THE DROVES
SOLAR FARM

The Droves Solar Farm

Chapter 7: Ecology and Biodiversity (Clean)

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7 Ecology and Biodiversity

7.1 Introduction

7.1.1 This chapter of the Environmental Statement (ES) presents the findings of the Environmental Impact Assessment (EIA) of effects on Ecology and Biodiversity as a result of the Scheme.

7.1.2 This chapter identifies and proposes measures to address the potential impacts and likely significant effects in relation to Ecology and Biodiversity, during the construction, operational and decommissioning phases.

7.1.3 The information presented within this chapter has been informed by the Scheme information provided in **ES Chapter 5: The Scheme [APP/6.1]**.

7.1.4 The following aspects have been considered within the Ecology and Biodiversity assessment process:

- An assessment of potential effects upon statutory and non-statutory ecological designations
- An assessment of potential effects upon ecological habitats (including irreplaceable habitats) and flora (including invasive non-native species); and
- An assessment of potential effects upon protected faunal species.

7.1.5 This Ecology and Biodiversity chapter has been prepared by Aspect Ecology Ltd (see ES **Appendix 1.1: Statement of Competence [APP/6.4]**).

7.1.6 This document has been updated at Deadline 6 to consider the Longmarsh Green Energy project, for which the EIA Scoping Report was submitted to PINS in October 2026, in relation to the cumulative assessment of the Scheme. This demonstrates the proactive and robust nature of the Applicant's cumulative assessment, even though the information for Longmarsh Green Energy has been received at a late stage of the Examination. The document references have not been updated from the original submission. Please refer to the **Guide to the Application [APP/1.3.8]** for the list of current versions of documents.

7.2 Consultation

Scoping Opinion

7.2.1 On 8 November 2024, the Applicant submitted a Scoping Opinion Request to the Planning Inspectorate (PINS) (see **ES Appendix 2.1: EIA Scoping Opinion Request [APP/6.4]**) in support of a request for a Scoping Opinion from PINS on behalf of the Secretary of State (SoS) pursuant to Regulation 10 of the EIA Regulations.

7.2.2 A Scoping Opinion (see **ES Appendix 2.2: Scoping Opinion [APP/6.4]**) was adopted by PINS on 18 December 2024.

7.2.3 The issues raised in the Scoping Opinion relating to Ecology and Biodiversity are summarised and responded to within **ES Appendix 7.1: Consultation and Legislation, Planning Policy and Guidance [APP/6.4]** which demonstrates how the matters raised in the Scoping Opinion are addressed in this ES.

Statutory Consultation and Preliminary Environmental Information Report (PEIR)

7.2.4 Statutory consultation was held between 21 May 2025, and 9 July 2025. Relevant responses to the PEIR relating to Ecology and Biodiversity and how these have been addressed through the ES are set out within **ES Appendix 7.1: Consultation and Legislation, Planning Policy and Guidance [APP/6.4].**

7.2.5 A further round of targeted consultation was undertaken between 3 September 2025 and 1 October 2025 following changes to the development boundary area of the Scheme presented in the PEIR and during Stage Two Statutory Consultation. Further detail regarding the targeted consultation is provided in **ES Chapter 1: Introduction [APP/6.1]**.

7.3 Legislation, Planning Policy and Guidance

7.3.1 A summary of applicable legislation, planning policy and other guidance documents against which the Scheme will be considered relating to assessment of Ecology and Biodiversity is set out in **ES Appendix 7.1: Consultation and Legislation, Planning Policy and Guidance [APP/6.4]**.

7.4 Assessment Assumptions and Limitations

7.4.1 The Ecology and Biodiversity assessment has considered the following assumptions and limitations:

- Survey limitations: All of the species that are present at the Site would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent during different seasons
- The survey work undertaken has been completed in accordance with standard guidelines, within the optimal seasonal period(s), therefore allowing a robust assessment in relation to the relevant receptors
- Attention was paid to the presence of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, the detectability of such species varies due to a number of factors, e.g. time of year, Site management, etc., and hence the absence of invasive species should not be assumed even if no such species were detected during the Phase 1 Survey. Nonetheless, the level of survey information

undertaken is considered to provide a robust basis, whilst where uncertainty remains a precautionary approach to risk of effects is incorporated to the assessments; and

- A recognised limitation of bat activity surveys is that bat detectors can only provide an index of activity rather than determine absolute numbers of bats. The results of bat activity surveys should therefore only be considered indicative of the amount of use bats make of an area rather than a measure of the abundance of bats. In addition, some bat species that are more difficult to detect because of their quiet echolocation calls, such as Brown Long-eared Bats, may be under-recorded. These limitations have been taken into account within the evaluation and assessment of the survey results.

7.5 Assessment Methodology

7.5.1 This section sets out the scope and methodology for the assessment of the impacts of the Scheme on Ecology and Biodiversity.

7.5.2 The key issues for the assessment of potential ecological effects relating to the Scheme are likely to be:

- Short-term effects arising from the construction or decommissioning phases, such as potential air quality, hydrological, lighting and noise, and habitat loss impacts; and
- Long term effects, effects that last for the operational phase only (unless otherwise specified below).

Sources of Information

7.5.3 The following sources of information that have been consulted in the preparation of this chapter:

- To inform the assessment of ecological impacts associated with the Scheme, and confirm the existing baseline conditions, ecological survey work has been undertaken during 2024 and 2025, to establish the baseline conditions present. The methodology utilised for the survey work can be split into three main areas: desktop study, habitat survey, and faunal surveys
- Further details on survey methodologies are provided in the Baseline Ecological Appraisal (ES Appendix 7.2: Baseline Ecological Survey Report [APP/6.4]), while a summary of the survey methodology along with the key ecological features that are considered within this preliminary assessment is set out below
- In order to compile background information on the Site and its immediate surroundings, desktop information has been obtained and reviewed, including information and records from Norfolk Biodiversity Information Service (NBIS), the online Multi-Agency Geographic Information for the Countryside (MAGIC) database, the Woodland Trust database and other available information sources in April 2024 and September 2025. In particular, the presence of non-statutory ecological designations and records of protected and notable species within 2km of the Site have been obtained in line with best

practice. A 2km search radius is deemed an appropriate Study Area to identify non-statutory designated sites and existing records of protected and priority species; and

- Ecological survey work has been undertaken at the Site during 2024 and 2025, full details of which are set out within the accompanying Baseline Ecological Appraisal (ES Appendix 7.2: Baseline Ecological Survey Report [APP/6.4]). Survey work completed includes extended Phase 1 [Ref 7-7] / UK Habitats 2.0 [Ref 7-8] habitat and general faunal survey work undertaken in April to August 2024 and April to September 2025; Bat survey work undertaken during April to October 2024; Badger survey in April 2024; Breeding Bird surveys in April to July 2024; Wintering Bird surveys undertaken in October 2024 to March 2025; Great Crested Newt Triturus cristatus (GCN) surveys in June 2024 and June 2025; and Reptile surveys undertaken in April to June 2025.

7.5.4 The survey results have been used to inform the initial consideration of constraints and design in relation to the Scheme, along with consideration of likely significant effects and potential mitigation and enhancement measures to be incorporated.

Study Area

7.5.5 To inform the assessment and extent of the Study Area, consideration has been given to the Zone of Influence (ZoI) of the Scheme. The ZoI is defined as the area over which ecological features may be affected by the biophysical changes caused by the Scheme and associated activities. The extent of such changes will typically reduce over distance, and effects experienced are dependent on the sensitivity of individual habitats, species or other ecological features, such that it is difficult to define a specific zone of influence which captures all potential effects arising from the Scheme. As such, two broad zones have been identified:

- A primary zone of influence largely relating to the Site itself, incorporating habitats and associated species directly affected by the footprint of the Scheme and associated works (in terms of habitat loss or damage). This zone also includes areas affected by factors such as noise, vibration, lighting, dust and pollution, the effects of which will be focused within the nearby surroundings (i.e. within 100m) of the Site. Survey work has specifically focused on this area, to allow an assessment of habitats and species directly affected by the Scheme; and
- Beyond this, a wider (or secondary) zone of influence exists, where ecological features may be subject to wider scale effects such as air pollution from traffic or water pollution within the wider river catchment. The assessment of features within this zone is largely based on background information identifying ecological designations, known habitats or species populations of importance which could be sensitive to such wider scale effects and is based on professional judgement and guidance where appropriate in relation to individual receptors.

7.5.6 In the first instance, where background information indicates the Order Limits lie within a known Impact Risk Zone (IRZ – as identified by Natural England) associated with Statutory Ecological Designations.

7.5.7 In addition, further ecological designations of international importance were searched for on the basis of a 25km search radius from the Site. Accordingly, in this context, the Study Area for Statutory Designations of international importance is defined as a 25km search radius from the Site (except where more distant designations are included in relevant IRZs in line with the above).

7.5.8 Statutory Designations of national importance were searched for on the basis of a 5km search radius from the Site. Accordingly, the Study Area for Statutory Designations of national importance is defined as a 5km search radius from the Site (except where more distant designations are included in relevant IRZs in line with the above).

7.5.9 Non-Statutory Designations (i.e those of county or district level importance) were searched for on the basis of a 2km search radius from the Site. Accordingly, the Study Area for Non-Statutory Designations is defined as a 2km search radius from the Site.

7.5.10 Following consideration in regard to the relevant ZoI (including comments received as part of the Scoping Opinion), the extent of the Study Area includes a search area extending up to 25km from the Site in relation to statutory designations, with more detailed background records of protected species and non-statutory designations obtained from within 2km of the Site. The land within the Order Limits has been subject to survey work as described above and within the accompanying Baseline Ecological Appraisal (**ES Appendix 7.2: Baseline Ecological Survey Report [APP/6.4]**).

Potential Impacts

7.5.11 Embedded mitigation measures being incorporated into the design and construction of the Scheme are set out in Section 7.7 below. Prior to the implementation of any mitigation (embedded or additional), the Scheme has the potential to have an effect on ecological receptors (beneficial or adverse), during the construction, operational and decommissioning phases in the following ways:

- Air quality impacts on Statutory and Non-Statutory Ecological Designations
- Hydrological impacts on Designations
- Lighting and noise impacts on Designations
- Habitat loss and degradation, including loss or degradation of irreplaceable habitats and Priority Habitats (those habitats listed within the UK Biodiversity Action Plan (2011))
- Spread of invasive species
- Killing and injury of faunal species
- Loss of habitat for faunal species; and
- Disturbance of protected species through construction activities and lighting.

Impact Assessment Methodology

7.5.12 The Ecology and Biodiversity assessment follows the general approach to undertaking EIA, explained in ES Chapter 2: EIA Process and Methodology **[APP/6.1]**, albeit it has been modified to align more closely with the CIEEM publication 'Guidelines for Ecological Impact Assessment in the UK and Ireland'.

7.5.13 The methodology for attributing sensitivity of receptors, magnitude of impacts and the significance of effects in relation to Ecology and Biodiversity is described further below in this chapter of the ES, as is how an effect is determined to be significant or not. The geographical scale of reference at which ecological receptors are assigned value is provided within Table 7-1.

Table 7-1 Geographical Scales of Reference in relation to ecological receptors

Designation (Importance) based on geographical scale	Receptor Significance
International	Statutory internationally important sites: SPAs, SACs and Ramsar sites supporting an internationally important population of a species or species assemblage.
National	Statutory nationally important sites: SSSIs and National Nature Reserves (NNR) supporting a nationally important population of a species or species assemblage.
Regional (Statutory or Non-Statutory)	Statutory Local Nature Reserves (LNR) or non-statutory supporting locally important populations of a species or species assemblage.
County, District and Local (Parish or Neighbourhood)	Non-statutory sites supporting a species population or species assemblage of importance at the County to Local level, or habitats of elevated local bearing.

Sensitivity of Receptor

7.5.14 The sensitivity of likely impacted receptors, defined depending on the vulnerability, recoverability and value/importance of the receptor, to potential effects arising from the Scheme has been assessed in line with the below, as detailed in Table 7-2.

7.5.15 Professional judgement is applied to assign levels of sensitivity (Negligible – Very High) considering the geographic frame of reference (Site Level – International Level), as informed by CIEEM guidelines.

Table 7-2 Sensitivity Criteria of Identified Receptor

Sensitivity	Geographic Scale	Description

Very High	International	Statutory internationally important sites: SPAs, SACs and Ramsar sites supporting an internationally important population / assemblage of species and/or habitat(s).
High	National	Statutory nationally important sites: SSSIs and NNRs supporting a nationally important population / assemblage of a species and/or habitat(s).
Medium/High	Regional	Statutory Local Nature Reserves (LNR) or non-statutory supporting regionally important populations / assemblage of species and/or habitats.
Medium	County or District	Non-statutory designations such as County Wildlife Sites, Road-side Nature Reserves, and Local Wildlife Sites supporting county or district important populations / assemblages of species and / or habitat(s).
Low	Local Parish or Neighbourhood	Species and habitats of conservation value at the local level (i.e. those listed within the Norfolk Biodiversity Partnerships Species and Habitats Action Plans).
Negligible	Site	Species and habitats that are not protected and are common and widespread.

7.5.16 Based on the criteria set out in Table 7-2 the sensitivities of identified receptors are shown below in Table 7-3.

Table 7-3 Sensitivity of Identified Receptor

Sensitivity	Identified Receptor
Very High	Breckland SPA
	Norfolk Valley Fens SAC
	Breckland SAC
	Other international designations within 25km of the Site (Roydon Common Ramsar, Roydon Common & Dersingham Bog SAC, Dersingham Bog Ramsar, River Wensum SAC, The Wash SPA & Ramsar, and The Wash and North Norfolk Coast SAC)
High	River Nar SSSI

	Breckland Forest SSSI
	Other national statutory designations within 5km of the Site (Castle Acre Common SSSI, Narborough Railway Embankment SSSI and East Walton & Adcock's Common SSSI)
	Irreplaceable Habitats (Veteran Trees)
	Invasive Non-native Species (Schedule 9)
Medium	River Road RNRs
	Other non-statutory ecological designations within 2km of the Site (Land Adjacent to River Nar CWS ref. 895, 945 & 902; Priory Meadow CWS; Land West of Castle Acre CWS; Mill House Lake CWS; Castle Acre Castle CWS; Mill House CWS; Narford Lake CWS; The Carr CWS; Lynn Road Disused Railway CWS; Priory Road RNR ref. U22074; and Walton Road ref. C65.)
	Priority Habitats (Lowland Woodland, Native Hedgerows, Priority Ponds)
Low	None
Negligible	Other Habitats (Arable Land; Modified Grassland)

Magnitude of Impact

7.5.17 The categorisation of the magnitude of impact takes into account the following factors:

- Extent
- Duration
- Frequency; and
- Reversibility

7.5.18 Professional judgement, best practice guidance, and relevant legislation are also considered.

7.5.19 The magnitude of impact is the level of change caused by the Scheme and is defined in Table 7-4.

Table 7-4 Criteria for Determining Magnitude of Impact

Magnitude of Impact	Description
High	Adverse: A permanent or long-term effect on the receptor, which may result in severe damage to key characteristics and implications for the integrity of the receptor or its conservation status.

	Beneficial: A permanent or long-term effect on the receptor, resulting in large increase in the key characteristics, ecological value or status.
Medium	Adverse: Impacts resulting in partial loss of or damage to a receptor, which could have implications for the integrity of the receptor or its conservation status.
	Beneficial: Impacts resulting in substantial gain or enhancement to a receptor, which could have positive implications for the integrity of the receptor or its conservation status.
Low	Adverse: Short-term or temporary impacts resulting in only minor loss of or damage to a receptor, being unlikely to have implications for the integrity of the receptor or its conservation status.
	Beneficial: Short-term or temporary impacts resulting in only minor gain or enhancement of a receptor, being unlikely to have implications for the integrity of the receptor or its conservation status.
Negligible	No effect or only a short-term reversible impact with no long-term effect on the receptor.

Categorising Scale of Effect

7.5.20 The scale of effect that the Scheme may have on an impacted receptor will be influenced by a guiding combination of the sensitivity of the identified receptor and the magnitude of impact.

7.5.21 There are four categories demonstrating the scale of effect:

- Negligible
- Minor
- Moderate; and
- Major.

7.5.22 The scale of effect is determined through use of the table below (Table 7-5) and using professional judgement.

Table 7-5 Scale of Effect

Magnitude of Impact	Sensitivity			
	High	Medium	Low	Negligible
High	Major	Major/Moderate	Moderate	Negligible

Medium	Major/Moderate	Moderate	Moderate/Minor	Negligible
Low	Moderate	Moderate/Minor	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

7.5.23 The nature of effects will be defined as either: beneficial or adverse.

Determining the Significance of Effect

7.5.24 Influenced by the scale of effect, which is a combination of the sensitivity of the receptor and the magnitude of impact, a judgement is made as to whether the effect is considered to be significant or not. To aid in determining whether an effect on an ecological receptor is significant or not, general guidelines have been produced that directly relate to the scale of effect:

- Major and moderate scale effects would be considered significant
- Minor scale effects are determined on the basis of professional judgement; and
- Negligible effects would not be significant.

7.5.25 However, the CIEEM Guidance is clear that significance in relation to individual effects is assigned based on professional judgement, taking into account the appropriate geographic scale. Where the above significance criteria do not align with the application of professional judgement, a conclusion on whether an effect is significant or not has been made based on professional judgement and not the scale of effect. Where this deviation from the standard methodology has been applied, it has been clearly presented in the ES chapter.

7.6 Baseline Conditions

The Order Limits

7.6.1 The Scheme is located within the administrative areas of NCC and BC, who are the host authorities. In addition, an administrative boundary of Borough Council of King's Lynn & West Norfolk (BCKLWN) is located adjacent to the Scheme. A full description of the Order limits is provided in ES Chapter 5: The Scheme **[APP/6.1]**.

Existing Baseline

7.6.2 The existing baseline conditions are assessed in this section and are derived from the completed desk and field-based studies, further details of which are set out within the accompanying Baseline Ecological Appraisal (ES Appendix 7.2: Baseline Ecological Survey Report **[APP/6.4]**).

Ecological Designations

7.6.3 The Site does not contain, nor is it located immediately adjacent to, any statutory ecological designations, the closest of which is the River Nar SSSI, which is located approximately 0.27km north of the Site.

7.6.4 Statutory ecological designations (including those of an international and national level importance), identified within the Study Areas with their respective orientation and distance from the Site, are summarised in Table 7-6, below, and shown at ES Figure 7.1: Ecological Designations [APP/6.3]. Table 7-6 also includes a brief account of qualifying features.

Table 7-6 Statutory Ecological Designations identified within the Study Area

Designation Name	Nearest Distance and Direction	Qualifying Feature / Reasons for Notification
River Nar SSSI	0.27km north	Habitat (Chalk River) and associated wetland assemblage; including of relevance Lapwing Vanellus vanellus.
Castle Acre Common SSSI	0.44km north	Habitat (Unimproved Grassland) and associated wetland assemblage; including of relevance Lapwing.
Breckland SPA	2.6km south west	Qualifying species in relation to Breckland SPA include breeding populations of Stone-curlew, Nightjar Caprimulgus europaeus, and Woodlark Lullula arborea.
Breckland Forest SSSI	2.6km south west	Nightjar and Woodlark.
Narborough Railway Embankment SSSI	2.8km south	Habitat (Calcareous Grassland), including associated floral and invertebrate assemblage
Norfolk Valley Fens SAC	3.6km north west	Habitats.
East Walton and Adcock's Common SSSI	3.3km north west	Habitats and Fauna (Invertebrates only).
Breckland SAC	8km south	Habitats and GCN
Roydon Common Ramsar	12.7km north west	Habitats and Fauna (Invertebrates only).

Designation Name	Nearest Distance and Direction	Qualifying Feature / Reasons for Notification
Roydon Common & Dersingham Bog SAC	12.7km north west	Habitats.
Dersingham Bog Ramsar	18.5km north west	Habitats and Fauna (Invertebrates only).
River Wensum SAC	12.6km north east	Habitats and Fauna (Invertebrates only).
The Wash SPA & Ramsar	21km north west	Wintering Waterfowl.
The Wash & North Norfolk Coast SAC	21km north west	Habitats and Fauna (Harbour Seal Phoca vitulina and Otter Lutra lutra.

7.6.5 The Study Area for non-statutory ecological designations encompasses those non-statutory designations located within a 2km search radius around the Site. The non-statutory ecological designations are identified in Table 7-7 (along with their respective distance and orientation from the Site) and shown at ES Figure 7.1: Ecological Designations **[APP/6.3]**.

7.6.6 A single Roadside Nature Reserve (RNR, ref U33086) is located along River Road within the Order limits (as shown at ES Figure 7.1: Ecological Designations **[APP/6.3]**). A further RNR is located along River Road, approximately 0.05km north of the Order limits, whilst all other identified ecological designations are situated over 0.2km from the Order limits.

Table 7-7 Non-Statutory Ecological Designations identified within the Study Area

Non-Statutory Designation	Nearest Distance and Orientation
River Road U33086 RNR	Within the Order limits (situated along River Road within the highway verge located between individual parcels).
River Road U22086 RNR	0.05km north.
Land Adjacent to the River Nar CWS ref. 985	0.5km north.
Priory Meadow CWS	1km north.
Lake West of Castle Acre CWS	0.35km north.

Non-Statutory Designation	Nearest Distance and Orientation
Mill House Lake CWS	0.96km north.
Land Adjacent to the River Nar CWS ref. 895	0.42km north west.
Land Adjacent to the River Nar CWS ref. 902	0.5km north west.
Land Adjacent to the River Nar CWS ref. 945	0.2km north east.
Priory Road U22074 RNR	0.8km north.
Mill House CWS	0.96km north.
Narford Lake CWS	1.5km north west.
The Carr CWS	1.5km north west.
Castle Acre Castle CWS	0.95km north east.
Lynn Road Disused Railway CWS	1.6km south.
Walton Road C65 RNR	1.7km north west.

Habitats

7.6.7 The Site is dominated by large, intensively managed arable fields, with areas under rotation for pig grazing. Field boundary features include hedgerows, tree lines and scattered trees, along with a number of additional habitats, comprising the following:

- Arable
- Game Cover Crops
- Modified Grassland
- Other Neutral Grassland
- Dense and Scattered Scrub
- Tall Forb Vegetation
- Hedgerows and Tree Lines
- Trees (including veteran trees)
- Woodland
- Ponds

- Ditches
- Buildings and Hardstanding; and
- Bare Ground.

7.6.8 A full description of the individual habitats and ecological features within the Site is set out within the Baseline Ecological Survey Report (ES Appendix 7.2: Baseline Ecological Survey Report **[APP/6.4]**), whilst the location and extent of individual habitats and features are shown at ES Figure 7.2: Habitats and Ecological Features **[APP/6.3]**. A summary of the habitats considered to be of ecological importance occurring within and adjacent to the Site (i.e. within the primary zone of influence) is set out in Table 7-8.

Table 7-8 Summary and Evaluation of Important Ecological Habitats and Features Present Within and Adjacent to the Study Area

Habitat Type	Brief Description	Sensitivity
Veteran Trees	Considerable numbers of mature trees situated within tree lines and hedgerows, include veteran trees (veteran trees represent irreplaceable habitat and are therefore important ecological habitats). Other trees (non-veteran) provide ecological value albeit do not represent Priority Habitats and, as such, are not considered important ecological habitats for the purpose of assessment in this ES chapter.	High
Woodland	Blocks of woodland including coniferous plantation, broad-leaved woodland and mixed woodland present in varying condition.	Medium
Ponds	Ten ponds are present within the Order limits and immediately adjacent/enclosed areas, the majority of which were recorded to be in relatively poor condition, predominantly linked with game management.	Medium
Hedgerows and Tree lines	The majority of field boundaries are marked by hedgerows, forming vegetated corridors (albeit the majority of these are species-poor). Nonetheless, all hedgerows are likely to qualify as a Priority Habitat based on the standard definition.	Medium

7.6.9 Other habitats present within the Site include arable, improved and semi-improved grassland, trees (non-veteran), scrub, ditches, hardstanding and bare ground. Such habitats are

evaluated within the Baseline Ecological Survey Report (**ES Appendix 7.2: Baseline Ecological Survey Report [APP/6.4]**) and are not considered to form habitats of ecological importance. As per Table 7-3, these receptors are considered to be Negligible sensitivity.

7.6.10 With regard to trees, it is noted that assessment within the PEIR combined consideration of all trees (including veteran). However, veteran trees form an irreplaceable habitat and therefore represent important ecological habitats, which should be subject to detailed assessment including in line with CIEEM guidance. As such, veteran trees have been considered separately within this ES chapter. Other (non-veteran) trees do not form priority habitats and are not included in standard lists of important sites or features (CIEEM, 2024) and, accordingly, are not considered to form important ecological habitats in the context of the Site. As set out in the PEIR, CIEEM guidance defines a 'significant effect' as: *"an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for 'biodiversity in general'…."*, which therefore would not apply in relation to (non-veteran) trees at the Site. As such, in line with other habitats that do not form important ecological habitats (including for consistency and to better accord with relevant guidance), other trees are evaluated within the Baseline Ecological Survey Report (Appendix 7.1 **[APP/6.4]**) and are not subject to further specific consideration within this ES chapter.

Faunal Species

7.6.11 As set out above, specific faunal survey work has been undertaken at the Site during 2024 and 2025 in regard to bats, badger, breeding and wintering birds, reptiles and GCN. In addition, general observations were made of any faunal use of the Site with particular attention paid to the potential presence of protected or notable species.

7.6.12 Further details of this survey work are included in the Baseline Ecological Survey Report (ES Appendix 7.2: Baseline Ecological Survey Report **[APP/6.4]**). A summary of faunal species considered to be of ecological importance at the Site and its immediate surroundings (i.e. the primary zone of influence) is set out in Table 7-9 below.

Table 7-9 Summary of Faunal Species of Potential Ecological Importance

Species Group	Brief description of usage	Sensitivity
Bats (roosting)	A small number of buildings and suitable structures are present within and immediately adjacent to the Site, which includes buildings suitable for roosting bats (with roosting activity confirmed for a single building adjacent to the Site). In addition, a substantial number of mature trees are present across the Site (located within field boundary vegetation), which provide suitable features for use by roosting bats.	Low
Bats (foraging/commuting)	Bat activity survey work has been undertaken at the Site across the 2024 seasonal period. The vast majority of bat activity recorded across the Site was composed of Common Pipistrelle and Soprano	Negligible – Medium/High

Species Group	Brief description of usage	Sensitivity
	Pipistrelle, albeit other bat species were recorded at the Site, including in particular numbers of Barbastelle registrations.	
Badger	Specific badger survey work was undertaken at the Site during 2024, which identified a small number of badger setts, in particular within the south west of the Site, albeit evidence of badger activity was recorded to be lacking across substantial areas of the Site. The results of this survey are set out within ES Appendix 7.2: Baseline Ecological Survey Report **[APP/6.4]**.	Negligible
Birds	14 priority bird species were confirmed to be breeding within the Site (including four Red List species), with a further 10 probably breeding and 6 possibly breeding based on the specific breeding bird survey work undertaken in 2024. Many of the breeding territories are associated with the mature boundary hedgerows and trees, and associated with the field margins, albeit 121 Skylark territories were recorded within the arable fields, whilst livestock units were recorded to be used by a number of bird species, including two probable breeding pairs of Eurasian Curlew. Of all the bird species recorded during the Wintering Bird Surveys, 53 are Birds of Conservation Concern (BoCC, red or amber listed), species listed in Schedule 1 of The Wildlife and Countryside Act 1981, or UK Biodiversity Action Plan species. Large numbers of Northern Lapwing *Vanellus vanellus* were recorded to be using the Site, with numbers peaking in February. Some parts of the Site consistently held more birds than others, namely areas of production (notably the various livestock units and winter cereal fields) or discrete agricultural landscape features created or maintained for wildlife such as mature boundary hedges, scrub, cultivated margins, bird seed plots, or pits.	Low – Medium/High
Other Mammals	Other notable/priority mammal species including Brown Hares and Hedgehogs are likely to make use of suitable habitats within the Site.	Negligible
Reptiles	The majority of the internal field areas are largely unsuitable for reptiles, due to intensive arable production. The field boundary vegetation, including grassland margins, hedgerow bases and ponds provide potentially suitable habitats for reptiles, albeit no background records for reptiles from the last 20 years were returned from NBIS. Reptile survey work was undertaken across the site during	Negligible

Species Group	Brief description of usage	Sensitivity
	April to June 2025, which recorded the presence of very low numbers of common reptile species (Grass Snake and Common Lizard).	
Amphibians (GCN)	A number of ponds are present within the Site and surrounding areas, including apparently suitable breeding opportunities for GCN. Specific eDNA survey work was undertaken of all suitable/accessible ponds within 250m of the Site during June 2024, which recorded negative results (indicating GCN likely to be absent). Further eDNA surveys of accessible ponds located between 250m and 500m of the Site was undertaken during 2025 following consultation comments, which recorded the presence of GCN within three of the ponds within this distance. These ponds, OP42, OP44b, and OP45 are shown on ES Figure 7.3: Pond Location and Survey Results **[APP/6/3]**, and are 185m, 212m, and 656m from the site boundary, respectively. Since undertaking this survey work, the Order limits have been adjusted, being reduced in the east and increased in the north in order to include areas for ecological mitigation and re-routing of overhead cables. As such, OP45 is no longer within 500m of the site and a number of additional, unsurveyed ponds are located to the north of the Site, within 500m.	Low

Future Baseline

7.6.13 This section considers changes to the baseline conditions as far as changes can be established, described above, that might occur in the absence of the Scheme coming forward during the time period over which the Scheme would be in place. The future baseline scenarios are set out in **ES Chapter 2: EIA Process and Methodology [APP/6.1]**.

7.6.14 In the absence of the Scheme, the baseline conditions would not be anticipated to change significantly if the current management remains consistent. Habitats currently in poor condition may continue to degrade unless management interventions are undertaken. As trees age, some of these may be expected to fail. Overall, the baseline conditions would be comparable to those currently present.

7.7 Embedded Mitigation

7.7.1 Likely environmental effects have been or will be avoided, minimised, mitigated or reduced through design measures and/or management of the Scheme, as outlined in this section. Proposed environmental enhancements are also described where relevant.

7.7.2 The Scheme has been designed to incorporate the retention of valuable habitats and ecological features, including those identified to be of importance for protected species. This will be achieved by implementing appropriate development buffers, which are to remain in-situ, and undeveloped for the lifetime of the Scheme, including throughout the construction and operational phases, and will be retained during the decommissioning phase, as set out within **Design Principles, Parameters and Commitments [APP/5.8]**.

7.7.3 The development buffers will be secured with fencing at the outer extents of the buffers to separate the Solar PV Site, with individual panels sited no closer than 4m to the secure fencing, as set out within **Design Principles, Parameters and Commitments [APP/5.8].**

7.7.4 The development buffers have been selected based on the relative importance and ecological sensitivity of the receptors identified, as set out below in Table 7-10.

Table 7-10 Summary of receptor development exclusion buffers

Receptor Development Exclusion Buffer	Buffer Size	Rationale
Hedgerows	8m	To provide sufficient root protection area, and opportunities for enhancement / habitat creation.
Hedgerows with Trees	10m	
Tree Lines	10m	
Individual Trees and Tree Groups (Including those with potential bat roosting features)	10m (unless otherwise specified by an Arboricultural Consultant)	
Veteran and/or Ancient Trees	15x width of stem diameter at breast height [Ref 7-9].	
Woodland	15m	
Watercourses and Ditch Bank Tops	10m	To fully retain ditches within permanently vegetated strips, and maximise ecological benefits, including mitigating for pollution events.
Ponds (eDNA Negative for GCN)	10m	To fully retain ponds within permanently vegetated strips, and maximise ecological benefits, including mitigating for pollution events.
Schedule 1 Bird Nests	Case by case	To safeguard protected species and account for specific species requirements.

Bat Roosts	Case by case	To safeguard protected species and account for specific species requirements.
Badger Setts (main) Badger Setts (outlier)	30m 20m	To safeguard protected species in accordance with standing advice [Ref 7-10].
Non-statutory Sites (including the River Road RNR ref. U33086)	10m	To retain and protect Dropwort, the notification for this designation.

7.7.5 In addition, the cessation of intensive arable production across the Solar PV Site will result in reduced physical disturbance during the operational phase (e.g. through lack of ploughing, seeding and harvesting of crops) and the reduction in application of pesticides (including insecticides and herbicides), along with reduced nutrient input due to removal of fertiliser input which will benefit ecological receptors and would likely result in increased ecological diversity and reduced pollution and leaching to offsite areas.

7.7.6 Other embedded mitigation which will further limit Scheme effects on ecological receptors during the construction and operational Phases includes:

- The identification of designated Site access and transit routes (**ES Chapter 9: Transport and Access [APP/6.2]),** which will follow existing field accesses, gaps in hedgerows, and trackways, including avoidance of the development buffers (where feasible to do so); and
- Routing of construction traffic, which will avoid sensitive areas, including designated sites (**ES Chapter 9: Transport and Access [APP/6.2]).**

7.7.7 In order to further address and mitigate potential adverse effects in regard to individual ecological receptors, the following mitigation measures are proposed to be implemented as part of the Scheme. Given the implementation of the above embedded mitigation measures represent firm commitments, including as set out within the **outline Construction Environmental Management Plan** (oCEMP) **[APP/7.6]** and **outline Landscape Environmental Management Plan** (oLEMP) **[APP/7.11]**, **ES Chapter 9: Transport and Access [APP/6.2],** and **Design Principles, Parameters and Commitments [APP/5.8].** they are included as embedded mitigation.

Embedded Construction Phase Mitigation

7.7.8 The following embedded mitigation measures have been incorporated into the Scheme's design for the construction phase:

Designations

Pollution Prevention

7.7.9 Specific pollution prevention measures will be incorporated into the construction phase.

7.7.10 Those details relating to the construction phase are contained within the oCEMP **[APP/7.6]** which has been prepared in support of the DCO Application. In particular, specific measures and approaches in the oCEMP **[APP/7.6]** are incorporated in order to prevent any potential run-off or pollutants leaving the Site, including along hydrological pathways that could otherwise reach the River Nar SSSI designation (including interfacing CWSs detailed above) and direct pathways (hydrological and dust) to non-statutory designations, including River Road RNRs. Pollution prevention measures are focussed on the interception of contaminants at source in line with standard construction processes. Initial approach and strategic measures are detailed within the oCEMP **[APP7.6]** submitted to accompany this DCO Application, including timescales for provision of further details and timescales for implementation set out in order to provide confidence in the proposed approach. The oCEMP **[APP/7.6]** will form the basis of the detailed CEMP, which will be secured via a requirement of the DCO.

Habitats

7.7.11 As set out above, the retention of key ecological habitats (woodlands, hedgerows, and ponds) along with appropriate buffers is included as embedded within the Scheme. However, in order to ensure protection of these features, measures such as the use of temporary construction/protection fencing and working safeguards will be incorporated at the construction phase of the Scheme, which is set out within the oCEMP **[APP/7.6]**, covering the protection of woodland at the boundaries, working in extremely dry or wet weather, storage and use of fuels and chemicals, and the movement of vehicles and plant, will be secured as part of the DCO Application through the oCEMP **[APP/7.6]**, and will reduce the likelihood of these impacts occurring. The buffer distances would be observed thereafter for the lifetime of the Scheme, including timescales for provision of further details and timescales for implementation set out in order to provide confidence in the proposed approach.

7.7.12 As veteran trees are considered irreplaceable habitats, the retention of these trees has been designed into the Scheme, and these features will be protected throughout the lifetime of the Scheme.

7.7.13 In addition, additional measures to be implemented to prevent the spread of exotic invasive species (including Variegated Yellow Archangel and Three-cornered Garlic, which have been recorded within the Study Area) and aim to eradicate these species from the Order limits are detailed within the oLEMP **[APP/7.11]** and oCEMP **[APP/7.6]** submitted with the DCO Application, ultimately further secured in the supporting LEMP and CEMP documents which will be secured via requirements of the DCO.

7.7.14 New habitats will be provided as part of the Scheme (oLEMP **[APP/7.11]**), with aims to improve biodiversity gains, where this does not conflict with construction, operation and

decommissioning functions of the Scheme. Examples of habitat creation and enhancement measures to be implemented as part of the Scheme include:

- Creation of new grassland habitats including wildflower grassland
- The gapping up of hedgerows and Tree Lines with additional native species
- Implementation of a rotational management strategy for hedgerows; and
- The selective thinning and management of vegetation associated with ponds and ditches.

7.7.15 The Scheme has been assessed using the Statutory Biodiversity Metric, including in line with relevant legislative requirements associated with the DCO Application, in order to ensure that the Scheme results in an overall increase in biodiversity value in line with standard guidelines. Given the nature of the habitats and enhancement measures proposed, the resultant BNG Assessment demonstrates net gain in habitat and hedgerow units substantially in excess of 10%.

Fauna

Bats

7.7.16 Disturbance effects are anticipated to be largely avoided through the adherence to daylight working hours during construction activities where practicable, as well as the implementation of a sensitive lighting strategy to avoid temporary disturbance to bat flight lines and foraging areas. Further details are confirmed within the oCEMP **[APP/7.6]** submitted with the DCO Application in order to ensure that potential effects on light-sensitive species such as bats are fully mitigated.

Badger

7.7.17 General construction safeguards in order to prevent accidental killing and injury of mammals including Badgers will be implemented during the construction phase of the Scheme, including as referred within the oCEMP **[APP/7.6]** submitted to accompany the DCO Application.

Other Mammals – Brown Hare and Hedgehog

7.7.18 Measures including those set out at 7.7.20 and 7.7.21 below to prevent accidental killing and injury of mammals will be implemented during the construction phase of the Scheme. Such measures are further detailed and referred to within the oCEMP **[APP/7.6]**.

Birds

7.7.19 To avoid an offence under the Wildlife and Countryside Act 1981 (as amended), the potential loss of active nests during construction will be avoided by either undertaking clearance of potential bird nesting habitat outside of the bird nesting season (March to August inclusive) or, if necessary, preceding any clearance with an inspection by a suitably qualified ecologist. Any nests identified will be cordoned off and protected until they cease to be active. Where

necessary, the use of bird scarers or other deterrence methods will be used to minimise the risk of ground nesting birds occupying open ground once construction works have commenced. These measures are detailed in the oCEMP **[APP/7.6]**.

General Safeguards

7.7.20 In order to avoid potentially significant effects on receptors during the construction phase as a result of anticipated damage from construction vehicles, dust deposition and surface run-off of contaminants or silt, it is proposed that standard additional mitigation measures are put in place during the construction phase, including the following:

- Prior to works commencing, a full site investigation will be undertaken to identify any potential sources of contamination and advise on appropriate safeguards to be implemented during construction works
- Erection of tree protection fencing around retained woody vegetation, hedgerows and trees in accordance with BS5837:2012
- Erection of temporary fencing around construction areas, protecting retained habitats of ecological value
- Damping down potential sources of dust
- Fires will only be lit in secure compounds and not allowed to remain lit during the night; and
- Implementation of engineering safeguards as part of construction works to control surface water run-off and avoid contamination of receptors. This could include measures such as the use of temporary silt traps in order to form an intercept for silt and other potential pollutants.

7.7.21 Furthermore, a number of general additional safeguarding measures will be set out in relation to fauna, including:

- All contractors will be briefed as to the possible presence of protected and notable faunal species within the Site, with particular reference to the implications of legislation and licensing
- Any trenches or deep pits within the Site that are to be left open overnight will be provided with a means of escape should a Badger or other mammal enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water
- Any trenches/pits will be inspected each morning to ensure no animals have become trapped overnight
- The storage of topsoil or other ‘soft’ building materials in the Site will be given careful consideration. Badgers will readily adopt such mounds as setts. So as to avoid the adoption of any mounds, these will be kept to a minimum and will be subject to inspections by site contractors with consideration given to temporarily fencing any such mounds to exclude Badgers

- Food and litter will not to be left within the working area overnight
- Storage of chemicals and hazardous materials in line with best practice guidelines, ensuring that they are secure, well away from the Site boundaries and cannot be accessed or knocked over by roaming animals
- To minimise adverse effects as a result of lighting during the construction phase, temporary lighting will be minimised, wherever practical. Where required for health and safety, security or other reasons, it will be positioned so as to minimise light spill on to hedgerows and other boundary features; and
- Disturbance from noise will be minimised by the adoption of good working practice.

7.7.22 The measures referred to above, along with further relevant measures and operations, are set out within the oCEMP **[APP/7.6].**

Embedded Operational Phase Mitigation

7.7.23 The following embedded mitigation measures have been incorporated into the Scheme's design for the operational phase.

Habitats

7.7.24 Ongoing management of habitats will be undertaken in order to maximise value for biodiversity throughout the operational phase of the Scheme, including in particular field boundary vegetation (hedgerows and trees) along with grassland areas. Proposed management strategies are set out within the **oLEMP [APP/7.11]** submitted to accompany the DCO Application, including timescales for provision of further details and timescales for implementation set out. Following decommissioning, planting associated with the National Grid Substation will remain and will continue to be managed accordingly. Remaining areas will be returned to the control of the landowner, such that no control would be available over the future management of new habitats; it is, however, assumed that established trees and hedgerow would remain post-decommissioning.

Fauna

Bats

7.7.25 No new lighting is proposed within the Solar PV Site areas at the Site and, accordingly, no further mitigation is required in regard to lighting across the majority of the Site. New lighting will be limited to locations essential to security, namely the Customer Substation, National Grid Substation, and Battery Energy Storage System (BESS). The detailed design of the BESS, Customer Substation, and National Grid Substation are yet to be confirmed, albeit will ensure that any new lighting is minimised and directed away from sensitive receptors including trees, hedgerows and woodlands (**outline Operational Environmental Management Plan** (oOEMP) **[APP/7.8]**). The development of a sensitive lighting strategy will include detailed measures to avoid light spill wherever possible, including in particular to prevent light spill into buffers and retained vegetation.

7.7.26 The Scheme will strengthen existing key movement corridors through the planting up of gaps along existing hedgerows and tree lines, as well as through the creation of new hedgerow and tree lines to improve connectivity throughout the Scheme. The creation of diverse habitats including new grassland habitats which will improve potential foraging opportunities for this group during the operational phase of the Scheme.

Badger

7.7.27 The detailed fencing strategy for the Site has been sensitively designed to allow permeability across the Site by Badgers, such that freedom of movement will remain, and connectivity to foraging resources within the wider landscape will remain while created habitats develop. Where appropriate, Badger security fencing will incorporate specific design measures such as gaps, gates or other features, (particularly associated with existing vegetated corridors and key commuting routes) in order to ensure continued permeability and access to foraging areas across the Site for Badgers.

Birds

7.7.28 Mitigation and compensation measures in respect of Skylark and Eurasian Curlew are proposed, including provision of new open grassland areas, favourable management of grassland margins and associated habitats, and long-term provision of Skylark plots within arable land outside of the proposed Solar PV Site (set out within Schedule 1 of the draft DCO [APP/3.1]). The proposed approach is set out within ES Appendix 7.3: Proposed Mitigation Strategy for Ground Nesting Birds Requiring Open Habitats [APP/6.4] and details of creation and management of specific grassland areas for ground nesting birds are identified within the oLEMP **[APP/7.11].**

Embedded Decommissioning Phase Mitigation

7.7.29 The following embedded mitigation measures have been incorporated into the Scheme design for the decommissioning phase:

Designations

Pollution Prevention

7.7.30 Specific pollution prevention measures will be incorporated into the decommissioning phases.

7.7.31 Those details relating to the decommissioning phase are contained within an **outline Decommissioning Strategy** (oDS) **[APP/7.10]** which has been prepared in support of the DCO Application. In particular, specific measures and approaches in the oDS **[APP/7.10]** have been incorporated in order to prevent any potential run-off or pollutants leaving the Site, including along hydrological pathways that could otherwise reach the River Nar SSSI designation (including interfacing CWSs detailed above) and direct pathways (hydrological and dust) to non-statutory designations including River Road RNRs.

7.7.32 Pollution prevention measures are focussed on the interception of contaminants at source in line with standard decommissioning processes. Initial approach and strategic measures detailed within the oDS, including timescales for provision of further details and timescales for implementation set out in order to provide confidence in the proposed approach. The oDS [APP/7.10] will inform the Decommissioning Strategy (DS), which will be drafted substantially in accordance with the oDS, and approved with BC prior to the commencement of the decommissioning phase.

Habitats

7.7.33 As set out above, the retention of key ecological habitats (woodlands, hedgerows, ponds and trees) along with appropriate buffers is included as embedded within the Scheme. The Order limits do not contain any significant blocks of woodland; however, there are shelter belts and small areas of woodland, the impact on which has been assessed in this ES chapter. In order to ensure protection of these features, measures such as the use of temporary fencing and working safeguards will be incorporated at the decommissioning phase of the Scheme, which has been set out within the oDS [APP/7.10], covering the protection of woodland at boundaries, working in extremely dry or wet weather, storage and use of fuels and chemicals, and the movement of vehicles and plant, will be secured through the DS, prior to the commencement of the decommissioning phase, and will reduce the likelihood of these impacts occurring.

7.7.34 As veteran trees are considered irreplaceable habitats, the retention of these trees has been designed into the Scheme, and these features will be protected throughout the lifetime of the Scheme, including during the decommissioning phase of the Scheme.

7.7.35 Additional measures will also be implemented to prevent the spread of exotic invasive species (including Variegated Yellow Archangel and Three-cornered Garlic, which have been recorded within the Study Area), which have been detailed within the oDS **[APP/7.10]** submitted with the DCO Application, ultimately further secured in the final DS.

7.7.36 A full BNG Assessment has been conducted and provided in **Biodiversity Net Gain Assessment Report [APP/7.4]**, taking account of all habitat trading rules and the latest Statutory Metric requirements, and confirming that the Scheme will result in Biodiversity Net Gain substantially in excess of 10%.

Fauna

Bats

7.7.37 Disturbance effects are anticipated to be largely avoided through the adherence to daylight working hours during decommissioning activities, where practicable, as well as the implementation of a sensitive lighting strategy to avoid temporary disturbance to bat flight lines and foraging areas. Further details are confirmed within the oDS **[APP/7.10]** submitted with the DCO Application in order to ensure that potential effects on light-sensitive species such as bats are fully mitigated.

Badger

7.7.38 General construction safeguards in order to prevent accidental killing and injury of mammals including Badger will be implemented during the decommissioning phase of the Scheme, including as referred within the oDS **[APP/7.10]** submitted to accompany the DCO Application.

Other Mammals – Brown Hare and Hedgehog

7.7.39 Measures, including those set out at 7.7.41 and 7.7.42 below, preventing accidental killing and injury of mammals will be implemented during the decommissioning phase of the Scheme. Such measures are further detailed and referred to within the oDS **[APP/7.10].**

Birds

7.7.40 To avoid an offence under the Wildlife and Countryside Act 1981 (as amended), the potential loss of active nests during decommissioning will be avoided by either undertaking clearance of potential bird nesting habitat (if required) outside of the bird nesting season (March to August inclusive) or, if necessary, preceding any clearance with an inspection by a suitably qualified ecologist. Any nests identified will be cordoned off and protected until they cease to be active. Where necessary, the use of bird scarers or other deterrence methods will be used to minimise the risk of ground nesting birds occupying open ground once construction works have commenced.

General Safeguards

7.7.41 In order to avoid potentially significant effects on receptors during the decommissioning phase as a result of anticipated damage from construction vehicles, dust deposition and surface run-off of contaminants or silt, it is proposed that standard additional mitigation measures are put in place during the decommissioning phase, to include the following:

- Prior to works commencing, a full site investigation will be undertaken to identify any potential sources of contamination and advise on appropriate safeguards to be implemented during works
- Erection of tree protection fencing around retained woody vegetation, hedgerows and trees in accordance with BS5837:2012
- Erection of temporary fencing around works areas, protecting retained habitats of ecological value
- Damping down of potential sources of dust
- Fires will only be lit in secure compounds and not allowed to remain lit during the night; and
- Implementation of engineering safeguards as part of works to control surface water run-off and avoid contamination of receptors. This could include measures such as the use of temporary silt traps in order to form an intercept for silt and other potential pollutants.

7.7.42 Furthermore, a number of general additional safeguarding measures will be set out in relation to faunal species, including:

- All contractors will be briefed as to the possible presence of protected and notable faunal species within the Site, with particular reference to the implications of legislation and licensing
- Any trenches or deep pits within the Site that are to be left open overnight will be provided with a means of escape should a Badger or other mammal enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water
- Any trenches/pits will be inspected each morning to ensure no animals have become trapped overnight
- The storage of topsoil or other 'soft' building materials in the Site will be given careful consideration. Badgers will readily adopt such mounds as setts. So as to avoid the adoption of any mounds, these will be kept to a minimum and will be subject to inspections by site contractors with consideration given to temporarily fencing any such mounds to exclude Badgers
- Food and litter will not to be left within the working area overnight
- Storage of chemicals and hazardous materials in line with best practice guidelines, ensuring that they are secure, well away from the Site boundaries and cannot be accessed or knocked over by roaming animals
- To minimise adverse effects as a result of lighting during the construction phase, temporary lighting will be minimised, wherever practical. Where required for health and safety, security or other reasons, it will be positioned so as to minimise light spill on to hedgerows and other boundary features; and
- Disturbance from noise will be minimised by the adoption of good working practice.

7.7.43 The measures referred to above, along with further relevant measures and operations, are set out within the oDS **[APP/7.10]**.

7.8 Assessment of Likely Effects

7.8.1 This section identifies and characterises potential impacts arising during the construction, operational and decommissioning phases of the Scheme.

7.8.2 Taking into account the embedded mitigation measures as detailed in Section 7.7, the potential for the likely effects of the Scheme on Ecology and Biodiversity receptors has been assessed using the methodology as detailed in Section 7.5 of this chapter. In the sections below, effects during the construction, operational and decommissioning phases of the Scheme are assessed for Ecology and Biodiversity receptors scoped into this assessment. Effects occurring during construction and decommissioning phases are considered to be short-term effects due to the duration of these phases, while those occurring as a result of

the operational phase are considered to be long-term effects (unless otherwise specified below).

7.8.3 Any additional mitigation required to reduce these effects is then set out in Section 7.9 below. Thereafter, an assessment is made of the significance of any residual effects after all mitigation measures have been accounted for.

Construction Phase

International Statutory Ecological Designations within 25km

Breckland SPA

Direct Effects

7.8.4 Breckland SPA is a receptor of international importance (very high sensitivity) sited outside of the Order limits, located approximately 2.6km southwest of the Scheme. Accordingly, the designation is located over 2.5km from the Site such that no direct effects are anticipated, resulting in a negligible magnitude of impact and a Negligible effect, which is not significant. Accordingly, no significant adverse effects on Breckland SPA in relation to direct pathways are anticipated as a result of the construction phase of the Scheme.

Functionally Linked Land

7.8.5 Potential for land sited outside of the SPA designation itself to represent functionally linked land and provide supporting habitat of importance to qualifying species (Stone-curlew, Nightjar and Woodlark) is of relevance in relation to the potential for likely significant effects as a result of the Scheme. Nightjar and Stone-curlew are summer visitors to the UK, wintering in northern Europe and Africa, and accordingly do not make use of the Site in winter. Woodlark remain resident in the UK throughout the year. However, none of these qualifying species were recorded during any of the specific breeding bird surveys conducted across the Study Area in 2024 and therefore the Site does not appear to represent functionally linked land used by qualifying species. As such, no direct effects to functionally linked land are anticipated, resulting in a negligible magnitude of impact and negligible effect, which is not significant. Accordingly, no significant adverse effects on Breckland SPA in relation to functionally linked land are anticipated as a result of the construction phase of the Scheme.

Indirect Effects - Air Quality

7.8.6 Air quality effects arising from activities during the construction phase will be temporary in nature and associated with the vehicle movements from the transit of materials and general on-site construction activities. The Air Pollution Information System (APIS) database [Ref 7-11] suggests that Woodlark, Nightjar and Stone-curlew are sensitive to nutrient impacts in the form of nitrogen deposition, which would therefore represent potential to affect the SPA given these species form the relevant qualifying features on which the designation is based. Design mitigation measures to minimise the likelihood and severity of potential air quality effects on Breckland SPA have been embedded into the Scheme design. This includes the identification of designated construction and material transit routes as part of the routing

strategy. In particular, access into the Site will be via the A1065, with vehicle movements directed along the A1065 and onwards via the A47 dual carriageway, therefore avoiding Breckland SPA.

7.8.7 Construction phase Heavy Goods Vehicular (HGV) movements shall be directed by a routing strategy (Design Principles, Parameters and Commitments [APP/5.8]), with an initial feasibility exercise indicating the following three key routes to the Site via local and strategic road networks:

- Route A: Access to/from the south from the A47, via the A1065
- Route B: Access to/from the north via A1065; and
- Route C: Access to/from the A47, from the west via Narford Road, Low Road, South Acre Road and A1065.

7.8.8 Breckland SPA is a receptor of international importance (very high sensitivity); however, none of the above routes pass through or immediately adjacent to the Breckland SPA and therefore there is no direct effect. Accordingly, subject to the above embedded design mitigation considerations, it is considered the magnitude of impact on Breckland SPA is negligible, resulting in a Negligible effect which is **not significant**. Therefore, no significant adverse effects on Breckland SPA in relation to air quality impacts are anticipated as a result of the construction phase of the Scheme.

Norfolk Valley Fens SAC

Direct Effects

7.8.9 Norfolk Valley Fens SAC is a receptor of international importance (very high sensitivity) sited outside of the Order limits, located approximately 3.6km north west of the Site at its nearest point, and accordingly is physically removed and separated from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impact is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Norfolk Valley Fens SAC in relation to direct pathways are anticipated as a result of the construction phase of the Scheme.

Indirect Effects

7.8.10 Similarly, given the degree of separation (3.6km) between Norfolk Valley Fens SAC and the Site, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impact is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Norfolk Valley Fens SAC are anticipated as a result of the construction phase of the Scheme.

Breckland SAC

Direct Effects

7.8.11 Breckland SAC is a receptor of international importance (very high sensitivity), located approximately 8km south of the Scheme at its nearest point, and notified on the basis of the habitats and species it supports, including terrestrial and wetland habitats, and GCN respectively. Breckland SAC is physically well removed from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Breckland SAC in relation to direct pathways are anticipated as a result of the construction phase of the Scheme.

Indirect Effects

7.8.12 Similarly, given the degree of separation (8km) between Breckland SAC and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Breckland SAC in relation to indirect pathways are anticipated as a result of the construction phase of the Scheme.

Other International Ecological Designations within 25km of the Scheme

7.8.13 Other Statutory Designations of international importance (very high sensitivity) considered in this assessment, and noted to be present within 25km of the Scheme are as listed below:

- Roydon Common Ramsar
- Roydon Common & Dersingham Bog SAC
- Dersingham Bog Ramsar
- River Wensum SAC
- The Wash SPA & Ramsar; and
- The Wash and North Norfolk Coast SAC.

Direct Effects

7.8.14 The above receptors are all located in excess of 12km from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Roydon Common Ramsar, Roydon Common & Dersingham Bog SAC, Dersingham Bog Ramsar; River Wensum SAC, The Wash SPA & Ramsar, and The Wash and North Norfolk Coast SAC in relation to direct pathways are anticipated as a result of the construction phase of the Scheme.

Indirect Effects

7.8.15 Similarly, given the degree of separation (>12km) between the above receptors of international importance (very high sensitivity) and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality

and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Roydon Common Ramsar, Roydon Common & Dersingham Bog SAC, Dersingham Bog Ramsar; River Wensum SAC, The Wash SPA & Ramsar, and The Wash and North Norfolk Coast SAC are anticipated in relation to indirect pathways as a result of the construction phase of the Scheme.

National Statutory Ecological Designations within 5km of the Scheme

River Nar SSSI

Direct Effects

7.8.16 The River Nar SSSI is a receptor of national importance (high sensitivity), located approximately 0.27km north of the Scheme at its nearest point, and notified on the basis of the habitats and species it supports, including terrestrial and wetland habitats, and Lapwing respectively. The River Nar SSSI is physically removed from the Scheme, such that there will be no land take or physical disturbance to the SSSI. Additionally, the closest point of the Order limits to the SSSI comprises the ecological mitigation area, with the nearest point of the Solar PV Site and Associated Development actually located approximately 0.83km south-west of the SSSI. As such, no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on the River Nar SSSI in relation to direct pathways are anticipated as a result of the construction phase of the Scheme.

Air Quality

7.8.17 The River Nar SSSI has been scoped in for assessment in relation to potential sensitivity for air quality effects during the construction phase.

7.8.18 As set out in the outline Construction Traffic Management Plan **(oCTMP) [APP/7.7]**, key traffic routes have been identified as part of the routing strategy for the construction phase of the Scheme. Key routes A and C cross the River Nar SSSI at a single point via a road bridge along the A47 approximately at Narborough, whereas key route B crosses the River Nar SSSI at a single point across a road bridge along the A1065 approximately at West Lexham, with traffic routes along Narford Road otherwise falling within approximately 200m of the River Nar SSSI at its closest point.

7.8.19 Background traffic movements associated with the construction phase of the Scheme are not anticipated to increase substantially above background rates at river crossings and along the nearest proposed key routes. For further detail on expected routing and traffic flows, reference can be made to **ES Chapter 9: Transport and Access [APP/6.2]**.

7.8.20 Further, it is anticipated that any elevation from background traffic movements during the construction phase will be of a short-term nature, with traffic flows distributed according to the routing strategy which details several routing options to be utilised as part of the Scheme.

7.8.21 Accordingly, air quality effects arising from dust settlement and vehicle emissions are anticipated to be limited and diffuse, such that under the proposed vehicle routing strategy, air quality effects are not anticipated, and the resulting magnitude of impact is negligible, resulting in a Negligible effect which is considered **not significant**.

7.8.22 Accordingly, no significant adverse effects of the Scheme are anticipated on the River Nar SSSI in terms of air quality throughout the construction phase.

Indirect Effects - Hydrological Pathways

7.8.23 As set out within **ES Chapter 12: Water Resources [APP/6.2]**, the River Nar SSSI is hydrologically linked to the Site via chalk aquifer baseflow and near-surface water supplies which drain into the River Nar SSSI, with the existing main source of leached nitrate within the River Nar SSSI arising from diffuse agricultural pollution. The Study Area itself supports a number of individual ditches, of which all but one was recorded to be dry at the time of initial survey; therefore, these do not appear to represent a connected network leading to the River Nar. Further, based on information within **ES Chapter 12: Water Resources [APP/6.2]**, rainwater is anticipated to infiltrate rapidly rather than generate substantial run-off.

7.8.24 In the absence of mitigation, there is potential for chemical spills and contaminated surface water runoff to reach the River Nar SSSI via overland flows such as ditches, which has the potential to degrade the habitats with adverse effects to the associated faunal and botanical assemblages of the River Nar SSSI, albeit given the separation and above considerations any risk would be low. Nonetheless, pollution prevention measures are included within the embedded mitigation (see paragraph 7.7.6., above), such that no adverse effects are anticipated, the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on the River Nar SSSI are anticipated through contamination and/or run-off as a result of construction phase activities.

Breckland Forest SSSI

Direct Effects

7.8.25 Breckland Forest SSSI is a receptor of national importance (high sensitivity), located approximately 2.6km south of the Scheme at its nearest point, and notified on the basis of breeding Nightjar, Woodlark and Red Squirrel Sciurus vulgaris, as well as a number of distributionally restricted flora. Breckland Forest SSSI is physically well removed from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impact is negligible, resulting in a Negligible effect which considered **not significant**. Accordingly, no significant adverse effects on the Breckland Forest SSSI in relation to direct pathways are anticipated as a result of the construction phase of the Scheme.

Indirect Effects

7.8.26 Similarly, given the degree of separation (2.6km) between Breckland Forest SSSI and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked

land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Breckland Forest SSSI are anticipated in relation to indirect pathways as a result of the construction phase of the Scheme.

Other National Statutory Ecological Designations within 5km of the Scheme

7.8.27 Other Statutory Designations of national significance (high sensitivity) considered in this assessment, and noted to be present within 5km of the Scheme, are as listed below:

- Castle Acre Common SSSI
- Narborough Railway Embankment SSSI; and
- East Walton & Adcock's Common SSSI.

Direct Effects

7.8.28 The above receptors are all located in excess of 0.4km from the Scheme, such that there will be no land take or physical disturbance to the SSSIs. As such, no direct effects are anticipated, and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Castle Acre Common SSSI, Narborough Railway Embankment SSSI, and East Walton & Adcock's Common SSSI in relation to direct pathways are anticipated as a result of the construction phase of the Scheme.

Indirect Effects

7.8.29 Similarly, given the separation between the above receptors of national importance (high sensitivity) and the Scheme (>0.4km to the Skylark mitigation area and >1.68km to the Solar PV Site and Associated Development), indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement (which will not arise within the Skylark mitigation area) are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Castle Acre Common SSSI, Narborough Railway Embankment SSSI, and East Walton & Adcock's Common SSSI are anticipated in relation to indirect pathways as a result of the construction phase of the Scheme.

Non-Statutory Ecological Designations within 2km of the Scheme

River Road RNRs (refs. 033086 & U22086)

Direct Effects

7.8.30 River Road RNRs (refs.033086 & U22086) are non-statutory designations of District importance (medium sensitivity) RNR 033086 is located within the Order limits and RNR U22086 is located adjacent to the Order limits.

7.8.31 RNR 033086 is designated for the presence of Dropwort, whereas RNR U22086 is designated for the presence of Knapweed Broomrape. The RNRs are located along the existing public highway of River Road, outside of the works area or the Order limits itself. Ecological buffers, which include the hedgerows and associated verges, have been embedded into the design of the Scheme from an early stage to avoid adverse impacts by way of damage to the vegetation present through direct damage or encroachment, such that the resulting magnitude of impact is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects in relation to direct pathways are anticipated on RNRs 033086 and U22086 as a result of the construction phase of the Scheme.

Indirect Effects

7.8.32 As above, RNRs 033086 and U22086 are non-statutory designations of District significance (medium sensitivity) located in or adjacent to the Order limits. Embedded mitigation measures to minimise the likelihood and severity of pollution events include dust control measures contained within a Construction Dusk Risk Assessment forming part of the oCEMP **[APP/7.6]**, along with pollution prevention measures similarly incorporated within the oCEMP **[APP/7.6**]. Accordingly, following the implementation of the embedded mitigation, no indirect effects on the RNRs are anticipated through contamination and/or run-off as a result of construction phase activities, such that the resulting magnitude of impact is negligible, resulting in a Negligible effect which is considered not significant. Accordingly, no significant adverse effects in relation to indirect pathways are anticipated on RNRs 033086 and U22086 as a result of the construction phase of the Scheme.

Other Non-Statutory Ecological Designations within 2km

7.8.33 Other Non-statutory Ecological Designations of County and District importance (medium sensitivity) present within 2km of the Site are listed below:

- Land Adjacent to River Nar CWS ref. 895, 945 & 902
- Priory Meadow CWS
- Land West of Castle Acre CWS
- Mill House Lake CWS
- Castle Acre Castle CWS
- Mill House CWS
- Narford Lake CWS
- The Carr CWS
- Lynn Road Disused Railway CWS
- Priory Road RNR ref. U22074; and
- Walton Road ref. C65.

Direct Impacts

7.8.34 The above designations are notified on the basis of the habitats and vegetation/flora supported. The above receptors are all located in excess of 0.2km from the Order Limits and substantially further from the Solar PV Site and Associated Development, with the closest areas of the Order Limits proposed only for Skylark mitigation, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS, The Carr CWS, Lynn Road Disused Railway CWS, Priory Road RNR ref. U22074, and Walton Road ref. C65 in relation to direct pathways are anticipated as a result of the construction phase of the Scheme.

Indirect Effects

7.8.35 The above designations of County and District importance (medium sensitivity) are physically removed from the Scheme, all of which are located in excess of 0.2km from the Order Limits and substantially further from the Solar PV Site and Associated Development, with the closest areas of the Order Limits proposed only for Skylark mitigation. As such, given the relevant interest features represent plant species and grassland habitats that are not susceptible to distant effects, no indirect effects on Walton Road RNR, Priory Road RNR and Lynn Road Disused Railway CWS are anticipated, and the resulting magnitude of impacts for these designations negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects in relation to indirect pathways are anticipated on Walton Road RNR, Priory Road RNR and Lynn Road Disused Railway CWS in relation to indirect pathways as a result of the construction phase of the Scheme.

7.8.36 The remaining designations within the above list are noted to interface with the River Nar SSSI along its east to west flow. Accordingly, in the absence of mitigation, and given the connected nature of Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS and The Carr CWS to the River Nar, there remains potential for the Scheme to generate indirect degradation effects by way of chemical spills and contaminated surface water runoff. Nonetheless, given the distance and separation along with limited potential flow routes (as set out above in relation to the River Nar SSSI) any risk of runoff reaching the River Nar (and subsequently the above non-statutory designations) would be low, whilst the embedded design considerations will further minimise the likelihood and severity of pollution events, dust deposition and run-off have been incorporated into the Scheme. As such, the magnitude of such impacts is negligible, resulting in a negligible effect which is considered **not significant**. Accordingly, in the absence of additional mitigation, it is anticipated that the Scheme will generate no significant adverse effects on Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS and The Carr CWS during the construction phase of the Scheme.

Habitats

Veteran Trees

Direct Effects

7.8.37 Veteran trees (representing irreplaceable habitat) are of high sensitivity. The retention of individual trees has been designed into the Scheme (including through routing of access via existing field entrances and access points), with suitable buffers of 15x stem diameter, to be maintained except as specified by detailed arboricultural advice. As such, subject to the embedded mitigation, no loss of veteran trees is anticipated as a result of the Scheme, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect, which is considered **not significant**. Accordingly, no significant adverse effects on veteran trees within the Site are anticipated in relation to direct pathways as a result of the construction phase of the Scheme.

Indirect Effects

7.8.38 Veteran trees within the Site are of high sensitivity. While embedded mitigation measures to minimise the likelihood and severity of pollution events, dust deposition and run-off have been incorporated into the Scheme, there exists potential for indirect degradation effects through pollution events and dust settlement. Nonetheless, embedded design considerations are considered to reduce the likelihood and severity of any potential pollution events, dust deposition and run-off to such low levels that the magnitude of impacts is negligible, resulting in a Negligible effect, which is considered **not significant**. Accordingly, no significant adverse effects on veteran trees within the Site are anticipated in relation to indirect pathways as a result of the construction phase of the Scheme.

Woodland

Direct Effects

7.8.39 The woodland within the Site is of medium sensitivity. As part of the Scheme design and embedded mitigation, no direct permanent loss of woodland within the Order limits is anticipated as all access, hardware and cabling installation will either avoid the woodland habitats which occur within and adjacent to the Site, or be limited to temporary impacts to vegetation within the woodland, such that the magnitude of impact is negligible, resulting in a Negligible effect, which is considered **not significant**. Accordingly, no significant adverse effects on woodland within the Site are anticipated in relation to direct pathways as a result of the construction phase of the Scheme.

Indirect Effects

7.8.40 The woodland within the Site is of medium sensitivity. Potential exists for construction activities to result in incidental damage, pollution, dust deposition or contamination to woodland margins in the absence of mitigation, albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting. Further, any effect would be temporary and

would likely be limited to the margins of the woodland, whilst embedded mitigation measures are proposed (including as set out within the oCEMP **[APP/7.6]**) which will further prevent any potential effects, such that the magnitude of impact is negligible, resulting in a Negligible effect, which is **not significant**. Accordingly, no significant adverse effects on woodland as a result of construction phase activities.

Hedgerows and Tree Lines

Direct Effects

7.8.41 The hedgerows and tree lines within the Site are of medium sensitivity. The retention of existing hedgerows and tree lines has been incorporated into the Scheme design, including the use of existing field access routes and hedgerow gaps for construction activities to avoid loss of hedgerows to accommodate access routes. As such, any removal of hedgerows would be anticipated to be limited to minor widening of existing gaps to ensure appropriate access.

7.8.42 The magnitude of impacts is therefore considered to be negligible, resulting in a Negligible effect, which is considered **not significant**. Accordingly, no significant adverse effects on hedgerows and tree lines within the Site are anticipated in relation to direct pathways as a result of the construction phase of the Scheme.

Indirect Effects

7.8.43 The hedgerows and tree lines within the Site are of medium sensitivity. Potential exists for construction activities to result in incidental damage, pollution, dust deposition or contamination, albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting. Embedded mitigation including maintenance of buffers will further reduce potential damage. Following the implementation of the embedded mitigation, the magnitude of impacts on hedgerows and tree lines arising from the construction of the Site is therefore considered to be negligible, resulting in a Negligible effect, which is **not significant**. Accordingly, no significant adverse impacts on hedgerows and tree lines are anticipated in relation to direct pathways as a result of the construction phase activities albeit at the Site level only.

Ponds

Direct Effects

7.8.44 The ponds within the Site are of medium sensitivity. No ponds are anticipated to be directly impacted through habitat loss as a result of the Scheme, whilst protective 10m buffers are included to all ponds as part of the embedded mitigation (**Design Principles, Parameters and Commitments [APP/5.8]**), such that the magnitude of potential impacts on ponds is negligible, resulting in a Negligible effect, which is **not significant**. Accordingly, it is anticipated that the Scheme will generate no significant adverse impacts on ponds in relation to direct pathways as a result of the construction phase.

Indirect Effects

7.8.45 The ponds within the Site are of medium sensitivity. Potential exists for construction activities to result in incidental damage, pollution, dust deposition or contamination of ponds and associated marginal habitats, albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting, whilst embedded mitigation in the form of maintenance of buffers will further reduce potential damage. Construction effects would be short term and temporary and likely limited to specific areas within the Site at any time, whilst the implementation of embedded mitigation is such that the magnitude of any impact is negligible, resulting in a Negligible effect, which is considered **not significant**. Accordingly, it is anticipated that the Scheme will generate no significant adverse impacts on ponds in relation to indirect pathways as a result of the construction phase.

Invasive and Non-Native Species (INNS)

Direct and Indirect Effects

7.8.46 The presence of INNS within the Site is of high sensitivity. Variegated Yellow Archangel and Three-cornered Garlic are present within the Study Area, albeit extremely limited in extent, particularly in relation to the scale of the Site. Both of these species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), such that it is an offence under this legislation to plant or cause the spread of these species into the wild. The currently recorded locations of these species are limited to buffer areas to be retained as part of the embedded mitigation, such that their currently recorded locations will remain unaffected, albeit potential exists for growth into affected areas over time and/or indirect disturbance through accidental encroachment into buffer areas. Embedded mitigation includes measures to prevent the spread of these species as a result of works at the Site, whilst also seeking to eradicate these species from the Order limits, which would represent a beneficial impact. In the context of the Site and given the limited existing extent, the magnitude of potential impacts arising from INNS removal would be negligible, resulting in a Negligible effect, which is not significant. Accordingly, following the embedded mitigation, no significant adverse effects are anticipated in regard to INNS during construction phase activities.

Fauna

Bats - Roosting

Direct Effects

7.8.47 The Site includes a number of trees including those containing potential roosting features (PRF), predominantly located within the field boundary hedgerows and tree lines. No buildings will be affected by the Scheme; however, the presence of roosting bats has been confirmed incidentally within a single offsite Barn, which will remain unaffected as a result of the Scheme. Without further survey work to confirm the nature, species and status of any individual roosts, it is not possible to confirm the scale of importance of any individual roost (e.g. small roosts of common species would likely be of significance at the Site level, whereas

large maternity roosts of rarer species would be of significance at larger scale). However, none of the relevant trees or buildings will be affected as a result of construction activities, whilst (as set out above) buffers will be retained throughout construction activities such that regardless of the importance of any bats present, should individual roosts be present, following the embedded mitigation the magnitude of impact is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse impacts on roosting bats are anticipated in relation to loss of roosts as a result of the construction phase.

Indirect Effects

7.8.48 Given the retention of the existing trees and buildings with associated buffers, potential for adverse impacts on roosting bats during construction phase activities would be limited to disturbance through noise and lighting associated with construction activities. Any such potential would be short-term and temporary prior to mitigation. Further, measures set out within embedded mitigation (including lighting considerations as part of the oCEMP **[APP/7.6]**) will ensure that potential for disturbance effects is avoided such that the magnitude of impact would be negligible, resulting in a Negligible effect, which is considered **not significant**. Accordingly, no significant adverse impacts on roosting bats are anticipated in relation to indirect pathways as a result of the construction phase of the Scheme.

Bats – Foraging / Commuting

Direct Effects

7.8.49 On the basis of the survey work undertaken, the assemblage of commuting and foraging bats recorded within the Study Area includes regular use by rarer species (i.e. Barbastelle), albeit limited to key commuting corridors with the majority of habitats unsuitable for this species such that the significance is considered to be at the Site-Regional level (negligible-high sensitivity). The Scheme design incorporates the retention of hedgerows, tree lines and woodland blocks, which constitute key movement corridors along which foraging and commuting bats traverse the Study Area, along with the key focus of foraging features. As set out above, embedded mitigation incorporates the retention of these features within appropriate development exclusion buffers outside of construction areas. As such, no direct loss of potentially important navigational features, commuting routes or foraging areas is anticipated. The removal of habitats of low value including the intensive the arable land will result in a potential temporary loss in available foraging habitat, albeit given the intensive arable management these areas are unlikely to support a significant invertebrate prey resource. The magnitude of impacts arising from temporary low value habitat loss is therefore considered negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse impacts on foraging/commuting bats are anticipated in relation to loss of habitats as a result of the construction phase.

Indirect Effects

7.8.50 Given the retention of the existing hedgerows, tree lines and mature vegetation with associated buffers, potential for adverse impacts on foraging/commuting bats during

construction activities would be limited to disturbance through noise and lighting associated with construction activities. Any such potential would be short-term and temporary in the absence of mitigation. Further, embedded mitigation incorporates suitable measures to ensure bats are safeguarded. As such, the magnitude of impact is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, it is anticipated that the Scheme will generate no significant adverse impacts in relation to noise and lighting with regard to foraging/commuting bats as a result of the construction phase of the Scheme.

Badger

Direct Effects

7.8.51 A small number of Badger setts and activity are present at the Site, which are therefore considered to be of significance at the Site level (negligible sensitivity). Specific details relating to the locations of Badger setts within the Study Area can be located within **ES Appendix 7.2: Baseline Ecological Survey Report [APP/6.4]**. Existing Badger setts will be fully retained and minimum 30m/20m (main/outlier sett) development exclusion buffers maintained as part of the embedded mitigation for the Scheme.

7.8.52 Similarly, the majority of foraging resources offering significant potential for Badger are likely limited to the field margins, hedgerows, tree-lines and woodlands which will be retained along with associated buffers such that they will remain unaffected during the construction phase. Internal areas within the arable fields are already subject to periodic vegetation loss and disturbance as part of arable cropping, such that the magnitude of impact on Badger resources as a result of temporary construction activities would be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on Badgers are anticipated in relation to direct pathways as a result of the construction phase.

Indirect Effects

7.8.53 Nonetheless, physical construction activities have potential to result in harm to individual Badgers that may wander onto the Site, including through accidental killing or injury. Embedded mitigation includes measures to safeguard Badgers comprising construction safeguards, as set out within the oCEMP **[APP/7.6]**. Accordingly, following the implementation of the embedded mitigation (including construction safeguards and suitable fencing design), the magnitude of impact on individual Badgers would be negligible, resulting in a Negligible effect which is considered **not significant**. As such, no significant adverse effects are anticipated in regard to individual Badgers as a result of the construction phase of the Scheme.

Otter and Water Vole

Direct and Indirect Effects

7.8.54 The Site does not contain any watercourses or connected waterbodies that could provide potential opportunities to support Otter or Water Vole, and no suitable connective habitats

are located within the immediate vicinity of the Site. Accordingly, on the basis of the survey information, it is reasonably considered that Otter and Water Vole are absent from the Site and immediately adjacent areas. As such, no direct or indirect effects are anticipated, resulting in a negligible magnitude of impact and a negligible effect which is **not significant**.

7.8.55 Accordingly, no significant adverse effects in regard to Otter or Water Vole are anticipated as a result of the construction phase of the Scheme.

Other Mammals – Brown Hare and Hedgehog

Direct and Indirect Effects

7.8.56 The Site provides suitable habitat for a range of small mammal species, including priority species Brown Hare and Hedgehog which are considered likely present and accordingly attributed a significance at the Site level (negligible sensitivity).

7.8.57 The construction activities will result in disturbance to habitats and potential for accidental killing or injury of individual mammals (including temporary loss of habitats), albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting, whilst habitats offering greatest cover and refuge such as hedgerows and woodlands will remain undisturbed with substantial buffers. Internal areas within the arable fields are already subject to periodic vegetation loss and disturbance as part of arable cropping, such that the magnitude of impact on Other Mammals as a result of temporary construction activities would be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on Other Mammals are anticipated as a result of the construction phase.

Breeding Birds

Direct and Indirect Effects

7.8.58 The assemblage of breeding birds (including ground nesting species) recorded within the site includes Priority species and is of medium sensitivity. Potential effects on breeding birds (including ground nesting species) during the construction phase relate to a direct loss of active nests and/or potential disturbance events, resulting in a direct effect on local populations and also potentially constituting an offence under the Wildlife and Countryside Act 1981 (as amended), which affords protection to wild birds and their eggs. Measures set out within stated embedded mitigation include safeguards (timing of vegetation clearance and/or nesting bird checks) in order to safeguard nesting birds and avoid a potential offence, as a result of which the magnitude of impact on bird populations would be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects are anticipated in regard to bird species (including ground nesting species) as a result of the construction phase of the Scheme.

Wintering Birds

Direct and Indirect Effects

7.8.59 The assemblage of wintering birds recorded within the site includes Priority species and is of medium sensitivity. Potential effects on wintering birds during the construction phase relate to a direct loss of foraging habitat and/or potential disturbance. Birds are highly mobile during this season, and as such will be able to disperse away from any habitat clearance or construction works, meaning the magnitude of impact on bird populations would therefore be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects are anticipated in regard to wintering bird species as a result of the construction phase of the Scheme.

Reptiles

Direct and Indirect Effects

7.8.60 The Site provides very limited suitable habitat for reptiles, with suitable habitat restricted to the field boundary vegetation, including grassland margins, hedgerow bases and ponds. Very low numbers of common reptile species (Grass Snake and Common Lizard) were recorded on site, all associated with field boundary habitats, and as such reptiles are present within the site and accordingly attributed a significance at the Site level (negligible sensitivity).

7.8.61 The construction activities will result in disturbance to limited areas of field boundary habitats and there is therefore potential for accidental killing or injury of individual reptiles, albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting, whilst habitats offering greatest cover and refuge such as hedgerows bases, ponds, and the majority of the grassland margins will remain undisturbed with substantial buffers and additional planting. Internal areas within the arable fields are unsuitable to support reptiles. As such, the result of temporary construction activities would be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on reptiles are anticipated as a result of the construction phase.

Amphibians (GCN)

Direct and Indirect Effects

7.8.62 The Study Area contains a number of ponds providing apparently suitable breeding opportunities for amphibians such as GCN (low sensitivity receptor), whilst a number of further ponds are present within the surrounding offsite areas within 500m of the Site. In addition, potentially suitable terrestrial habitats are present throughout the Site, albeit the vast majority of internal areas remain under intensive arable crop production which are subject to regular disturbance and provide at best sub-optimal terrestrial habitats.

7.8.63 The existing ponds will be retained, with surrounding buffers maintained as part of the Scheme's embedded mitigation. Terrestrial habitats offering raised potential for amphibians within the Site are likely limited to the field margins, hedgerows, tree-lines and woodlands which will be retained along with associated buffers such that they will remain largely unaffected during the construction phase.

7.8.64 Specific surveys of ponds within the Site and associated 500m radius during 2024 and 2025 only recorded two ponds (OP42 and OP44b) within 500m of the Site as supporting GCN. A third pond identified to support GCN is now located over 500m from the Site after revision of the Order limits. Construction activities will not be undertaken throughout the entire Order limits, with land in the north for ecological mitigation and land in the north and east to facilitate Grid Connection Infrastructure. As such, OP42 is located over approximately 750m from any construction activities and OP44b is located over approximately 700m from any construction activities. Accordingly, no breeding habitats or terrestrial habitats used by GCN within 500m of any breeding ponds will be affected by construction activities.

7.8.65 Guidance [Ref 7-12] set out within Natural England's Method Statement template, to be used when applying for a GCN development licence, states that surveys of ponds located 250m to 500m from the Order limits are only required when all of the following conditions are met:

- Maps, aerial photos, walk-over surveys or other data indicate that the pond(s) has potential to support a large GCN population
- The footprint contains particularly favourable habitat, especially if it constitutes the majority available locally
- The Scheme would have a substantial negative effect on that habitat; and
- There is an absence of dispersal barriers.

7.8.66 There is no evidence that offsite ponds within 250-500m of the Site would have particular potential to support large populations of GCN. As set out above, the Solar PV Site is dominated almost exclusively by intensively managed arable land (representing suboptimal habitat), with more permanently vegetated habitats such as woodlands, trees and hedgerows retained with appropriate buffers as part of the embedded mitigation, such that they are located outside of the construction footprint. Construction activities will result in temporary disturbance to arable areas, which could result in harm to individual GCN should they be present, albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting. In any case, GCN populations are only present within ponds further than 500m from construction activities. As such, the magnitude of impact on GCN as a result of construction activities would be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on GCN are anticipated in relation to direct pathways as a result of the construction phase.

Operational Phase

International Statutory Ecological Designations within 25km

Breckland SPA

7.8.67 Operational activities would include routine servicing, maintenance activities, and replacement of equipment such as PV panels and BESS, as required, as well as management of vegetation, with in particular traffic movements infrequent and no on-site staff required on day-to-day basis (as per **ES Chapter 5: The Scheme [APP/6.1]**).Breckland SPA

is a receptor of international importance (very high sensitivity) sited outside of the Order limits, located approximately 2.6km southwest of the Scheme. Accordingly, the designation is located outside of, and over, 2.5km from the Site. As such, no direct effects are anticipated as a result of operational activities and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Breckland SPA are anticipated as a result of the operational phase of the Scheme.

Norfolk Valley Fens SAC

7.8.68 Norfolk Valley Fens SAC is a receptor of international importance (very high sensitivity) sited approximately 3.6km north west of the Order limits. As such, no direct effects are anticipated as a result of operational activities and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Breckland SPA are anticipated as a result of the operational phase of the Scheme.

Breckland SAC

7.8.69 Breckland SAC is a receptor of international importance (very high sensitivity) sited approximately 8km south of the Order limits. As such, no direct effects are anticipated as a result of operational activities and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Breckland SPA are anticipated as a result of the operational phase of the Scheme.

Other International Ecological Designations within 25km of the Scheme

7.8.70 Other Statutory Designations of international importance (very high sensitivity) considered in this assessment, and noted to be present within 25km of the Scheme are as listed below:

- Roydon Common Ramsar
- Roydon Common & Dersingham Bog SAC
- Dersingham Bog Ramsar
- River Wensum SAC
- The Wash SPA & Ramsar; and
- The Wash and North Norfolk Coast SAC.

Direct Effects

7.8.71 The above receptors are all located in excess of 12km from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Roydon Common Ramsar, Roydon Common & Dersingham Bog SAC, Dersingham Bog Ramsar; River Wensum SAC, The Wash SPA & Ramsar, and The Wash and North Norfolk

Coast SAC the above receptors in relation to direct pathways are anticipated as a result of the operational phase of the Scheme.

Indirect Effects

7.8.72 Similarly, given the degree of separation (>12km between the above receptors of international importance (sensitivity) and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Roydon Common Ramsar, Roydon Common & Dersingham Bog SAC, Dersingham Bog Ramsar; River Wensum SAC, The Wash SPA & Ramsar, and The Wash and North Norfolk Coast SAC are anticipated in relation to indirect pathways as a result of the operational phase of the Scheme.

River Nar SSSI

7.8.73 River Nar SSSI is a receptor of national importance (high sensitivity) located approximately 0.27km north of the Order limits, such that there will be no land take or physical disturbance to the SSSI. Additionally, the closest point of the Order limits to the SSSI comprises the Skylark mitigation area, with the nearest point of the Solar PV Site and Associated Development actually located approximately 0.83km south-west of the SSSI. As such, no direct effects are anticipated as a result of operational activities and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on River Nar SSSI are anticipated as a result of the operational phase of the Scheme

7.8.74 The cessation of intensive arable farming across the Site will likely reduce the overall long-term input of fertilisers and pesticides during the operational phase, which would therefore potentially result in a long-term beneficial effect on the River Nar SSSI, albeit the magnitude of such impacts is considered to be negligible, resulting in a Negligible effect which is **not significant.**

Breckland Forest SSSI

7.8.75 Breckland SSSI is a receptor of national importance (high sensitivity) sited approximately 2.6km south of the Order limits at its nearest point. As such, no direct effects are anticipated as a result of operational activities and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Breckland Forest SSSI are anticipated as a result of the operational phase of the Scheme.

Other National Statutory Ecological Designations within 5km of the Scheme

7.8.76 Other Statutory Designations of national significance (high sensitivity) considered in this assessment, and noted to be present within 5km of the Scheme are as listed below:

- Castle Acre Common SSSI

- Narborough Railway Embankment SSSI; and
- East Walton & Adcock's Common SSSI.

Direct Effects

7.8.77 The above receptors are all located in excess of 0.4km from the Scheme, such that there will be no land take or physical disturbance to the SSSIs, whilst the above designations are separated from the Scheme by features such as roads. As such, no direct effects are anticipated, and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Castle Acre Common SSSI, Narborough Railway Embankment SSSI, and East Walton & Adcock's Common SSSI in relation to direct pathways are anticipated as a result of the operational phase of the Scheme.

Indirect Effects

7.8.78 Similarly, given the separation (>0.4km to the mitigation area and >1.68km to the Solar PV Site and Associated Development) between the above receptors of national importance (high sensitivity) and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated. Further, the interest features of the above designations relate to grassland and invertebrates that are unlikely to be susceptible to distant disturbance or effects. Accordingly, the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Castle Acre Common SSSI, Narborough Railway Embankment SSSI, and East Walton & Adcock's Common SSSI are anticipated in relation to indirect pathways as a result of the operational phase of the Scheme.

Non-Statutory Ecological Designations within 2km of the Scheme

River Road RNRs

7.8.79 As above, RNRs 033086 and U22086 are non-statutory designations of District importance (medium sensitivity) located within and adjacent to the Order limits, respectively. Operational activities will be well-removed from the locations of the RNRs. As such, no direct effects are anticipated as a result of operational activities and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on River Road RNRs are anticipated as a result of the operational phase of the Scheme.

Other Non-Statutory Ecological Designations within 2km

7.8.80 Other Non-statutory Ecological Designations of County and District importance (medium sensitivity) present within 2km of the Site are listed below;

- Land Adjacent to River Nar CWS ref. 895, 945 & 902
- Priory Meadow CWS

- Land West of Castle Acre CWS
- Mill House Lake CWS
- Castle Acre Castle CWS
- Mill House CWS
- Narford Lake CWS
- The Carr CWS
- Lynn Road Disused Railway CWS
- Priory Road RNR ref. U22074; and
- Walton Road ref. C65.

Direct Impacts

7.8.81 The above designations are notified on the basis of the habitats and vegetation/flora supported. The above receptors are all located in excess of 0.2km from the Order Limits and substantially further from the Solar PV Site and Associated Development, with the closest areas of the Order Limits proposed only for Skylark mitigation, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS, The Carr CWS, Lynn Road Disused Railway CWS, Priory Road RNR ref. U22074, and Walton Road ref. C65 in relation to direct pathways are anticipated as a result of the operational phase of the Scheme.

Indirect Effects

7.8.82 The above designations of County and District importance (medium sensitivity) are physically well removed from the Scheme, all of which are located in excess of 0.2km from the Order Limits and substantially further from the Solar PV Site and Associated Development, with the closest areas of the Order Limits proposed only for Skylark mitigation. Given the relevant interest features relate to plant species and grassland habitat that are not susceptible to distant disturbance events, no indirect effects on Walton Road RNR, Priory Road RNR and Lynn Road Disused Railway CWS are anticipated, and the resulting magnitude of impacts for these designations negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects in relation to indirect pathways are anticipated on Walton Road RNR, Priory Road RNR and Lynn Road Disused Railway CWS in relation to indirect pathways as a result of the operational phase of the Scheme.

7.8.83 The remaining designations within the above list are noted to interface with the River Nar SSSI along its east to west flow. Accordingly, in the absence of additional mitigation, and given the connected nature of Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS and The Carr CWS to the River Nar, there

remains potential for the Scheme to generate indirect degradation effects by way of chemical spills and contaminated surface water runoff, albeit given the distance and separation along with limited potential flow routes (as set out above in relation to the River Nar SSSI) any risk of runoff reaching the River Nar (and subsequently the above non-statutory designations) would be low. Nonetheless, embedded design considerations to minimise the likelihood and severity of pollution events, dust deposition and run-off have been incorporated into the Scheme should this occur, the magnitude of such impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, it is anticipated that the Scheme will generate no significant adverse effects on Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS and The Carr CWS during the operational phase of the Scheme.

Habitats

Veteran Trees

Direct Effects

7.8.84 The veteran trees within the Site are of high sensitivity. The retention of individual trees has been designed into the Scheme (including through routing of access via existing field entrances and access points), with suitable buffers of 15x stem diameter, to be maintained except as specified by detailed arboricultural advice. The magnitude of impact is therefore negligible, resulting in a Negligible effect, which is **not significant**. Accordingly, no significant adverse effects on veteran trees within the Site are anticipated in relation to direct pathways as a result of the operational phase of the Scheme.

Indirect Effects

7.8.85 The veteran trees within the Site are of high sensitivity. Once constructed, operational use of the Site is unlikely to result in any significant dust deposition or pollution events in relation to veteran trees. As such the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on veteran trees within the Site are anticipated in relation to degradation effects as a result of the operational phase of the Scheme.

Woodland

Direct Effects

7.8.86 The woodland within the Site is of medium sensitivity and will be fully retained within the embedded mitigation, such that no direct effects on woodland are anticipated. The magnitude of impact is therefore negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on woodland within the Site are anticipated in relation to direct pathways as a result of the operational phase of the Scheme.

Indirect Effects

7.8.87 The woodland within the Site is of medium sensitivity. Once constructed, operational use of the Site is unlikely to result in any significant dust deposition or pollution events in relation to woodland. As such the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on woodland are anticipated in relation to indirect pathways as a result of operational phase activities.

Hedgerows and Tree Lines

Direct Effects

7.8.88 The hedgerows and tree lines within the Site are of medium sensitivity. The retention of existing hedgerows and tree lines has been incorporated into the Scheme, with proposed access routes limited to existing field accesses and gaps in hedgerows such that no loss of hedgerows or tree lines is anticipated as a result of operational requirements. Embedded mitigation includes additional hedgerow and tree line planting with timescales for implementation and provisions included within the oLEMP **[APP/7.11]**. The magnitude of impacts on hedgerows and tree lines arising from the operation of the Site is dependent on the amount, detail and location of new hedgerow and tree planting, which is subject to the detailed design; for the purpose of this assessment, a range of low to high impact is considered. On the basis of a low to high magnitude of impact, this results in a is Minor to Major Beneficial effect; however, due to the final magnitude being subject to the detailed design of the Scheme, the effect is considered to be **not significant**. Accordingly, no significant beneficial impacts on hedgerows and tree lines are anticipated in relation to direct pathways as a result of the operational phase.

Indirect Effects

7.8.89 The hedgerows and tree lines within the Site are of medium sensitivity. Once constructed, operational use of the Site is unlikely to result in any significant dust deposition or pollution events in relation to hedgerows or tree lines. As such the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on hedgerows and tree lines are anticipated in relation to indirect pathways as a result of operational phase activities.

Ponds

Direct Effects

7.8.90 The ponds within the Site are of medium sensitivity. No ponds are anticipated to be directly impacted through habitat loss as a result of the Scheme, whilst the inclusion of 10m protective buffers around ponds is incorporated as part of the embedded mitigation, such that the magnitude of impact is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse impacts on ponds are anticipated in relation to direct pathways as a result of the construction phase.

Indirect Effects

7.8.91 The ponds within the Site are of medium sensitivity. Once constructed, operational use of the Site is unlikely to result in any significant dust deposition or pollution events in relation to ponds. As such the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant indirect adverse effects on ponds are anticipated in relation to indirect pathways as a result of operational phase activities.

Invasive and Non-Native Species

Direct and Indirect Effects

7.8.92 The presence of INNS within the Site is of high sensitivity. Variegated Yellow Archangel and Three-cornered Garlic are present within the Study Area albeit extremely limited in extent, particularly in relation to the scale of the Site. Both of these species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), such that it is an offence under this legislation to plant or cause the spread of these species into the wild. The currently recorded locations of these species are limited to buffer areas to be retained as part of the embedded mitigation, such that their currently recorded locations will remain unaffected, albeit potential exists for growth into affected areas over time. Further, given the likely reduced intensity of management and disturbance due to the cessation of intensive arable production during the operational phase of development, potential for disturbance or spread of these species would be anticipated to be reduced in relation to the existing baseline position. Nonetheless, embedded mitigation includes measures to prevent the spread of these species, whilst further aiming to eradicate the recorded INNS species from the Order limits. In the context of the Site and given the limited existing extent, the magnitude of potential impacts arising from INNS removal would be negligible, resulting in a Negligible effect which is considered not significant. Accordingly, no significant adverse impacts in relation to INNS are anticipated in relation to direct and indirect pathways as a result of the operational phase.

Fauna

Bats - Roosting

Direct and Indirect Effects

7.8.93 The Site includes a number of trees including those containing PRF, predominantly located within the field boundary hedgerows and tree lines. No buildings will likely be affected by the Scheme; however, the presence of roosting bats has been confirmed incidentally within a single offsite barn, which will remain unaffected under the Scheme. The trees and buildings at the Site will be retained along with suitable undisturbed buffers as part of the Scheme. Further, no lighting is proposed within the Solar PV Site (such that no lighting is anticipated within the vicinity of potential roosting features).

7.8.94 As such the magnitude of impact is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, it is anticipated that the Scheme will generate no significant adverse impacts on roosting bats in relation to direct or indirect pathways as a result of the operational phase.

Bats – Foraging / Commuting

Direct Effects

7.8.95 On the basis of the survey work undertaken, the assemblage of commuting and foraging bats recorded within the Study Area includes regular use by rarer species (i.e. Barbastelle), albeit limited to key commuting corridors with the majority of habitats unsuitable for this species such that the significance is considered to be at the Site-Regional level (negligible-high sensitivity). The Scheme design incorporates the retention of hedgerows, tree lines and woodland blocks, which constitute key movement corridors along which foraging and commuting bats traverse the Study Area, along with the key focus of foraging features. As set out above, embedded mitigation incorporates the retention of these features within appropriate development exclusion buffers. As such, no loss of potentially important navigational features, commuting routes or foraging areas is anticipated. The removal of habitats of low value including the intensively farmed arable land will result in a temporary loss in available foraging habitat, albeit given the intensive arable management these areas are unlikely to support a significant invertebrate prey resource. The magnitude of impacts arising from temporary low value habitat loss is therefore negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on foraging/commuting bats are anticipated in relation to habitat loss as a result of the operational phase.

Indirect Effects

7.8.96 On the basis of the above considerations, no significant loss of foraging or commuting habitats is anticipated as a result of the Scheme, albeit any lighting installed within the Scheme would have potential to impact on bats utilising key corridors. However, no lighting is proposed within the Solar PV Site areas (such that no lighting is anticipated within the vicinity of the majority of corridors). Proposed new safety lighting will be required, associated with the Customer Substation, National Grid Substation and BESS, albeit limited to the minimum requirements for Health and Safety as part of embedded mitigation. Given the need for lighting (and noting the limited extent of affected area under the Scheme), the magnitude of impacts arising through indirect pathways (lighting) would be anticipated to be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects are anticipated in regard to foraging/commuting bats in relation to disturbance (lighting) during the operational phase of the Scheme.

Badger

Direct and Indirect Effects

7.8.97 A small number of Badger setts and activity are present at the Site, which are therefore considered to be of significance at the Site level (negligible sensitivity). Specific details relating to the locations of Badger setts located within the Study Area can be located within **ES Appendix 7.2: Baseline Ecological Survey Report [APP/6.4]**. Existing Badger setts will be fully retained and minimum 30m/20m (main/outlier sett) development exclusion buffers maintained as part of the embedded mitigation for the Scheme.

7.8.98 Further, existing mature vegetated habitats such as hedgerows, woodland and tree lines will be retained with suitable buffers, whilst stable grassland habitats will be created and maintained within the Solar PV Site throughout the operational phase of the Scheme, representing increased potential foraging opportunities across the Site throughout that time (representing significant positive effects). New boundary fencing has potential to obstruct access to foraging areas and/or limit connectivity across the Site for Badger, albeit this would largely be in respect of internal field areas (currently providing limited foraging value) with the majority of boundary corridors and features such as woodlands and hedgerows retained outside of fenced areas and therefore continuing to be available for use. In the absence of additional mitigation, the magnitude of impacts on Badger due to fencing would be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse impacts on Badgers are anticipated in relation to potential exclusion from foraging areas as a result of the operational phase.

Otter and Water Vole

Direct and Indirect Effects

7.8.99 The Site does not contain any watercourses or connected waterbodies that could provide potential opportunities to support Otter or Water Vole, and no suitable connective habitats are located within the immediate vicinity of the Site. Accordingly, on the basis of the survey information, it is reasonably considered that Otter and Water Vole are absent from the Site and immediately adjacent areas. As such, no direct or indirect effects are anticipated, resulting in a negligible magnitude of impact and a negligible effect which is not significant.

7.8.100 Accordingly, **no significant** adverse effects in regard to Otter or Water Vole are anticipated as a result of the operational phase of the Scheme.

Other Mammals – Brown Hare and Hedgehog

Direct and Indirect Effects

7.8.101 Existing mature vegetated habitats such as hedgerows, woodland and tree lines provide cover and foraging resources for other mammals. These habitats will be retained with suitable buffers, whilst stable grassland habitats will be created and maintained within the Solar PV Site throughout the operational phase of the Scheme, representing increased potential foraging opportunities across the Site throughout that time. The new boundary fencing proposed as part of the Scheme has potential to obstruct access to foraging areas and/or limit connectivity across the Site for other mammals, albeit this would largely be in respect of internal field areas (currently providing limited foraging value) with the majority of boundary corridors and features such as woodlands and hedgerows retained outside of fenced areas and therefore continuing to be available for use. Further, embedded mitigation includes suitable design of fencing to allow permeability, including mammal gates where appropriate. Overhead power lines are unlikely to represent a barrier to any other mammal species. In the absence of additional mitigation, impacts on other mammals due to fencing would therefore be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly,

no significant adverse impacts on other mammals are anticipated in relation to potential exclusion from foraging areas as a result of the operational phase.

Breeding Birds

Direct and Indirect Effects

7.8.102 **Ground nesting birds (Skylark and Eurasian Curlew)**. Ground nesting birds include Priority Species and are therefore of medium sensitivity. Of the ground nesting species recorded within the Study Area, Eurasian Curlew and Eurasian Skylark require clear site lines to nest locations within open-structured vegetation, including within arable landscapes. In the absence of mitigation, the Scheme will result in the loss of open habitats with clear site lines, due to the inclusion of the PV panels. Embedded mitigation includes mitigation and compensation measures in respect of Skylark and Eurasian Curlew, including provision of new open grassland areas, favourable management of grassland margins and associated habitats, and long-term provision of Skylark plots within arable land outside of the proposed Solar PV Site. The proposed approach is set out within **ES Appendix 7.3: Proposed Mitigation Strategy for Ground Nesting Birds Requiring Open Habitats [APP/6.4]** and details of creation and management of specific grassland areas for ground nesting birds are identified within the oLEMP **[APP/7.11]**. The impacts on breeding Skylark and Eurasian Curlew are therefore negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse impacts on breeding Skylark and Eurasian Curlew are anticipated in relation to potential exclusion from foraging areas as a result of the operational phase.

7.8.103 **Breeding birds (other species).** Other breeding birds recorded within the Site include Priority species and are of medium sensitivity. The majority of breeding birds recorded within the Study Area are generalist species (species that make use of a wide variety of habitats and food sources), which will likely continue to utilise the retained boundary habitats and associated buffers in the long term, whilst disturbance events across the Site would likely be commensurate with, or reduced in relation to the existing agricultural management activities. Additional planting and habitat provision will likely improve the habitat suitability of the Site for these species. The magnitude of impacts arising from additional habitat provision is minor, resulting in a Moderate/Minor Beneficial effect which is considered **significant**. No significant adverse impacts on breeding birds are anticipated in relation to habitat loss as a result of the operational phase. Accordingly, only **significant beneficial effects** are anticipated on other wintering bird species as a result of operational activities.

7.8.104 **Wintering birds (Lapwing).** Lapwing is a Priority species and is therefore of medium sensitivity. Of the wintering bird species recorded within the Study Area, Lapwing require clear site lines whilst foraging within open-structured vegetation, including within arable landscapes, albeit will also use grassland habitats. In the absence of mitigation, the Scheme will result in the loss of open habitats with clear site lines, due to the inclusion of the PV panels. Embedded mitigation provided above for breeding Skylark and Eurasian Curlew will also benefit Lapwing during the winter months. As such, the impacts on wintering Lapwing would be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no

significant adverse impacts on wintering Lapwing are anticipated in relation to potential exclusion from foraging areas as a result of the operational phase.

7.8.105 **Wintering birds (other species).** Other wintering birds recorded within the site include Priority species and are of medium sensitivity. The majority of wintering birds recorded within the Study Area are generalist species (species that make use of a wide variety of habitats and food sources), which will likely continue to utilise the retained boundary habitats and associated buffers in the long term, whilst disturbance events across the Site would likely be commensurate with, or reduced in relation to the existing agricultural management activities. Additional planting and habitat provision will likely improve the habitat suitability of the Site for these species. The magnitude of impacts arising from additional habitat provision is minor, resulting in a Moderate/Minor Beneficial effect which is considered **significant**. No significant adverse impacts on other wintering birds are anticipated in relation to habitat loss as a result of the operational phase. Accordingly, only **significant beneficial effects** are anticipated on other wintering bird species as a result of operational activities.

Reptiles

Direct and Indirect Effects

7.8.106 Existing field boundary vegetation, including grassland margins, hedgerow bases and ponds provide suitable habitat for reptiles. These habitats will be retained with suitable buffers, whilst stable grassland habitats will be created and maintained within the Solar PV Site throughout the operational phase of the Scheme, representing increased potential opportunities across the Site throughout that time. The magnitude of impacts arising from additional habitat provision is low, resulting in a Negligible effect which is considered **not significant**. No significant adverse impacts on reptiles are anticipated in relation to habitat loss as a result of the operational phase. Accordingly, no significant effects are anticipated on reptile species as a result of the operational phase of the Scheme.

Amphibians (GCN)

Direct and Indirect Effects

7.8.107 As set out above, specific survey work of ponds within 500m of the Order limits demonstrated presence of GCN within three ponds (low sensitivity receptor), located 185m, 212m, and 656m from the current Order limits. The two ponds located within 500m of the Site Boundary and located approximately 700m and 750m from the proposed construction activities.

7.8.108 In line with the above considerations, given the distance and separation of these ponds, the Site is unlikely to represent an important resource used by GCN. Further, existing mature vegetated habitats such as hedgerows, woodland and tree lines that provide potential cover and foraging resources for amphibians such as GCN (should this species be present) will be retained with associated buffers of vegetation such that they will continue to be available for use. During the operational phase, internal field areas will be subject to reduced levels of ground disturbance in comparison with current intensive arable management and

development of grassland, representing increased potential foraging opportunities across the Site throughout that time should amphibians make use of these areas. The magnitude of impacts arising from additional habitat provision is low, resulting in a Minor Beneficial effect which is considered **not significant**. No significant adverse impacts on amphibians are anticipated in relation to habitat loss as a result of the operational phase. Accordingly, only **minor non-significant beneficial effects** are anticipated on amphibians as a result of operational activities.

Decommissioning Phase

International Statutory Ecological Designations within 25km

Breckland SPA

Direct Effects

7.8.109 Breckland SPA is a receptor of international importance (very high sensitivity) sited outside of the Order limits, located approximately 2.6km south west of the Scheme. Accordingly, the designation is located outside of, and over 2.5km from the Site such that no direct effects are anticipated, and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Breckland SPA in relation to direct pathways are anticipated as a result of the decommissioning phase of the Scheme.

Indirect Effects - Air Quality

7.8.110 Air quality effects arising from activities during the decommissioning phase will be temporary in nature and associated with the vehicle movements from the transit of materials and on-site construction related activities. The Air Pollution Information System (APIS) database [Ref 7-11] suggests that Woodlark, Nightjar and Stone-curlew are sensitive to nutrient nitrogen impacts. Embedded mitigation measures to minimise the likelihood and severity of potential air quality effects on Breckland SPA have been embedded into the Scheme from an early stage. This includes designated decommissioning and material transit routes being identified as part of the routing strategy, as part of which, access into the Site will be via the A1065, with vehicle movements directed along the A1065 and onwards via the A47 dual carriageway, therefore avoiding Breckland SPA.

7.8.111 As set out in **ES Chapter 9: Transport and Access [APP/6.2]**, it is assumed that traffic movement during the decommissioning phase would be equivalent to or less than peak traffic flows during the construction phase. decommissioning phase HGV movements shall be directed by a routing strategy, with an initial feasibility exercise indicating the following three key routes to the Site via local and strategic road networks:

- Route A: Access to/from the south from the A47, via the A1065
- Route B: Access to/from the north via A1065; and
- Route C: Access to/from the A47, from the west via Narford Road, Low Road, South Acre Road and A1065.

7.8.112 Breckland SPA is a receptor of international importance (very high sensitivity), however none of the above routes pass through or immediately adjacent to the Breckland SPA. Accordingly, subject to above design mitigation considerations, it is considered the magnitude of impact on Breckland SPA is negligible, resulting in a Negligible effect which is **not significant**. Therefore, no significant adverse effects on Breckland SPA in relation to air quality impacts are anticipated as a result of the decommissioning phase of the Scheme.

Norfolk Valley SAC

Direct Effects

7.8.113 Norfolk Valley Fens SAC is a receptor of international importance (very high sensitivity) sited outside of the Order limits, located approximately 3.6km north west of the Site at its nearest point, and accordingly is physically removed and separated from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Norfolk Valley Fens SAC in relation to direct pathways are anticipated as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.114 Similarly, given the degree of separation (3.6km) between Norfolk Valley Fens SAC and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Norfolk Valley Fens SAC in relation to indirect pathways are anticipated as a result of the decommissioning phase of the Scheme.

Breckland SAC

Direct Effects

7.8.115 Breckland SAC is a receptor of international importance (very high sensitivity), located approximately 8km south of the Scheme at its nearest point, and notified on the basis of the habitats and species it supports, including terrestrial and wetland habitats, and GCN respectively. Breckland SAC is physically well removed from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Breckland SAC in relation to direct pathways are anticipated as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.116 Similarly, given the degree of separation (8km) between Breckland SAC and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not**

significant. Accordingly, no significant adverse effects on Breckland SAC are anticipated in relation to indirect pathways as a result of the decommissioning phase of the Scheme.

Other International Ecological Designations within 25km of the Scheme

7.8.117 Other Statutory Designations of international significance (sensitivity) considered in this preliminary assessment, and noted to be present within 25km of the Scheme are as listed below:

- Roydon Common Ramsar
- Roydon Common & Dersingham Bog SAC
- Dersingham Bog Ramsar
- River Wensum SAC
- The Wash SPA & Ramsar; and
- The Wash and North Norfolk Coast SAC.

Direct Effects

7.8.118 The above receptors are all located in excess of 12km from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Roydon Common Ramsar, Roydon Common & Dersingham Bog SAC, Dersingham Bog Ramsar; River Wensum SAC, The Wash SPA & Ramsar, and The Wash and North Norfolk Coast SAC, the above receptors in relation to direct pathways are anticipated as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.119 Similarly, given the degree of separation (>12km between the above receptors of international importance (very high sensitivity) and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Roydon Common Ramsar, Roydon Common & Dersingham Bog SAC, Dersingham Bog Ramsar; River Wensum SAC, The Wash SPA & Ramsar, and The Wash and North Norfolk Coast SAC are anticipated in relation to indirect pathways as a result of the decommissioning phase of the Scheme.

River Nar SSSI

Direct Effects

7.8.120 The River Nar SSSI is a receptor of national importance (high sensitivity), located approximately 0.27km north of the Scheme at its nearest point, and notified on the basis of the habitats and species it supports, including terrestrial and wetland habitats, and Lapwing respectively. The River Nar SSSI is physically removed from the Scheme, such that there

will be no land take or physical disturbance to the SSSI. Additionally, the closest point of the Order limits to the SSSI comprises the ecological mitigation area, with the nearest point of the Solar PV Site and Associated Development actually located approximately 0.83km south-west of the SSSI. As such, **no direct effects** are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on the River Nar SSSI in relation to direct pathways are anticipated as a result of the decommissioning phase of the Scheme.

Air Quality

7.8.121 The River Nar SSSI has been scoped in for assessment in relation to potential sensitivity for air quality effects during the decommissioning phase.

7.8.122 As set out in the **oCTMP [APP/7.7]**, key traffic routes identified as part of the routing strategy for the decommissioning phase of the Scheme. Key routes A and C cross the River Nar SSSI at a single point via a road bridge along the A47 approximately at Narborough, whereas key route B crosses the River Nar SSSI at a single point across a road bridge along the A1065 approximately at West Lexham, with traffic routes along Narford Road otherwise falling within approximately 200m of the River Nar SSSI at its closest point.

7.8.123 There is no reason to suggest background traffic movements associated with this Phase of the Scheme will increase substantially above background rates at river crossings and along the nearest proposed key routes. For further detail on expected routing and traffic flows refer to **ES Chapter 9: Transport and Access [APP/6.2]**.

7.8.124 Further, there is no reason to suggest that any elevation from background traffic movements during the decommissioning phase will not be of a short-term nature, with traffic flows distributed according to the routing strategy which details several routing options to be utilised as part of the Scheme.

7.8.125 Accordingly, air quality effects arising from dust settlement and vehicle emissions are anticipated to be limited and diffuse, such that under the proposed vehicle routing strategy, air quality effects are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**.

7.8.126 Accordingly, no significant adverse effects of the Scheme are anticipated on the River Nar SSSI in terms of air quality throughout the decommissioning phase.

Indirect Effects – Hydrological Pathways

7.8.127 As set out within **ES Chapter 12: Water Resources [APP/6.2]**, the River Nar SSSI is hydrologically linked to the Site via chalk aquifer baseflow and near-surface water supplies which drain into the River Nar SSSI, with main source of leached nitrate within the River Nar SSSI arising from diffuse agricultural pollution. The Study Area itself supports a number of individual ditches, of which all but one was recorded to be dry at the time of initial survey, whilst these do not appear to represent a connected network leading to the River Nar. Based on information within **ES Chapter 12: Water Resources [APP/6.2]**, rainwater is anticipated

to infiltrate rapidly rather than generate substantial run-off within the Site. Accordingly, no potential surface water flow pathways to the River Nar SSSI are present, and rainwater is anticipated to infiltrate rapidly rather than generate substantial run-off.

7.8.128 In the absence of mitigation, there is potential for chemical spills and contaminated surface water runoff to reach the River Nar SSSI via overland flows which has the potential to degrade the habitats with adverse effects to the associated faunal and botanical assemblages of the River Nar SSSI, albeit given the separation and above considerations any risk would be low. Nonetheless, pollution prevention measures are included within the embedded mitigation, such that no adverse effects are anticipated, the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on the River Nar SSSI are anticipated through contamination and/or run-off via hydrological pathways through contamination and/or run-off as a result of decommissioning phase activities.

Breckland Forest SSSI

Direct Effects

7.8.129 Breckland Forest SSSI is a receptor of national importance (high sensitivity), located approximately 2.6km south of the Scheme at its nearest point, and notified on the basis of breeding Nightjar, Woodlark and Red Squirrel Sciurus vulgaris, as well as a number of distributionally restricted flora. Breckland Forest SSSI is physically well removed from the Scheme, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on the Breckland Forest SSSI in relation to direct pathways are anticipated as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.130 Similarly, given the degree of separation (2.6km) between Breckland Forest SSSI and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Breckland Forest SSSI are anticipated in relation to indirect pathways as a result of the decommissioning phase of the Scheme.

Other National Statutory Ecological Designations within 5km of the Scheme

7.8.131 Other Statutory Designations of national significance (high sensitivity) considered in this preliminary assessment, and noted to be present within 5km of the Scheme are as listed below:

- Castle Acre Common SSSI
- Narborough Railway Embankment SSSI; and
- East Walton & Adcock's Common SSSI.

Direct Effects

7.8.132 The above receptors are all located in excess of 0.4km from the Scheme, such that there will be no land take or physical disturbance to the SSSIs. Similarly, given the separation (>0.4km to the mitigation area and >1.68km to the Solar PV Site and Associated Development) between the above receptors of national importance (high sensitivity) and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated. Further, the interest features of the above designations relate to grassland and invertebrates that are unlikely to be susceptible to distant disturbance or effects. Accordingly, no direct effects are anticipated, and the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Castle Acre Common SSSI, Narborough Railway Embankment SSSI, and East Walton & Adcock's Common SSSI in relation to direct pathways are anticipated as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.133 Similarly, given the degree of separation (>0.4km to the mitigation area and >1.68km to the Solar PV Site and Associated Development) between the above receptors of national importance (high sensitivity) and the Scheme, indirect effects such as disturbance via lighting and noise, or functionality linked land effects arising from air quality and dust settlement are not anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on Castle Acre Common SSSI, Narborough Railway Embankment SSSI, and East Walton & Adcock's Common SSSI are anticipated in relation to indirect pathways as a result of the decommissioning phase of the Scheme.

Non-Statutory Ecological Designations within 2km of the Scheme

River Road RNRs (refs. 033086 & U22086)

Direct Effects

7.8.134 River Road RNRs (refs.033086 & U22086) are non-statutory designations of **medium** sensitivity located in within and adjacent to the Order limits, respectively.

7.8.135 RNR 033086 is designated for the presence of Dropwort, whereas RNR U22086 is designated for the presence of Knapweed Broomrape. The RNRs are located along the existing public highway of River Road, outside of the Order limits. Ecological buffers have been embedded into the design of the Scheme from an early stage to avoid adverse impacts by way of damage to the vegetation present through direct damage or encroachment, such that the resulting magnitude of impact is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects in relation to direct pathways are anticipated on RNRs 033086 and U22086 as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.136 As above, RNRs 033086 and U22086 are non-statutory designations of medium sensitivity located in adjacent to the Order limits. Embedded design considerations to minimise the likelihood and severity of pollution events, dust deposition and run-off have been incorporated into the Scheme, such that the resulting magnitude of impacts is considered to be negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on the River Road RNRs 033086 and U22086 in relation to degradation effects arising from pollution events, dust deposition and run-off are anticipated as a result of the decommissioning phase of the Scheme.

Other Non-Statutory Ecological Designations within 2km

7.8.137 Other Non-statutory Ecological Designations of County and District importance (medium sensitivity) present within 2km of the Site are listed below:

- Land Adjacent to River Nar CWS ref. 895, 945 & 902
- Priory Meadow CWS
- Land West of Castle Acre CWS
- Mill House Lake CWS
- Castle Acre Castle CWS
- Mill House CWS
- Narford Lake CWS
- The Carr CWS
- Lynn Road Disused Railway CWS
- Priory Road RNR ref. U22074; and
- Walton Road ref. C65.

Direct Impacts

7.8.138 The above designations are notified on the basis of the habitats and vegetation/flora supported. The above receptors are all located in excess of 0.2km from the Order Limits and substantially further from the Solar PV Site and Associated Development, with the closest areas of the Order Limits proposed only for Skylark mitigation, such that no direct effects are anticipated, and the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS, The Carr CWS, Lynn Road Disused Railway CWS, Priory Road RNR ref. U22074, and Walton Road ref. C65 in relation to direct pathways are anticipated as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.139 The above designations of county and district importance (medium sensitivity) are physically removed from the Scheme, all of which are located in excess of 0.2km from the Order Limits and substantially further from the Solar PV Site and Associated Development, with the closest areas of the Order Limits proposed only for Skylark mitigation. No indirect effects on Walton Road RNR, Priory Road RNR and Lynn Road Disused Railway CWS are anticipated given the designated features of these RNRs relate to plant species and grassland habitats that are unlikely to be susceptible to distant disturbance effects, and as such, the resulting magnitude of impacts for these designations negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects in relation to indirect pathways are anticipated on Walton Road RNR, Priory Road RNR and Lynn Road Disused Railway CWS in relation to indirect pathways as a result of the decommissioning phase of the Scheme.

7.8.140 The remaining designations within the above list are noted to interface with the River Nar SSSI along its east to west flow. Accordingly, in the absence of additional mitigation, and given the connected nature of Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS and The Carr CWS to the River Nar, there remains potential for the Scheme to generate indirect degradation effects by way of chemical spills and contaminated surface water runoff, albeit given the distance and separation along with limited potential flow routes (as set out above in relation to the River Nar SSSI) any risk of runoff reaching the River Nar (and subsequently the above non-statutory designations) would be low. Nonetheless, embedded design considerations to minimise the likelihood and severity of pollution events, dust deposition and run-off have been incorporated into the Scheme should this occur. The magnitude of impact is therefore negligible, resulting in a Negligible effect, which is **not significant**. Accordingly, no significant adverse effects on Land Adjacent to River Nar CWS ref. 895, 945 & 902, Priory Meadow CWS, Land West of Castle Acre CWS, Mill House Lake CWS, Castle Acre Castle CWS, Mill House CWS, Narford Lake CWS and The Carr CWS during the decommissioning phase of the Scheme.

Habitats

Veteran Trees

Direct Effects

7.8.141 The veteran trees within the Site are of high sensitivity. The retention of veteran trees has been designed into the Scheme (including through routing of access via existing field entrances and access points), with suitable buffers of 15x stem diameter, to be maintained except as specified by detailed arboricultural advice. The magnitude of impact is therefore negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on veteran trees within the Site are anticipated in relation to direct pathways as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.142 Veteran trees within the Site are high sensitivity. Embedded mitigation measures to minimise the likelihood and severity of pollution events include, dust deposition and run-off have been incorporated into the Scheme, following which, potential for indirect degradation effects through pollution events and dust settlement would be removed, such that the resulting magnitude of impacts is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects on veteran trees within the Site are anticipated in relation to degradation effects as a result of the decommissioning phase of the Scheme, albeit at the Site level only.

Woodland

Direct Effects

7.8.143 The woodland within the Site is of medium sensitivity. As part of the Scheme design and embedded mitigation, no direct loss of woodland is anticipated as existing woodland habitats within the Order limits as all access, hardware and cabling deconstruction will avoid the woodland habitats which occur within and adjacent to the Site. The magnitude of impact is therefore negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on woodland within the Site are anticipated in relation to direct pathways as a result of the decommissioning phase of the Scheme.

Indirect Effects

7.8.144 The woodland within the Site is of medium sensitivity. Potential exists for decommissioning activities to result in incidental damage, pollution, dust deposition or contamination to woodland margins in the absence of mitigation, albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting. Further, any effect would be temporary and would likely be limited to the margins of the woodland, whilst embedded mitigation measures are proposed (including as set out within the **oDS [APP/7.10]**) which will further prevent any potential effects, such that the magnitude of impact is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on woodland are anticipated as a result of decommissioning phase activities.

Hedgerows and Tree Lines

Direct Effects

7.8.145 The hedgerows and tree lines within the Site are of medium sensitivity. In line with the construction phase, existing field access routes and hedgerow gaps would be utilised for decommissioning activities such that any necessary loss of hedgerows and tree lines would be anticipated to be limited to minor (temporary) widening of existing gaps to ensure appropriate access. Further, embedded mitigation includes additional hedgerow and tree line planting to be retained following decommissioning, with timescales for implementation and provisions included within the oDS. Accordingly, the magnitude of impacts on hedgerows and tree lines arising from the decommissioning of the Site is considered to be of a Minor to Major Beneficial effect; however, due to the final magnitude being subject to the detailed design of

the Scheme prior to the construction phase, the effect is considered to be **not significant**. Accordingly, it is anticipated that the Scheme will generate no significant adverse effects and have non-significant beneficial impacts on hedgerows and tree lines as a result of the decommissioning phase.

Indirect Effects

7.8.146 The hedgerows and tree lines within the Site are of medium sensitivity. Potential exists for decommissioning activities to result in incidental damage, pollution, dust deposition or contamination to hedgerows and tree lines, albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting, whilst embedded mitigation in the form of maintenance of buffers will further reduce potential damage, such that the magnitude of impacts on hedgerows and tree lines arising from the proposals is negligible. Decommissioning effects would be short term and temporary and likely limited to specific areas within the Site at any time, such that at most the magnitude of any impact is therefore considered negligible, resulting in a Negligible effect which is **not significant**. Accordingly, following the embedded mitigation, it is anticipated that the Scheme has the potential to result in temporary non-significant adverse effects on hedgerows and tree lines in relation to indirect pathways as a result of decommissioning phase activities albeit at the Site level only.

Ponds

Direct Effects

7.8.147 The ponds within the Site are of medium sensitivity. The retention of existing ponds has been incorporated into the Scheme design along with associated protective buffers. In line with the construction phase, no ponds are anticipated to be directly impacted through habitat loss as a result of the decommissioning phase, with decommissioning activities located outside of the buffer zones included as part of the embedded mitigation, such that the magnitude of impact is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse effects on ponds are anticipated as a result of the decommissioning phase activities.

Indirect Effects

7.8.148 The ponds within the Site are of medium sensitivity. Potential exists for decommissioning activities to result in incidental damage, pollution, dust deposition or contamination of ponds and associated marginal habitats, albeit this would not be anticipated to be significantly greater than the existing baseline position as a result of current agricultural activities such as ploughing and crop harvesting, whilst embedded mitigation in the form of maintenance of buffers will further reduce potential damage. Further, decommissioning effects would be short term and temporary and likely limited to specific areas within the Site at any time, such that at most the magnitude of any impact is negligible, resulting in a Negligible effect which is **not significant**. Accordingly, following the mitigation measures set out, no significant adverse effects on ponds in relation to indirect pathways as a result of construction phase activities albeit at the Site level only.

Invasive and Non-Native Species

Direct and Indirect Effects

7.8.149 The presence of INNS within the Site is of high sensitivity. Variegated Yellow Archangel and Three-cornered Garlic are present within the Study Area at select locales associated with hedgerows and field margins. Both of these species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), such that it is an offence under this legislation to plant or cause the spread of these species into the wild. The currently recorded locations of these species are limited to buffer areas to be retained as part of the embedded mitigation such that their currently recorded locations will remain unaffected, albeit potential exists for growth into affected areas over time and/or indirect disturbance through accidental encroachment into buffer areas (whilst the substantial time prior to the decommissioning phase is such that there is a high level of uncertainty over the likelihood of continued presence and/or status of INNS at the Site at that time). Embedded mitigation includes measures to prevent the spread of these species as a result of works at the Site, such that at most the magnitude of any impact in regard to INNS is negligible, resulting in a Negligible effect, which is **not significant**. Accordingly, following the embedded mitigation, **no significant adverse effects** are anticipated in regard to decommissioning phase activities.

Fauna

Bats - Roosting

Direct and Indirect Effects

7.8.150 As above, the Site includes a number of trees including those containing PRF, predominantly located within the field boundary hedgerows and tree lines. No buildings will be affected by the Scheme; however, the presence of roosting bats has been confirmed incidentally within a single offsite barn, which will remain unaffected as a result of the Scheme. In respect of trees in particular given the typical timescales, transitional nature and lifespan of potential roosting features associated with trees, the precise location and nature of individual features would be expected to have changed considerably at the Site by the time of decommissioning, albeit it is anticipated that a similar overall level of potential features would remain present at the Site at that time.

7.8.151 Given the retention of the existing trees and buildings with associated buffers, potential for adverse impacts on roosting bats during construction activities would be limited to potential disturbance through noise and lighting associated with construction activities. Any such potential would be short-term and temporary. The trees and buildings at the Site will be retained along with suitable undisturbed buffers as part of the Scheme. Further, no lighting is proposed within the Solar PV Site (such that no lighting is anticipated within the vicinity of potential roosting features). As such the magnitude of impact is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, it is anticipated that the Scheme will generate no significant adverse impacts on roosting bats in relation to direct or indirect pathways as a result of the decommissioning phase of the Scheme.

Bats - Foraging / Commuting

Direct Effects

7.8.152 On the basis of the survey work undertaken, the assemblage of commuting and foraging bats recorded within the Study Area includes regular use by rarer species (i.e. Barbastelle), albeit limited to key commuting corridors with the majority of habitats unsuitable for this species such that the significance is considered to be at the Site-Regional level (negligible-high sensitivity). Decommissioning activities will be focussed on removal of infrastructure and reversion to agricultural uses in line with the current baseline. Accordingly, no direct loss of potentially important navigational features, commuting routes or foraging areas is anticipated. The magnitude of impacts arising from temporary low value habitat loss is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on foraging/commuting bats are anticipated in relation to habitat loss as a result of the decommissioning phase.

Indirect Effects

7.8.153 Given the retention of the existing hedgerows, tree lines and mature vegetation with associated buffers, the potential for adverse impacts on foraging/commuting bats during decommissioning activities would be limited to disturbance through noise and lighting associated with construction activities. Any such potential would be short-term and temporary in the absence of additional mitigation, whilst measures set out within the embedded mitigation, for example in regard to lighting, (including as part of the oDS **[APP/7.10]**) will ensure bats are safeguarded. Accordingly, the magnitude of impact would be negligible, resulting in a Negligible effect which is considered **not significant**, such that no significant adverse effects are anticipated in regard to foraging/commuting bats in relation to temporary disturbance (noise and lighting) as a result of the decommissioning phase of the Scheme.

Badger

Direct Effects

7.8.154 A small number of Badger setts and activity are present at the Site, which are therefore considered to be of significance at the Site level (negligible sensitivity). Specific details relating to the locations of Badger setts within the Study Area can be located within **ES Appendix 7.2: Baseline Ecological Survey Report [APP/6.4]**. Existing Badger setts will be fully retained and minimum 30m/20m (main/outlier sett) development exclusion buffers maintained as part of the embedded mitigation for the Scheme.

7.8.155 In line with consideration in regard to construction impacts, the majority of foraging resources offering significant potential for Badger are likely limited to the field margins, hedgerows, tree-lines and woodlands which will be retained along with associated buffers such that they will remain unaffected during the decommissioning phase. Decommissioning activities will be focussed on removal of infrastructure and reversion to agricultural uses in line with the current baseline. Accordingly, no direct loss of current habitats or importance to Badger is anticipated, albeit necessary loss of grassland areas (created and retained

throughout the operational phase) would occur, potentially representing an adverse impact on Badgers at the time. However, such habitats would only have been brought about on a temporary basis as a result of the Scheme and therefore the overall magnitude of impacts arising from habitat loss as a result of decommissioning is considered negligible, resulting in a Negligible effect which is **not significant**. Accordingly, no significant adverse impacts on Badgers in terms of habitat loss are anticipated in relation to habitat loss as a result of the decommissioning phase.

Indirect Effects

7.8.156 Nonetheless, in line with construction activities, physical works forming part of the decommissioning phase have potential to result in harm to individual Badgers that may wander onto the Site during the works, including through accidental killing or injury. Embedded mitigation includes measures (including construction safeguards and suitable fencing design included within the oDS **[APP/7.10]**) to safeguard Badgers. Accordingly, following the implementation of the embedded mitigation, the magnitude of impact on individual Badgers would be negligible, resulting in a Negligible effect which is considered **not significant**. As such, no significant adverse effects are anticipated in regard to In the absence of additional mitigation.

Otter and Water Vole

Direct and Indirect Effects

7.8.157 The Site does not contain any watercourses or connected waterbodies that could provide potential opportunities to support Otter or Water Vole, and no suitable connective habitats are located within the immediate vicinity of the Site. Accordingly, on the basis of the survey information, it is reasonably considered that Otter and Water Vole are absent from the Site and immediately adjacent areas. As such, no direct or indirect effects are anticipated, resulting in a negligible magnitude of impact and a negligible effect which is **not significant.**

7.8.158 As such no significant adverse effects in regard to Otter or Water Vole are anticipated as a result of the decommissioning phase of the Scheme.

Other Mammals – Brown Hare and Hedgehog

Direct and Indirect Effects

7.8.159 In line with consideration in regard to construction impacts, the habitats offering greatest potential cover and foraging resources for other mammal species are likely focussed on the field margins, hedgerows, tree-lines and woodlands which will be retained along with associated buffers such that they will remain unaffected during the decommissioning phase. Decommissioning activities will be focussed on removal of infrastructure and reversion to agricultural uses in line with the current baseline. Accordingly, no direct loss of current habitats or importance to other mammals is anticipated, albeit necessary loss of grassland areas (created and retained throughout the operational phase) would occur, potentially representing an adverse impact on mammal species at the time. However, such habitats

would only have been brought about on a temporary basis as a result of the Scheme and therefore the overall magnitude of impacts arising from habitat loss as a result of decommissioning is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on other mammals in terms of habitat loss are anticipated in relation to habitat loss as a result of the decommissioning phase.

Breeding Birds

Direct and Indirect Effects

7.8.160 In line with the construction phase, potential effects on breeding birds (including ground nesting species) during the decommissioning phase relate to a direct loss of active nests and/or potential disturbance events, resulting in a direct effect on local populations and also potentially constituting an offence under the Wildlife and Countryside Act 1981 (as amended), which affords protection to wild birds and their eggs. Measures set out within stated embedded mitigation include safeguards (timing of vegetation clearance and/or nesting bird checks) in order to safeguard nesting birds and avoid a potential offence, following which, the magnitude of impact on bird populations would be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects are anticipated in regard to bird species (including ground nesting species) as a result of the decommissioning phase of the Scheme.

Wintering Birds

Direct and Indirect Effects

7.8.161 In line with the construction phase, potential effects on wintering birds during the decommissioning phase relate to a direct loss of foraging habitat and/or potential disturbance. Birds are highly mobile during this season, and as such will be able to disperse away from any habitat clearance or construction works, therefore the magnitude of impact on bird populations would therefore be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse effects are anticipated in regard to wintering bird species as a result of the decommissioning phase of the Scheme.

Reptiles

Direct and Indirect Effects

7.8.162 In line with consideration in regard to construction impacts, the habitats offering greatest potential cover and foraging resources for other mammal species are likely focussed on the field margins, hedgerow bases, and ponds which will be retained along with associated buffers such that they will remain unaffected during the decommissioning phase. Decommissioning activities will be focussed on removal of infrastructure and reversion to agricultural uses in line with the current baseline. Accordingly, no direct loss of current habitats or importance to reptiles is anticipated, albeit necessary loss of grassland areas (created and retained throughout the operational phase) would occur, potentially

representing an adverse impact on reptiles at the time. However, such habitats would only have been brought about on a temporary basis as a result of the Scheme and therefore the overall magnitude of impacts arising from habitat loss as a result of decommissioning is negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on reptiles in terms of habitat loss are anticipated as a result of the decommissioning phase.

Amphibians (GCN)

Direct and Indirect Effects

7.8.163 Decommissioning activities and associated potential for impacts on amphibians (GCN) will be similar to the construction phase (albeit the construction phase represents the worst-case scenario), should the population remain absent from ponds within 500m of the construction footprint on the basis of the current populations. Given the timescales prior to the progression of decommissioning activities, it is possible that the status of GCN could change, with any accurate assessment of effects necessarily depend on the population status at the time, which would likely need to be updated through up-to-date survey work, to inform the decommissioning phase.

7.8.164 However, on the basis of the current information, the magnitude of impact on GCN (low sensitivity receptor) as a result of temporary decommissioning activities would be negligible, resulting in a Negligible effect which is considered **not significant**. Accordingly, no significant adverse impacts on GCN are anticipated in relation to direct pathways as a result of the decommissioning phase.

7.9 Additional Mitigation Measures

Additional Construction and Decommissioning Phase Mitigation Measures

7.9.1 Although not required, given there are no significant adverse effects, the following additional mitigation measures have been incorporated into the Scheme's design for the construction phase:

Fauna

Badger

7.9.2 Badgers are dynamic animals and levels of Badger activity can rapidly change at a site, with new setts being created at any time. Given the known presence of Badger setts in the area, it is proposed that updated Badger survey work is carried out prior to commencement of the construction and decommissioning phases in order to confirm the current status of Badgers at the Site and inform any detailed mitigation (including the need for works to be undertaken under licence should any active setts be affected at that time).

7.9.3 Should additional Badger setts be discovered in locations which cannot be accommodated within the Scheme design (including where new setts are discovered in locations which

disrupt or prevent construction activities), it is anticipated that such setts would need to be closed under licence, with suitable mitigation measures/compensation provided in line with relevant licence requirements.

7.10 Residual Effects

7.10.1 As there are no significant adverse effects identified, the effects will remain unchanged as those reported above in the assessment of likely effects.

7.11 Cumulative Effects Assessment

7.11.1 This section presents an assessment of cumulative effects between the Scheme and other existing and/or approved developments.

7.11.2 As set out in **ES Chapter 2: EIA Process and Methodology [APP/6.1]**, a Cumulative Effects Assessment (CEA) has been undertaken as part of the EIA in accordance with PINS Advice on Cumulative Effects Assessment (September 2024) and has considered two types of cumulative effects.

- In combination effects: the combined effect generated by individual effects on a particular receptor (presented within **ES Chapter 17: In-Combination Effects [APP/6.2]**; and
- Cumulative effects: effects generated by the Scheme and other planned or approved developments on the same receptor (presented in **ES Volume I, Chapters 6 to 16 [APP/6.2]**).

In-Combination Effects

7.11.3 In-combination effects occur when receptors are subject to effects under more than one environmental topic. As such, the effects presented in **ES Chapters 6 to 16 [APP/6.2]** (regardless of whether they are classed as significant or not significant) have been reviewed to identify receptors subject to one or more types of effect to ensure that the interrelationship between each of the aspects of the environment likely to be affected by the Scheme has been properly evaluated and considered.

7.11.4 These have been summarised and tabulated to demonstrate where these effects have the potential to occur and is presented in **ES Chapter 17: In-Combination Effects [APP/6.2]**.

7.11.5 No likely significant in-combination effects relating to Ecology and Biodiversity have been identified.

Cumulative Effects

7.11.6 Cumulative effects may arise as a result of effects associated with the Scheme combining with effects associated with other developments. The list of developments has been narrowed down to focus on those developments which are most likely to give rise to

cumulative effects. A long-list was generated which was then refined following consultation with relevant local planning authorities, this short-list forms the basis of this assessment.

7.11.7 A short list of cumulative developments/allocations can be found in **ES Appendix 2.4: Cumulative Schemes [APP/6.4].**

Relevant Developments

7.11.8 Those developments which have the potential to result in cumulative effects on Ecological Receptors within the associated Study Area are set out in Table 7-11. The remaining schemes are not considered to have potential for cumulative effects within the Ecological Receptors study area due to their distance and separation from the site, such that they would not impact on the same ecological receptors, habitats or faunal populations as the Scheme and accordingly would not combine with the Scheme to result in significant cumulative effects.

Table 7-11 Short List Developments/Allocations relevant to Ecological Receptors

Short List Ref	Planning Ref	Description	Distance from the Scheme
1	EN0110010	High Grove Solar Farm	Adjoining and adjacent
2	EN010079	Norfolk Vanguard Offshore Wind Farm – east and west terrestrial elements	6km
3	EN010087	Norfolk Vanguard Offshore Wind Farm	6km
4	3SO/2024/0002/SCO	Indigo Corporation Limited – 400,000 bird broiler farm (Scoping Opinion)	1km
5	Allocation 4: LP[097]010, Allocation 6: LP[097]018	Breckland Local Plan Swaffham Housing Allocations 4, 6 and 7	4km
6	3PL/2022/1215/F	Low Carbon Solar Park 15 Ltd	2.7km Cable route includes a small section within and

			adjacent to the Order limits.
7	EN110048	Longmarsh Green Energy – solar energy, battery energy storage and co-located data centre campus	6.2km

7.11.9 Natural England has identified a number of other plans or projects to be considered, including High Grove Solar Farm, terrestrial elements of the Norfolk Boreas Offshore Wind Farm, and terrestrial elements of the Norfolk Vanguard Offshore Wind Farm, which are therefore considered specifically below in relation to cumulative effects.

High Grove Solar

7.11.10 At the time of writing, part of High Grove Solar Farm is located within the Site, specifically an area of the cable route corridor of High Grove Solar Farm, such that potential exists for both developments to impact the same habitats and populations and/or individuals in regard to faunal species.

7.11.11 Due to the proximity of High Grove Solar to the Order limits for the Scheme, and the potential for identified sensitive receptors to be affected by both developments, the potential for cumulative effects with High Grove Solar have been considered in this assessment.

Norfolk Vanguard Offshore Wind Farm – east and west terrestrial elements

7.11.12 Norfolk Vanguard Offshore Wind Farm – east and west terrestrial elements is located 6km from the Site. Given the nature of the proposals and the lack of significant effects of the Scheme and any pathways forming potential links between the two schemes, no shared receptors appear to be present between the two developments and therefore no potential exists for cumulative effects.

Norfolk Boreas Offshore Wind Farm – terrestrial elements

7.11.13 Norfolk Boreas Offshore Wind Farm is similarly located 6km from the Site. Given the nature of the proposals and the lack of significant effects of the Scheme and any pathways forming potential links between the two schemes, no shared receptors appear to be present between the two developments and therefore no potential exists for significant cumulative effects.

Indigo Corporation Limited – 400,000 bird broiler farm (Scoping Opinion)

7.11.14 Based on the information provided within the EIA Scoping Opinion for this cumulative scheme, no ecological information appears to have been submitted with the proposal. However, the consultation response received from Place Services identifies potential for significant adverse effects on designations (Breckland SPA, Breckland Forest SSSI,

Breckland Farmland SSS and other designations) specifically in regard to air and water pollution from increased ammonia levels. The proposal is located 1km from the Order limits for the Scheme. Information at **ES Chapter 16: Other Environmental Matters [APP/6.2]**, confirms that air quality effects as a result of the Scheme are not likely to be significant. Further, Breckland SPA and Breckland Forest SSSI are specifically considered, noting that these (and other nearby designations) are not located within approximately 50m of the Site or within approximately 200m of any roads considered for construction traffic, such that no potential exists for in combination effects in relation to air quality with the Scheme and this cumulative scheme. Further, no hydrological link exists between the Site and the relevant designations or Indigo Corporation Limited site, such that cumulative effects in relation to hydrology can be ruled out. On this basis no cumulative effects are anticipated with this development, and it has not been considered any further in this assessment.

Breckland Local Plan Swaffham Housing Allocations 4, 6 and 7

7.11.15 Breckland Local Plan Swaffham Housing Allocations 4, 6 and 7 are located 4km from the Site. These allocations are sufficiently distant from the Site that given the nature of the proposals, they are unlikely to interact directly with the Scheme. As such, no shared receptors appear to be present between the two developments and therefore no pathways appear to exist by which in significant cumulative effects in relation to ecology receptors could occur.

Low Carbon Solar Park 15 Ltd

7.11.16 A small part of the proposed Low Carbon Solar Park 15 Ltd is located within the Site, specifically in the form of a short section of the cable route corridor which also extends along the A1065 Castle Acre Road that runs adjacent to the Scheme, such that potential exists for both developments to impact the same habitats and populations and/or individuals in regard to faunal species. The remainder of the proposed Low Carbon Solar Park 15 Ltd is located approximately 2.7km from the Scheme, covering an area of approximately 94.4ha.

7.11.17 Due to the proximity of the cable route of Low Carbon Solar Park 15 Ltd to the Order limits for the Scheme (including, in particular, the cable route), and the potential for identified sensitive receptors to be affected by both developments, the potential for cumulative effects with Low Carbon Solar Park 15 Ltd has been considered in this assessment.

Longmarsh Green Energy

7.11.18 Longmarsh Green Energy is located approximately 6.2km south west of the Site at its closest point (identified for solar and battery storage), beyond a number of roads including the A47, areas of agricultural land, and RAF Marham. The land identified for the proposed eastern substation is located approximately 12km west of the Site, whilst the proposed data centre is further removed from the Site, located approximately 21km west, beyond the A10. A review of available drainage catchment data available at environment.data.gov.uk has indicated that the Longmarsh Green Energy Site is located within separate drainage catchments to the Scheme and therefore no potential for in combination ecological effects in terms or water quality or hydrology appears to exist between the two sites.

7.11.19 Given the nature of the proposals, and the lack of significant effects of the Scheme and any pathways forming potential links between the two schemes, no shared receptors appear to be present between the two developments and therefore no potential exists for significant cumulative effects.

Other identified proposals

7.11.20 Other identified developments are located at a greater distance from the Site (over 7km) and are therefore unlikely to result in effects on the same individuals or populations in respect of the majority of habitats and faunal species, with the exception of more mobile species such as birds.

7.11.21 Further, where no adverse effects (or beneficial effects) on individual receptors are anticipated as a result of the Scheme, it is clear that no potential for these to combine with other developments to result in significant cumulative adverse effects.

Cumulative Effects Assessment

Ecological Designations

7.11.22 Natural England's consultation response to the PEIR highlighted Potter & Scarning Fens, East Dereham SSSI, component of Norfolk Valley Fens SAC, which is located within 200m of the A47. Natural England agreed that the Scheme, in isolation, would not result in significant effects, albeit impacts to air quality from construction traffic with other plans or projects need to be considered. The cumulative schemes identified to have the potential to contribute to in combination effects have been reviewed (**ES Appendix 2.4: Cumulative Schemes [APP/6.4]**) and none have been identified to have impacts on this section of the A47 and thus **no potential exists for significant cumulative effects**. This is due to a number of factors, including:

- The identified construction period does not overlap with the construction period for this development; and
- The cumulative schemes are well-removed from the site and located in a position where construction traffic is highly unlikely to make use of the A47 to the south of Dereham.

7.11.23 Following the above information and implementation of the mitigation and enhancement measures proposed (as detailed in Section 7.7), no significant adverse effects are anticipated on any identified ecological designations as a result of the construction , operational or decommissioning phases of the Scheme. Accordingly, no potential cumulative adverse effects on ecological designations are anticipated in combination with any of the identified cumulative schemes.

Habitats

7.11.24 High Grove Solar Farm will be constructed at a different time to the Scheme, and as such, no potential cumulative effects on ecological habitats are anticipated in combination with this project.

7.11.25 The Low Carbon Solar Park 15 Ltd cable route, a small section of which is within the Order limits and adjacent to the Scheme, is limited in area and mainly located within the A1065, such that disturbance is likely to be minimal and there will be no permanent habitat loss. As such, no potential cumulative effects on ecological habitats are anticipated in combination with the cable route aspect of this project. The Low Carbon Solar Park 15 Ltd solar area is located approximately 2.7km to the east of the Scheme, and given the scale of this project, no potential cumulative effects on ecological habitats are anticipated in combination with the solar array aspect of this project.

7.11.26 In line with the above information, under the Scheme, following the implementation of the proposed mitigation and enhancement measures, ecologically valuable habitats will be entirely retained and protected with buffers maintained throughout the construction, operational and decommissioning phases, whilst new habitats will be provided such that significant beneficial effects on habitats are anticipated (including to be evidenced through BNG assessment using the Statutory Biodiversity Metric prior to submission of the ES). Accordingly, no potential cumulative adverse effects on ecological habitats are anticipated in combination with any of the identified cumulative schemes.

Fauna

7.11.27 High Grove Solar Farm will be constructed at a different time to this Scheme, and as such, no potential cumulative effects on fauna are anticipated in combination with this project.

7.11.28 The Low Carbon Solar Park 15 Ltd cable route, a small section of which is within the Order limits and adjacent to the Scheme, is limited in area and mainly located within the A1065, such that disturbance is likely to be minimal and there will be no permanent habitat loss. As such, no potential cumulative effects on fauna are anticipated in combination with the cable route aspect of this project. The Low Carbon Solar Park 15 Ltd solar area is located approximately 2.7km to the east of the Scheme, and given the scale of this project, no potential cumulative effects on fauna are anticipated in combination with the solar array aspect of this project.

7.11.29 As set out above, following the implementation of the proposed mitigation and enhancement measures, no long term residual adverse effects are anticipated as a result of the Scheme in respect of Bats, Badger, other mammals (Brown Hare and Hedgehog), ground nesting birds (Skylark and Eurasian Curlew), wintering birds, and amphibians (GCN), whilst significant beneficial effects are anticipated in respect of breeding birds (species other than ground nesting species requiring open sight lines), such that no potential exists for cumulative effects to occur in relation to any of these species in combination with any of the identified cumulative schemes.

7.12 Conclusion

7.12.1 This chapter has set out and assessed the likely effects of the Scheme in relation to Ecology and Biodiversity. Likely effects have been assessed for the construction, operational and decommissioning phases of the Scheme. Following the implementation of embedded mitigation and additional mitigation as detailed in sections 7.7 and 7.9 respectively, residual effects have not been identified in relation to Ecology and Biodiversity during the construction, operational and decommissioning phases.

7.12.2 Table 7-12 sets out a summary of the Ecology and Biodiversity environmental effects.

Table 7-12 Summary of Residual Effects for Ecology and Biodiversity

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Construction Phase								
Breckland SPA	Very High	Construction activities on site (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Breckland SPA	Very High	Construction activities (Functionally Linked Land)	None	Location of Order Limits	None	None	None	None
Breckland SPA	Very High	Construction activities on site (Air Quality)	Negligible	Designated site access and transit routes, oCEMP	Negligible	None	Negligible	None
Norfolk Valley Fens SAC	Very High	Construction activities (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Norfolk Valley Fens SAC	Very High	Construction activities (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Breckland SAC	Very High	Construction activities (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Breckland SAC	Very High	Construction activities (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Other International Designation within 25km	Very High	Construction activities (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Other International Designation within 25km	Very High	Construction activities (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
River Nar SSSI	High	Construction activities (Direct Effect)	Negligible	Location of Order Limits	None	None	Negligible	None
River Nar SSSI	High	Construction activities on site (Air Quality)	Negligible	Location of Order Limits	None	None	Negligible	None
River Nar SSSI	High	Construction activities (Indirect Effects – hydrological pathways)	Negligible	Designated site access and transit routes, Pollution prevention measures including as set out at section 7.7. Measures within oDS.	Negligible	None	Negligible	None
Breckland Forest SSSI	High	Construction activities (Direct Effect)	Negligible	Location of Order Limits	None	None	Negligible	None
Breckland Forest SSSI	High	Construction activities on site (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Other Statutory Designations within 5km	High	Construction activities on site (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Other Statutory Designations within 5km	High	Construction activities on site (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
River Road RNRs	Medium	Construction activities (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
River Road RNRs	Medium	Construction activities (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Other non-statutory Designation within 2km	Medium	Construction activities (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Other non-statutory Designation within 2km	Medium	Construction activities (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Other non-statutory Designation within 2km	Medium	Construction activities (Indirect Effects – Hydrological Impacts)	Negligible	Pollution prevention measures including as set out at section 7.7.		None	Negligible	None
Habitats (Veteran Trees)	High	Construction activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers (Veteran Tree Buffer) as set out at Table 7.11 and oCEMP	None	None	Negligible	None
Habitats (Veteran Trees)	High	Construction activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers (Veteran Tree Buffer) as set	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				out at Table 7.11 and oCEMP				
Habitats (Woodland)	Medium	Construction activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP	None	None	Negligible	None
Habitats (Woodland)	Medium	Construction activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP	None	None	Negligible	None
Habitats (Hedgerows and Tree Lines)	Medium	Construction activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Habitats (Hedgerows and Tree Lines)	Medium	Construction activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP	None	None	Negligible	None
Habitats (Ponds)	Medium	Construction activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP	None	None	Negligible	None
Habitats (Ponds)	Medium	Construction activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Invasive Non-native Species	High	Construction activities: risk of spread (Direct and Indirect Effects)	Negligible	Measures within oLEMP to prevent spread, whilst also seeking to eradicate these species within the Order limits.	None	None	Negligible	Future monitoring of INNS as part of management.
Roosting Bats	Negligible - High	Construction activities (Direct Effects)	Negligible	Retention and protection of existing trees and structures. Absence of lighting from Solar PV Areas, management of construction lighting. Measures within oCEMP.	None	None	Negligible	None
Roosting Bats	Negligible - High	Construction activities (Indirect Effects)	Negligible	Retention and protection of existing trees and structures. Absence of lighting from Solar PV Areas,	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				management of construction lighting. Measures within oCEMP.				
Foraging/Commuting Bats	Negligible - High	Construction activities (Direct Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Absence of lighting from Solar PV Areas, management of construction lighting. Measures within oCEMP.	None	None	Negligible	None
Foraging/Commuting Bats	Negligible - High	Construction activities (Indirect Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Absence of	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				lighting from Solar PV Areas, management of construction lighting. Measures within oCEMP.				
Badger	Negligible	Construction activities (Direct Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Measures within oCEMP.	None	None	Negligible	None
Badger	Negligible	Construction activities (Indirect Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Measures within oCEMP.	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Otter and Water Vole	N/A	Construction activities (Direct and Indirect)	Negligible	None.	None	None	None	None
Other Mammals – Brown Hare and Hedgehog	Negligible	Construction activities (Direct and Indirect)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Measures within oCEMP.	None	None	Negligible	None
Breeding Birds	Medium	Construction activities (Direct and Indirect)	Negligible	Specific measures in regard to ground nesting birds. Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors, creation of grassland. .	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				Measures within oCEMP.				
Wintering Birds	Medium	Construction activities (Direct and Indirect)	Negligible	Specific measures in regard to ground nesting birds. Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors, creation of grassland. Measures within oCEMP.	None	None	Negligible	None
Reptiles	Negligible	Construction activities on site: Temporary loss of habitat, killing, injury or disturbance of individuals (Direct and Indirect)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors, creation of grassland.	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				Measures within oCEMP.				
Amphibians (GCN)	Low	Construction activities on site: Temporary loss of habitat, killing, injury or disturbance of individuals (Direct Effects)	Negligible	None.	None	None	Negligible	None
Operational Phase								
Breckland SPA	Very High	Operational activities	Negligible	Location of Order limits	None	None	Negligible	None
Norfolk Valley Fens SAC	Very High	Operational activities	Negligible	Location of Order limits	None	None	Negligible	None
Breckland SAC	Very High	Operational activities	Negligible	Location of Order limits	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Other International Designation within 25km	Very High	Operational activities (Direct Effects)	Negligible	Location of Order limits	None	None	Negligible	None
Other International Designation within 25km	Very High	Operational activities (Indirect Effects)	Negligible	Location of Order limits	None	None	Negligible	None
River Nar SSSI	High	Operational activities	Negligible	Location of Order limits. Drainage strategy.	None	None	Negligible	None
Breckland Forest SSSI	High	Operational activities	Negligible	Location of Order limits	None	None	Negligible	None
Other Statutory Designations within 5km	High	Operational activities on site (Direct Effects)	Negligible	Location of Order limits	None	None	Negligible	None
Other Statutory	High	Operational activities on site (Indirect Effects)	Negligible	Location of Order limits	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Designations within 5km								
River Road RNRs	Medium	Operational activities	Negligible	Protection measures in oLEMP, maintenance of buffer zones and enhancement/creation of grassland.	None	None	Negligible	None
Other non-statutory Designation within 2km	Medium	Operational activities (Direct Effects)	Negligible	Location of Order limits	None	None	Negligible	None
Other non-statutory Designation within 2km	Medium	Operational activities (Indirect Effects)	Negligible	Location of Order limits	None	None	Negligible	None
Other non-statutory Designation within 2km	Medium	Operational activities (Indirect Effects – Hydrological Impacts)	Negligible	Location of Order limits. Drainage strategy.	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Habitats (Veteran Trees)	High	Operational activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers (Veteran Tree Buffer) as set out at Table 7.11	None	None	Negligible	None
Habitats (Veteran Trees)	High	Operational activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers (Veteran Tree Buffer) as set out at Table 7.11	None	None	Negligible	None
Habitats (Woodland)	Medium	Operational activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11	None	None	Negligible	None
Habitats (Woodland)	Medium	Operational activities (Indirect Effects)	Negligible	Retention and protection including appropriate	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				buffers as set out at Table 7.11				
Habitats (Hedgerows and Tree Lines)	Medium	Operational activities (Direct Effects)	Low to High	Retention and protection including appropriate buffers as set out at Table 7.11	None	None	Minor to Major Beneficial	None
Habitats (Hedgerows and Tree Lines)	Medium	Operational activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11	None	None	Negligible	None
Habitats (Ponds)	Medium	Operational activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Habitats (Ponds)	Medium	Operational activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11	None	None	Negligible	None
Invasive Non-native Species	High	Operational activities: risk of spread (Direct and Indirect Effects)	Negligible	Measures within oLEMP to prevent spread, whilst also seeking to eradicate these species from the Order limits.	None	None	Negligible	Future monitoring of INNS as part of management.
Roosting Bats	N/A	Operation of solar scheme for power generation, grid connection and associated maintenance activities (Direct and Indirect Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Absence of lighting from Solar PV Areas	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Foraging/Commuting Bats	Negligible - High	Operational activities (Direct Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Absence of lighting from Solar PV Areas	None	None	Negligible	None
Foraging/Commuting Bats	Negligible - High	Operational activities (Indirect Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Absence of lighting from Solar PV Areas	None	None	Negligible	None
Badger	Negligible	Operational activities (Direct and Indirect Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				vegetated corridors. Incorporation of measures within fencing strategy and design, measures within oLEMP.				
Otter and Water Vole	N/A	Operational activities (Direct and Indirect)	Negligible	None	None	None	None	None
Other Mammals	Negligible	Operational activities (Direct and Indirect)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Incorporation of measures within fencing strategy and design, measures within oLEMP.	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Breeding Birds: Ground (Skylark and Eurasian Curlew)	Medium	Operation of solar scheme for power generation, grid connection and associated maintenance activities (loss of open habitats with long sight-lines for breeding) (Direct and Indirect Effects)	Negligible	Measures set out in Ground Nesting Bird Mitigation Strategy including provision and management of grassland areas, Skylark plots, measures in oLEMP.	None	None	Negligible	None
Breeding Birds (other species)	Medium	Operation of solar scheme for power generation, grid connection and associated maintenance activities	Minor	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Creation of new habitats. Management measures within oLEMP..	None	None	Moderate/Minor Beneficial	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Wintering Birds (Lapwing)	Medium	Operation of solar scheme for power generation, grid connection and associated maintenance activities (loss of open habitats with long sight-lines for foraging) (Direct and Indirect Effects)	Negligible	Provision and management of grassland areas, measures in oLEMP.	None	None	Negligible	None
Wintering Birds (other species)	Medium	Operational activities: Temporary loss of habitat, killing, injury or disturbance of individuals	Minor	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Creation of new habitats. Management measures within oLEMP.	None	None	Moderate/Minor Beneficial	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Reptiles	Negligible	Operational activities: New grassland habitats and associated ongoing management	Low	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors, creation and management of grassland. . Measures within oLEMP.	None	None	Negligible	None
Amphibians (GCN)	Low	Operation of solar scheme for power generation, grid connection and associated maintenance activities.	Low	Retention and protection of existing vegetated corridors and ponds. Favourable management measures within oLEMP.	None	None	Minor Beneficial	None
Decommissioning Phase								

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Breckland SPA	Very High	Decommissioning activities (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Breckland SPA	Very High	Decommissioning activities (Air Quality)	Negligible	Location of Order Limits.	None	None	Negligible	None
Norfolk Valley Fens SAC	Very High	Decommissioning activities (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Norfolk Valley Fens SAC	Very High	Decommissioning activities (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Breckland SAC	Very High	Decommissioning activities (Direct Effects)	Negligible	Location of Order Limits.	None	None	Negligible	None
Breckland SAC	Very High	Decommissioning activities (Indirect Effects)	Negligible	Location of Order Limits.	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Other International Designation within 25km	Very High	Decommissioning activities (Direct Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
Other International Designation within 25km	Very High	Decommissioning activities (Indirect Effects)	Negligible	Location of Order Limits	None	None	Negligible	None
					None			
					None			
River Nar SSSI	High	Decommissioning activities (Direct Effect)	Negligible	Location of Order Limits,	None	None	Negligible	None
River Nar SSSI	High	Decommissioning activities on site (Air Quality)	Negligible	Designated site access and transit routes, Measures within oDS.	None	None	Negligible	None
River Nar SSSI	High	Decommissioning activities (Indirect	Negligible	Pollution prevention	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
		Effects – hydrological pathways)		measures including as set out at section 7.7. Measures within oDS.				
Breckland Forest SSSI	High	Decommissioning activities (Direct Effect)	Negligible	Location of Order Limits.	None	None	Negligible	None
Breckland Forest SSSI	High	Decommissioning activities on site (Air Quality)	Negligible	Location of Order Limits, Designated site access and transit routes, Measures within oDS.	None	None	Negligible	None
Other Statutory Designations within 5km	High	Decommissioning activities on site (Direct Effects)	Negligible	Location of Order Limits,	None	None	Negligible	None
Other Statutory Designations within 5km	High	Decommissioning activities on site (Indirect Effects)	Negligible	Location of Order Limits,	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
River Road RNRs	Medium	Decommissioning activities (Direct Effects)	Negligible	Location of Order Limits,	None	None	Negligible	None
River Road RNRs	Medium	Decommissioning activities (Indirect Effects)	Negligible	Pollution prevention measures including as set out at section 7.7. Measures within oDS.	None	None	Negligible	None
Other non-statutory Designation within 2km	Medium	Decommissioning activities (Direct Effects)	Negligible	Location of Order limits	None	None	Negligible	None
Other non-statutory Designation within 2km	Medium	Decommissioning activities (Indirect Effects)	Negligible	Location of Order limits	None	None	Negligible	None
Other non-statutory	Medium	Decommissioning activities (Indirect	Negligible	Location of Order Limits, Pollution prevention measures	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Designation within 2km		Effects – Hydrological Impacts)		including as set out at section 7.7. Measures within oDS.				
Habitats (Veteran Trees)	High	Decommissioning activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers (Veteran Tree Buffer) as set out at Table 7.11 and oCEMP/oDS	None	None	Negligible	None
Habitats (Veteran Trees)	High	Decommissioning activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers (Veteran Tree Buffer) as set out at Table 7.11 and oCEMP/oDS	None	None	Negligible	None
Habitats (Woodland)	Medium	Decommissioning activities (Direct Effects)	Negligible	Retention and protection including appropriate	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				buffers as set out at Table 7.11 and oCEMP/oDS				
Habitats (Woodland)	Medium	Decommissioning activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP/oDS	None	None	Negligible	None
Habitats (Hedgerows and Tree Lines)	Medium	Decommissioning activities (Direct Effects)	Low to High	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP/oDS	None	None	Minor to Major Beneficial	None
Habitats (Hedgerows and Tree Lines)	Medium	Decommissioning activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers as set out	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				at Table 7.11 and oCEMP/oDS				
Habitats (Ponds)	Medium	Decommissioning activities (Direct Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMPoDS	None	None	Negligible	None
Habitats (Ponds)	Medium	Decommissioning activities (Indirect Effects)	Negligible	Retention and protection including appropriate buffers as set out at Table 7.11 and oCEMP/oDS	None	None	Negligible	None
Invasive Non-native Species	High	Decommissioning activities on Site: risk of spread (Direct and Indirect Effects)	Negligible	Ongoing implementation of measures within oLEMP and oDS to prevent spread, whilst also seeking to eradicate these	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				species from the Order limits, such that they would likely be absent by the time of decommissioning.				
Roosting Bats	N/A	Decommissioning activities (Direct and Indirect Effects)	Negligible	Retention and protection of existing trees and structures. Absence of lighting from Solar PV Areas, management of construction lighting. Measures within oCEMP./oDS	None	None	Negligible	None
Foraging/Commuting Bats	Negligible - High	Decommissioning activities (Direct Effects)	Negligible	Retention and protection of existing trees and structures. Absence of lighting from Solar PV Areas, management of	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				construction lighting. Measures within oCEMP/oDS.				
Foraging/Commuting Bats	Negligible - High	Decommissioning activities (Indirect Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Absence of lighting from Solar PV Areas, management of construction lighting. Measures within oCEMP/oDS.	None	None	Negligible	None
Badger	Negligible	Decommissioning activities (Direct Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors.	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				Measures within oCEMP/oDS.				
Badger	Negligible	Decommissioning activities (Indirect Effects).	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Measures within oCEMP/oDS.	None	None	Negligible	None
Otter and Water Vole	N/A	Construction activities (Direct and Indirect)	Negligible	None	None	None	Negligible	None
Other Mammals	Negligible	Decommissioning activities (Direct and Indirect)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Measures within oCEMP/oDS.	None	None	None	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
Breeding Birds	Medium	Decommissioning activities (Direct and Indirect)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Specific measures within oCEMP/oDS.	None	None	Negligible	None
Wintering Birds	Medium	Decommissioning activities: Temporary loss of habitat, killing, injury or disturbance of individuals	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Specific measures within oCEMP/oDS.	None	None	Negligible	None
Reptiles	Negligible	Decommissioning activities: Temporary loss of habitat, killing, injury or disturbance of individuals (Direct Effects)	Negligible	Retention and protection of existing trees, hedgerows and strengthening of vegetated corridors. Specific	None	None	Negligible	None

Receptor	Sensitivity	Description of Impact	Magnitude of Impact	Embedded Mitigation	Scale and Nature of Effect (with embedded mitigation)	Additional Mitigation	Residul effect (with additional mitigation)	Monitoring Requirement
				measures within oCEMP/oDS.				
Amphibians (GCN)	Low	Decommissioning activities: Temporary loss of habitat, killing, injury or disturbance of individuals (Direct Effects)	Negligible	Retention and protection of existing habitats including ponds and strengthening of vegetated corridors. Specific measures within oCEMP/oDS.	None	None	Negligible	None

References

Ref 7- 1 Department for Energy Security & Net Zero (2023) Overarching National Policy Statement for Energy (EN-1)

Ref 7- 2 Department for Energy Security & Nat Zero (2023) National Policy Statement for Renewable Energy Infrastructure (EN-3)

Ref 7- 3 Department for Energy Security & Net Zero (2023) National Policy Statement for Electricity Networks Infrastructure (EN-5)

Ref 7- 4 Office of the Deputy Prime Minister (2005) 'Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System'

Ref 7- 5 British Standards Institution (2013) 'BS 42020:2013. Biodiversity – Code of Practice for Planning and Development'

Ref 7- 6 CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, ver. 1.3 (updated September 2024)

Ref 7- 7 Joint Nature Conservation Committee (2010, as amended) 'Handbook for phase 1 habitat survey: A technique for environmental audit.'

Ref 7- 8 UKHAB Ltd (2023) 'UK Habitat Classification Version 2.0 2023'

Ref 7- 9 Natural England (2022) 'Ancient woodland, ancient trees and veteran trees: advice for making planning decisions'

Ref 7- 10 Badger Trust (2023) 'Badger Protection: Best Practice Guidance for Developers, Ecologists and Planners (England)'

Ref 7- 11 Air Pollution Information System (APIS) Online Database

Ref 7- 12 English Nature (2004) 'An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus'. English Nature Research Report 576

THE DROVES

SOLAR FARM