***.

3.5.26 The vast majority of the Site is arable land, which has negligible suitability for amphibians. Habitats within the Site such as ponds, ditches, woodland, hedgerow bases, tree line bases and associated grassland field-margins provide further suitable habitat for hibernating, commuting and foraging.

3.5.27 During the extended habitat survey, multiple log piles were also identified in an area of woodland directly adjacent to the western Scheme Boundary of East Park Site A (TN9). Such log piles have potential to act as wildlife hibernacula considered suitable for amphibians.

Reptiles

3.5.28 The combined data search returned three records of grass snake within 2km of the Site during the last ten years. No records were returned within the Site itself, with the closest recording located in Little Staughton; c.245m east of East Park Site B.

3.5.29 A review of MAGIC identified no granted Natural England licences for reptiles within 2km of the Site.

3.5.30 The vast majority of the Site is arable land, which has negligible suitability for reptiles. Habitats within the Site such as ponds, ditches, woodland, hedgerow bases, tree line bases and associated grassland field-margins provide further suitable habitat for hibernating, commuting and foraging.

3.5.31 During the extended habitat survey, multiple log piles were also identified in an area of woodland directly adjacent to the western Scheme Boundary of East Park Site A (TN9). Such log piles have potential to act as wildlife hibernacula considered suitable for reptiles.

Badger

3.5.32 Discussed separately within ***PEIR Volume 2 Appendix 7-4***: *Confidential Badger Survey Report*.

Otter

3.5.33 The combined data search returned 21 recent records of otter, the closest of which was located immediately north of East Park Site C on the River Kym. Records including sightings, spraints and prints are located along the length of the River Kym. Recent camera trap records were also provided within the data search located on the Riseley Brook, which connects directly to the Pertenhall Brook. Records primarily centre on the River Great Ouse

3.5.34 Returned records included live and dead sightings of otter, as well as signs such as spraints and prints. A confirmed holt was identified 945m north of the Site, with a possible holt also identified 650m north.

3.5.35 No otter field signs were identified within the Site during the extended habitat survey.

3.5.36 Several on-Site and adjacent watercourses were considered suitable for otter, including an unnamed stream located within East Park Site B that connects to Pertenhall Brook, Pertenhall Brook and the River Kym. Such watercourses were considered to provide suitable foraging and commuting opportunities, as well as locations for establishing holts and resting places in areas of riparian vegetation.

3.5.37 Unsurveyed watercourses within and adjacent to the Site that were identified through aerial imagery may also be suitable for otter. These include Honeydon Brook, Colmworth Brook, South Brook and Duloe Brook.

Water Vole

3.5.38 The combined data search returned nine records of water vole within 2km of the Site. Of these, none were identified within the Site itself. Records were made between 2018 and 2022, with the closest record identified 1.1km north-west of East Park Site C along the River Kym. Records comprised live sightings, latrines, burrows and feeding remains.

3.5.39 Six records were identified c.1.65km south-west of Eaton Socon Substation situated at the most southern end of the proposed cable route. The clustered records were recorded along a wet ditch, which itself spans c.1.7km east before connecting to the Honeydon Brook / Colmworth Brook which runs directly along the Scheme Boundary of the proposed cable route south of Eaton Socon substation.

3.5.40 Two additional records were identified c.1.8km east of the Site in Hen Brook located within St. Neots.

3.5.41 No signs of water vole were identified within the Site during the extended habitats surveys. Watercourses and ditches present within and immediately adjacent to the Site offer suitable habitat for the species, with foraging, commuting and burrowing opportunities available. The most suitable watercourses included in the habitat surveys comprise the River Kym, Pertenhall Brook and an unnamed stream located within East Park Site B that connects to Pertenhall Brook.

3.5.42 Several other suitable watercourses may also include unsurveyed sections of Honeydon Brook, Colmworth Brook, South Brook and Duloe Brook.

Hazel Dormouse

3.5.43 The combined data search returned no records of hazel dormouse within 2km of the Site during the past ten years.

3.5.44 A review of MAGIC identified no granted Natural England licences for dormice within 2km.

3.5.45 During the habitat survey no signs of hazel dormouse were recorded. The dominant arable habitat within the Site provides negligible suitability for hazel dormouse. Areas of ancient woodland located outside of the Site likely offer suitable habitat to support this species, however such woodlands are small in size and sparsely located within the landscape scale reducing the likelihood of hazel dormouse presence.

White-clawed Crayfish

3.5.46 The combined data search returned no records of white-clawed crayfish during the previous ten years.

3.5.47 During the extended habitat survey, several watercourses within and adjacent to the Site were considered suitable to support this species. Watercourses considered to be suitable include the River Kym, Pertenhall Brook and an unnamed stream located within East Park Site B.

3.5.48 Several other watercourses identified from aerial imagery may also provide suitable habitat for the species, which are scheduled to be included in extended habitat surveys in 2024. These include Honeydon Brook, Colmworth Brook, South Brook and Duloe Brook, located within the grid connection route.

Other Notable Species

Flora

3.5.49 Of the plant species returned in the combined data search, only bluebell was listed under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). A total of 13 records of bluebell were returned in the data search, with one record located within the Site itself. This included bluebell in a parcel of woodland situated in the centre of East Park Site A.

3.5.50 Bluebell was identified directly adjacent to the Site during the extended habitat surveys with the species recorded in woodlands neighbouring East Park Site B and C.

Fish

3.5.51 The combined data search retuned no records of notable fish within 2km of the Site during the last ten years.

3.5.52 Watercourses identified within and adjacent to the Site are considered suitable for supporting notable species of fish, including bullhead and European eel. These include an unnamed stream in East Park Site B, Pertenhall Brook and the River Kym. Other potentially suitable watercourses may include Honeydon Brook, Colmworth Brook, South Brook and Duloe Brook.

Invertebrates

3.5.53 Of the invertebrate species returned in the combined data search, only Norfolk hawker *Aeshna isosceles*, purple emperor *Apatura iris* and white-letter hairstreak *Satyrium w-album* are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

3.5.54 Thirty records of Norfolk hawker were returned during the last ten years, with all records (dating between 2019 and 2022) situated outside the Site along the River Great Ouse in St. Neots. Purple emperor was recorded once in 2022 approximately 1.8km west of East Park Site A. White-letter hairstreak was recorded four times between 2018 and 2022, with all records located outside the Site. Two of these records were identified directly adjacent to the south-eastern boundary of East Park Site B (directly west of Little Staughton), along an elm-rich hedgerow which continues north along the Scheme Boundary.

3.5.55 The data search also identified 37 invertebrate species (606 records) listed under Section 41 of the NERC Act/UK Biodiversity Action Plan within 2km of the Site over the last ten years. Of these, only four records were identified within the Site itself. These four records (dating between 2019 and 2020) all related to small heath situated within either East Park Site A or B. The remaining 36 priority species were distributed throughout the wider landscape. These include moths, butterflies and dragonflies, such as beaded chestnut, blood-vein, brindled beauty, brown-spot pinion, buff ermine, centre-barred sallow, cinnabar, crescent, deep-brown dart, dot moth, dusky thorn, ghost moth, green-brindled crescent, grey dagger, knot grass, lackey, large nutmeg, large wainscot, latticed heath, lunar yellow underwing, mottled rustic,

mouse moth, Norfolk hawker, oak hook-tip, powdered quaker, rosy rustic, rustic, sallow, shaded broad-bar, shoulder-striped wainscot, small emerald, small phoenix, small square-spot, sprawler, white ermine and white-letter hairstreak.

3.5.56 The habitats within the Site are not considered to be of a floristic or structural quality which could support significant assemblages of invertebrates or notable species. Unmanaged marshy riparian areas bordering on-Site wetland habitats (e.g. watercourses and wet ditches) may have potential to support Norfolk hawker, whilst any sections of hedgerow containing high concentrations of elm may support white-letter hairstreak. On-Site woodlands dominated by oak (particularly ancient woodland) may also have potential to support purple emperor populations present in the wider landscape.

Mammals

3.5.57 The data search returned records of other notable mammal species including hedgehog and brown hare within 2km of the Site during the last ten years. Of these, none were identified within the Site itself.

3.5.58 The hedgerows, woodland, tree lines and grassland field margins within the Site provide the greatest opportunities for breeding, foraging and sheltering brown hare and hedgehog. Brown hare were frequently noted within the Site incidentally during surveys.

3.6 Invasive Non-native Species

3.6.1 The combined data search returned 12 records of invasive non-native plant species, as listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), within 2km of the Site during the last ten years. Of these, non were located within the Site itself. Species identified in the wider landscape include Himalayan balsam, Nuttall's waterweed, floating pennywort, wall cotoneaster, water fern and Japanese rose. The closest of these records

relates to Himalayan balsam identified in 2014 approximately 700m south-east of Eaton Socon substation.

3.6.2 Invasive, non-native animals were returned in the data search. Multiple grey squirrel and Chinese muntjac records were identified throughout the wider landscape during the last ten years. Birds listed under Schedule 9 that were returned in the data search include Egyptian goose, black swan, Canada goose, golden pheasant, Mandarin duck, red-crested pochard, barn owl, barnacle goose, red kite and white-tailed eagle.

3.6.3 No invasive, non-native species were identified within the Site during the extended habitat surveys.

ANNEX 1

Photographs

Photographs	
Photograph 1: An example of an arable field situated within the Site.	**Photograph 2:** An example of an on-Site grassland field margin. Pictured also is a woodland located adjacent to East Park Site C.
Photograph 3: An example of a typical managed and intact species-poor hedgerow located throughout the Site.	**Photograph 4:** Pictured is a wet field boundary ditch, here situated within East Park Site C.

Photographs

Photograph 5: Pertenhall Brook situated within eastern extent of East Park Site A.

Photograph 6: The River Kym located adjacent to the northern Scheme Boundary of East Park Site C.

Photograph 7: TN6- An example of a high bat roost potential ash tree recorded directly adjacent to the Site.

Photograph 8: TN13 – A barn owl box located on a pole within the Site.

Photographs

Photograph 9: TN14 - An on-Site building used for storage within East Park Site B.

Photograph 10: TN16 – One of two on-Site barns situated adjacent East Park Site A.

Photograph 11: Pertenhall Brook within western extent of East Park Site A

Photograph 12: Unnamed tributary of the Pertenhall Brook within East Park Site B