

CHAPTER 10 - ECOLOGY AND ORNITHOLOGY

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INTRODUCTION

10.1 This chapter of the ES has been prepared by Turnstone Ecology Limited and presents an assessment of the likely significant effects on Biodiversity from the proposed PV and cable installation and construction works and once the EIA Development is completed and operational. Mitigation measures are identified, where appropriate, to avoid, reduce

or offset any significant adverse effects identified and/or enhance likely beneficial effects. Taking into account the mitigation measures, the nature and significance of the likely residual effects are reported.

10.2 The chapter is supported by the following appendices:

- Appendix 10.1 - July 2021, Extended Phase 1 Habitat Survey;
- Confidential Badger Appendix 10.1a July 2021 (available on request); and
- Appendix 10.2 - July 2021, Breeding Bird Survey.

COMPETENCE

10.3 This chapter has been prepared by Tristan Evans BSc Msc CIEEM, Principal Ecological Consultant at Turnstone Ecology Ltd. Tristan has worked in ecological consultancy for over 15 years and has obtained extensive experience of carrying out ecological survey and assessment on a variety of projects ranging from small scale housing developments to large national and international infrastructure projects.

LEGISLATION, PLANNING POLICY AND GUIDANCE

Legislation Context

10.4 A number of legislative Acts, Directives and international conventions aim to conserve biodiversity and nature conservation interest in the UK. A summary of legislation that is relevant to the Proposed Development is provided below:

- The Bonn Convention.
- The Bern Convention.
- The Convention on Biological Diversity.
- The Conservation of Habitats and Species Regulations 2017) as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- Wildlife and Countryside Act, 1981 (as amended).
- The Countryside and Rights of Way Act, 2000.

- The Natural Environment and Rural Communities (NERC) Act (2006).
- Conservation of Habitats and Species Regulations, 2010 (as amended).

Planning Policy Context

National

- 10.5 The following national planning policy is relevant to the Application:
- National Planning Policy Framework (2021).

Local

- 10.6 The following local planning policy is relevant to the Application:
- Suffolk Biodiversity Action Plan and Suffolk’s Priority Species List.
 - Further policy assessment is carried out in the Planning Statement.

Guidance

- 10.7 The following guidance is relevant to the Application:

- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal; and
- BS42020:2013 Biodiversity – Code of practice for planning and development (BSI 2013).

ASSESSMENT METHODOLOGY

Consultation

- 10.8 An online meeting comprising informal EIA Scoping was undertaken on 25th November 2020 during which informal views and comments were received from a Planning Officer at Mid-Suffolk District Council and a Principal Consultant Ecologist on behalf of Mid-Suffolk District Council on survey methods and mitigation options.

Study Area and Scope

- 10.9 The study area is considered to include all ecological receptors with potential

to be directly or indirectly affected by the proposed development. This includes all habitats within the site boundary in addition to those outside of the site boundary that could be affected by the development.

- 10.10 The location and surrounding context of the Application Site are shown in **Figures 1.1, 1.2 and 1.3 of Volume 3** of this Environmental Statement.
- 10.11 The assessment compares effects with and without the proposals. The current baseline is taken from surveys and information available in 2020 and 2021. For the purpose of this assessment operational impacts have been considered from the point of completion of the development (i.e. from 2021/2022).

Establishing Baseline Conditions and Sensitive Receptors

- 10.12 Information relating to designated sites within 2km of the centre of the whole site (TM 10752 47260) has been obtained. A search of 2km was appropriate for this site due to the current and historic use of the site and the surrounding landscape and that the zone of influence for the

proposed development is considered to be limited. This was supplemented with other freely available information, such as planning portals and species distribution maps.

- 10.13 Information relating to sites where European Protected Species (EPS) Licences have been granted between 2009 and 2019 has been obtained from MAGIC (www.magic.gov.uk).
- 10.14 A site survey was carried out on 18th May 2020 by Turnstone Ecology Ltd in order to provide the ecological baseline and consisted of a Phase 1 Habitat Survey and a Protected Fauna suitability survey (Appendix 10.1). This was followed up by Breeding Bird Surveys during May, June and July 2020 (Appendix 10.2); a Winter Bird Survey visit in February 2021 and a walkover of the cable route April 2021. The appendices to this chapter provide full details of the survey effort, findings and evaluation.

Methodology for the Assessment of Likely Significant Effects

- 10.15 The Ecological Impact Assessment (EclA) follows the UK Chartered Institute of Ecology and Environmental Management (CIEEM) “Guidelines for Ecological Impact Assessment in the UK and Ireland” 2018. The guidelines are endorsed by statutory consultees in EIA and other concerned organisations including Natural England, The Environment Agency, Environment and Heritage Service, Association of Local Government Ecologists (ALGAE), Institute of Environmental Management and Assessment (IEMA) and the Wildlife Trusts. The CIEEM Guidelines are also recommended in the planning guidance ‘Planning for Biodiversity and Geological Conservation: A Guide to Good Practice’ (ODPM 2006) as the recommended procedure for the ecological component of an EIA.
- 10.16 The EclA involved the following key stages:
 - identifying the zone of influence arising from the whole lifespan of the project;

- identifying ecological features (e.g. habitats, species, ecosystems and their functions/processes, previously known as ecological receptors) through field surveys and the background data search;
- determination of the ecological value/importance of the ecological features (see **Table 10.1 on page 165**) in order to indicate which features require detailed impact assessment;
- identification of the potential impacts and assessment of effects on the integrity or conservation status of the ecological features in terms of their extent, magnitude, duration, reversibility, timing and frequency;
- identify cumulative impacts;
- identify significant effects of impact in the absence of any mitigation;
- incorporation of ecological mitigation measures to avoid or reduce effects, and compensation measures to balance any unavoidable significant effects, and enhancement to provide net benefits for biodiversity over and

above requirements for avoidance, mitigation and compensation; and

- assessment of the significance of any residual ecological effects remaining after the implementation of mitigation and compensation measures.

Receptor Importance

10.17 The level of receptors' importance, which were determined by CIEEM 2018, is set out in **Table 10.1 - Receptor Sensitivity Descriptors**.

Assumptions and Limitations

10.18 Surveys were carried out at a suitable time of year to understand potential impacts on habitats and likely species present.

Importance	Descriptor
Very High (International/ European)	<p>An internationally designated site or candidate/proposed site (Special Protection Area (SPA), potential SPA, Special Area of Conservation (SAC), candidate SAC and/or Ramsar site). A sustainable area of a habitat listed in Annex I of the Habitats Directive or smaller areas of such habitat which are essential to maintain the viability of the larger whole. Sustainable population of an internationally important species or site supporting such a species (or supplying a critical element of their habitat requirement) i.e.:</p> <ul style="list-style-type: none"> • IUCN Red List species that is listed as critically endangered, endangered or vulnerable; or • Species listed in Annex IV of the Habitats Directive; or • Sites that support 1% or more of a biogeographic population of a species; or • The species is at a critical phase of its life cycle.
High (National i.e. England)	<p>A nationally designated site (Site of Special Scientific Interest (SSSI), National Nature Reserve) or a discrete area which meets the selection criteria for national designation (e.g. SSSI selection criteria). An area formally selected by Defra as a Nature Improvement Area. A sustainable area of a priority habitat identified in the UK BAP or of smaller areas of such habitat, which are essential to maintain the viability of the whole. Sustainable population of a nationally important species or site supporting such a species (or supplying a critical element of their habitat requirement) i.e.:</p> <ul style="list-style-type: none"> • Species listed on Schedules 5 and 8 of the WCA (1981); • UK Red Data Book species; • Other species listed as occurring in 15 or fewer 10km squares in the UK; or • Sites supporting 1% or more of a national population.

<p>Medium – High (Regional i.e. south-eastern England)</p>	<p>Sites/populations which exceed the County-level designations but fall short of SSSI selection guidelines, including the following:</p> <ul style="list-style-type: none"> • Sustainable areas of key habitat identified in the Regional BAP or smaller areas of such habitat, which are essential to maintain the viability of the whole; • Population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK; • Population of a species listed in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; or • Sites supporting 1% or more of a regional population.
<p>Medium (County i.e. Suffolk)</p>	<p>Some designated sites (including County Wildlife Sites, Local Wildlife Sites). A viable area of habitat identified in the County BAP. Sustainable populations of the following species:</p> <ul style="list-style-type: none"> • Species listed in a County/Metropolitan ‘red data book’ or BAP on account of its rarity/localisation in a county context; or, • Sites supporting 1% or more of a county population.
<p>Low-Medium (Unitary Authority i.e. Borough)</p>	<p>Some designated sites (including non-statutory designated Sites of Importance for Nature Conservation, Sites of Borough Importance). Viable areas of habitat identified in a District/Borough BAP. Sites/features that are scarce within the District/Borough or that appreciably enrich the District/Borough habitat resource. Sustainable populations of the following species:</p> <ul style="list-style-type: none"> • Species listed in a District/Borough BAP on account of its rarity/localisation in a district context; or • Sites supporting 1% or more of a district/Borough population.
<p>Low (Local Neighbourhood or Parish)</p>	<p>Sites/populations, which appreciably enrich the Parish/Neighbourhood habitat resource (for example hedgerows of medium richness).</p>
<p>Negligible (i.e. Zone of Influence only)</p>	<p>No significant ecological value.</p>

Table 10.1 - Receptor Sensitivity Descriptors

BASELINE CONDITIONS

- 10.19 The baseline conditions are fully detailed in the Ecological Assessment report. In summary the baseline conditions are as follows.
- 10.20 The site covers an approximate area of 84ha of arable land immediately to the north of Tye Lane.

Designated Sites

- 10.21 Bramford Meadows Local Nature Reserve (LNR) is located approximately 590m to the east of the proposed development. The site constitutes low lying river grassland and scrub in a linear strip along the River Gipping. The meadows are crossed by wet ditches and the old course of the river. Species found include slender ground hopper, great green bush cricket, brown argus, reed and sedge warblers and flowering rush. The site is designated as a County Wildlife Site for ditch vegetation including water forget me not, marsh woundwort, water mint, brooklime and water figwort.
- 10.22 Little Blackenham Pit SSSI is located approximately 1.55km to the north of

the proposed development. The site supports one of the few examples of chalk grassland flora in East Suffolk and includes unusual plants such as Greater Broomrape (*Orobanche rapum-ganistae*). A tunnel from one of the pits contains one of the largest underground roosts for hibernating bats known in Great Britain, it is regularly used by Daubenton's bat (*Myotis daubentoni*), Natterer's bat (*Myotis nattereri*) and Brown Long-eared bat (*Plecotus auratus*).

Habitats and Flora

- 10.23 The array site is dominated by five arable fields. Whilst the crops heavily dominate each field the boundaries consist of a mix of hedgerows, trees and field margin vegetation. The grid connection runs south-west through arable land crossing a hedge lined road, two hedgerows and through a bare area within a dense tree line.
- 10.24 The arable land is not of ecological importance at any level and the hedgerows, trees and field margins are of botanical importance at a Local level.

- 10.25 There is one pond on site (along the northern site boundary) with a further eight ponds present within 250m of the site and ten ponds within 250m-500m of the array, with five ponds within the vicinity of the cable route. The pond on site is of ecological importance at a site level.
- 10.26 One building is present within the boundaries of the development site, which is a modern agricultural building. The building is of no ecological importance at any level.
- 10.27 A copse is present immediately adjacent to the centre of the southern site boundary. This habitat is important at a local level.

Fauna

- 10.28 Protected species present or potentially present on site include Badger, bats, nesting birds, Great Crested Newt and reptiles and are discussed below. Other species which were considered within the PEA but whose presence was ruled out (e.g Dormouse Dormouse due to absence of the species in the region) are not discussed below.

Badger

- 10.29 The hedgerow bases, field margins and areas of adjacent copse provide suitable habitat for Badger setts and for foraging. The arable fields provide some suitable foraging opportunities but the presence of setts is unlikely due to regular agricultural disturbance.
- 10.30 Badger setts and evidence of Badger activity was recorded on site with the majority of activity in the western portion of site.
- 10.31 The site is of importance for Badger setts and foraging at a Local level.

Bats

- 10.32 The majority of the site is open arable land that is suitable for only very limited use by foraging bats. The linear habitats (hedgerows and trees) and adjacent copses on and around the site are suitable for use by foraging and commuting bats.
- 10.33 There is one built structure on site however this is of negligible roosting potential for bats. Trees in the boundaries and immediate vicinity have roosting potential for bats.

- 10.34 Habitats suitable for bats foraging on or commuting through the site (and the potential bat roosts) are important at the Unitary Authority level.

Birds

- 10.35 The arable fields are suitable for ground-nesting bird species, such as Skylark (*Alauda arvensis*) and the boundary hedgerow and trees are suitable for a variety of species, including those of national conservation concern.
- 10.36 Two Schedule 1 species were recorded within the survey area during the 2020 surveys: Barn Owl and Hobby. It is considered the site is used for foraging only for these species although suitable nesting habitat is present immediately adjacent to site.
- 10.37 Nine Red Listed Birds of Conservation Concern (BoCC) species were recorded, of which seven are also NERC priority species.
- 10.38 Species breeding in habitats not being impacted included Cuckoo (probable breeding), Herring Gull (non-breeding), Starling (non-breeding), Song Thrush (probable breeding), Mistle Thrush (non-NERC

and probable breeding), Nightingale (non-NERC and probable breeding), Linnet (probable breeding) and Yellowhammer (probable breeding).

- 10.39 Skylark (probable breeding) are in habitat to be impacted by the proposals. Based on registrations of displaying male Skylark it is considered that the site supports up to twelve territories (singing males).
- 10.40 Nesting birds on site are important at the Unitary Authority level.

Great Crested Newt

- 10.41 There is one pond on site (on the northern site boundary), from which obtained water samples tested negative for Great Crested Newt environmental DNA.
- 10.42 Outside of the site there are eight ponds within 250m and a further seven within 500m of the array. Of these ponds two are over 75m with all other ponds greater than 150m from site and with the majority separated by a road.
- 10.43 Ponds outside of the site are not publicly accessible. Given the distance of ponds from the proposed works areas (i.e. the only close works

to ponds is improvement of arable to create wide hedgerow), those ponds have suitable foraging habitat immediately surrounding them and negatively impacted habitats are of poor suitability, surveys were not required of the ponds further from site.

- 10.44 Low populations of Great Crested Newt were recorded in 2012 and 2015 in two ponds both further than 500m from site (approximately 600m and 900m south-west of site). One of these ponds is within 100m of the proposed cable route.
- 10.45 Habitats suitable for Great Crested Newt in the vicinity of the site are important at the Unitary Authority level.

Reptiles

- 10.46 The majority of the site is intensively managed and of limited suitability. Suitable reptile habitat includes boundary hedgerows and field margins and adjacent woodland. An individual Common Lizard was recorded adjacent to site (to the south of Tye Lane).
- 10.47 Reptiles on and in the vicinity of site are important at the Unitary Authority level.

Future Baseline

- 10.48 Future baseline is provided however it is worth noting that the features on site are not specifically dynamic but will change in response to predictable activities such as habitat management.
- 10.49 It is also worth noting there is not likely to be a considerable time-lag between the date the assessment has been undertaken and the date when the development activities (to be undertaken in one phase) will take place.
- 10.50 In the absence of the EIA development but with continued management, it is considered that there would be very limited change to the sites ecological significance due to the continued dominance of crop over both the majority of the site and the whole of the developed area.
- 10.51 In the absence of the EIA development and in the absence of continued management, the succession of the site would likely progress from being dominated by arable crop vegetation in the short term, to mostly scrub in the medium term and having semi-mature trees long term.

- 10.52 The site would become more suitable for use by the ecological receptors that have been recorded, such as bats, badgers, reptiles and birds, although it is possible that areas of the site, such as the hedgerows and field margins, become outgrown and become less suitable for reptiles.
- 10.53 Without management it is considered that the pond will become further overgrown and be less suitable for use by amphibians.
- 10.54 There is potential that in the medium to long term the site could become an important site for foraging bats within the local area as the site becomes wooded, with trees also developing features suitable for use by roosting bats.
- 10.55 The addition of trees would be of a low positive impact with relation to carbon storage when considering climate change.

Summary of Receptors and Sensitivity

- 10.56 Based on the baseline conditions described above, **Table 10.1 - Receptor Sensitivity Descriptors** sets out a summary of the existing and future receptors, respectively, and their sensitivity.

Receptor	Value
Existing	
Bramford Meadows LNR	Medium-High
Little Blackenham Pit SSSI	High
Arable	Negligible
Hedgerow	Low
Trees	Low
Pond	Low
Bats	Low-Medium
Birds	Low-Medium
Badger	Low
Great Crested Newt	Low-Medium
Reptiles	Low-Medium
Future	
Bramford Meadows LNR	Medium-High
Little Blackenham Pit SSSI	High
Scrub	Low
Hedgerow	Low
Woodland	Medium
Pond	Negligible
Bats	Medium
Birds	Low-Medium
Badger	Low-Medium
Great Crested Newt	Low-Medium
Reptiles	Low-Medium

Table 10.2 - Summary of Receptor Sensitivity

Significance of Effect

- 10.57 Designated sites will not be impacted by the proposed development and accordingly there will be no significant impact.
- 10.58 The arable land holds limited botanical value or foraging value to wildlife however will be crossed by commuting animals. A 150mm gap for small mammals and 230mm gap at known Badger paths will ensure its removal will only lead to a medium term minor adverse impact.
- 10.59 The hedgerow and trees will only be impacted where gaps are widened for access or cable routing passes through whilst the majority will remain present. This will lead to a permanent impact at only a local level.
- 10.60 The pond will not be impacted by the proposed development and accordingly there will be no significant impact.
- 10.61 Bats will use the arable land to be lost for only limited foraging with the main commuting routes in place and a low impact on use of features for commuting and roosting. Lighting impacts will be limited by lack of

lighting during operation and use of infrared CCTV security lighting. This activity will lead to a medium term minor adverse impact.

10.62 The loss of arable land will impact Skylark territories and impact upon hedge and tree nesting species with a reduction in foraging habitat. This activity will lead to a medium term minor adverse impact.

10.63 Badger will use the arable land for foraging. Given the suitable alternative sett building locations in the area disturbance of setts during construction would lead to a minor adverse impact.

10.64 Great Crested Newt ponds are not present on site. Loss of small sections of hedgerow, which could be used for commuting or foraging however are in locations away from ponds, have a negligible impact to individuals in the wider area. Works on the cable route near to the known low population are within poor suitability land and will take place after a search for the species and ensuring that any digging will be closed up with soil or covered at the end each day to ensure no animals become trapped. This activity will lead to a no significant impact.

10.65 Reptiles are present on site although likely to only use margins and boundary features regularly. The margins will mean a reduction in foraging habitat but will not stop individuals commuting through the area and will not remove all foraging habitat. The loss of the margins would lead to a permanent minor adverse impact.

Environmental Design and Management

10.66 The proposals will directly impact habitats on site through the removal of the arable area and small sections of hedgerow as a result of widening gaps for access.

10.67 Protected species that may be affected by the proposals are bats, birds, Badger, Great Crested Newt and reptiles.

10.68 Proposed development strategies have been designed to incorporate the consideration of protected species as below. Planting proposals are discussed in **Appendix 10.1** and illustrated on **Figure 11.7 of Volume 3** of this Environmental Statement.

Demolition and Construction

10.69 Standard mitigation measures relating to pollution prevention, management and control of invasive species and nesting birds will all be undertaken in line with good practice guidance. This is expected to be undertaken through the implementation of a Construction Environmental Management Plan (CEMP) and Ecological Mitigation and Enhancement Plan (EMEP).

10.70 Given the nature and sphere of influence of the proposed development and the reasons for the protected site's designation no mitigation is required in respect of the SSSI or LNR and there will be no impact on the sites.

Operational EIA Development

BRAMFORD MEADOWS LNR AND LITTLE BLACKENHAM PIT SSSI

10.71 The completed development will have no impact on the protected sites.

BADGER

10.72 The development will take place with works limited to 20m away from boundary features where setts are

present. This will lead to no significant impact.

BATS

10.73 No suitable bat roosting features will be impacted and very limited impact will take place to boundary hedgerows and trees which are of highest suitability for foraging bat species. This will lead to no significant impacts.

BIRDS

10.74 Very limited impact will take place to boundary hedgerows and trees which are of highest suitability for nesting and foraging bird species. This will lead to no significant impact.

10.75 The change to grassland and increase in hedgerows and tree will overall produce a positive impact on the bird diversity on site, including skylark foraging habitat.

10.76 Due to the lack of an important assemblage of wintering species no significant impact on wintering birds is predicted.

GREAT CRESTED NEWT

10.77 Very limited impact will take place to boundary hedgerows, margins and trees which are of greatest value to the species.

10.78 No direct impact to ponds will take place and works will not take place within 75m of ponds leading to no significant effects.

REPTILES

10.79 Very limited impact will take place to boundary hedgerows, margins and trees which are of greatest use to the species leading to no significant effects.

MITIGATION, MONITORING AND RESIDUAL EFFECTS

Bramford Meadows LNR and Little Blackenham Pit SSSI

10.80 There will be no impact on the sites and accordingly no mitigation is proposed.

Badger

10.81 A pre-works site visit will be undertaken to ensure that no setts have been created in areas requiring a licence to allow works to take place. A pre-works tool-box talk will take place to ensure all site staff are aware of any constraints to construction.

10.82 It is possible that there will be a direct impact to the Badger setts through the proposed work. No setts will be destroyed but active setts may be disturbed and tunnels impacted through boundary fencing. Proposed mitigation will include;

- Re-survey prior to development commencing to understand the latest Badger activity on site;
- Where possible a buffer will be set up around any Badger setts;
- Within 30m no heavy machinery will be used;
- Between 20-30m light machinery and hand tools can be used; and
- Within 20m only hand tools will be used.

10.83 Where there remains a risk of disturbance or impact to tunnels,

setts will be temporarily closed whilst works in the immediate vicinity take place (likely to be one week of closure following any individual licenced temporary sett closure meaning only a very limited period of loss of sett habitat).

10.84 Long term the site will remain suitable for use by Badgers and although some parts of the site will be fenced this will not restrict the movement of Badgers around the site. This will be ensured by:

- Creating a 230mm gap beneath the fence at any location that mammal runs are recorded during the updated Badger survey prior to works;
- Allowing a 150mm gap around the whole of the remaining site fencing meaning Badgers will easily be able to create access below the fence where they choose.

10.85 The change of arable to wildflower meadow will be long term and have a minor positive impact on the species.

Bats

10.86 Appropriate mitigation will need to be agreed to ensure there is no possible

disturbance of roosts should they be present. This will include appropriate lighting during the construction with a restriction on working hours to remove the need to lighting at night and directing works related lighting away from the boundary features and the use of downlighting to ensure that suitable roosting features and foraging and commuting habitats remain unlit.

10.87 Enhancements for the site have been detailed above and include additional, and gapping up of, hedgerows, treelines and copses as well as planting of wildflower meadows around panels, all of which will improve the existing habitats and overall biodiversity of the site. Additional roosting opportunities in the form of eight bat boxes will be positioned on trees around the development site.

10.88 The proposed mitigation will ensure there are no significant negative impacts.

Birds

10.89 Works affecting suitable nesting habitat (arable field, field margin and where hedgerow gaps are widened for

access) will be completed outside the bird nesting season (March to August inclusive) or, if this is not possible, after a survey by an experienced ecologist to check for nesting birds. If nesting birds are found then appropriate buffers with no work around the nest will need to be set up and left in place until nesting has ended naturally.

10.90 Habitat creation, enhancement and management, such as the planting of wildflower meadows, addition of trees and enhancing the hedgerows along with the addition of eight bird boxes around the site will lead to an impact that will be direct and long term and will result in a positive impact.

Great Crested Newt

10.91 Precautionary mitigation measures will include;

- undertaking a tool-box talk at the start of works to ensure site staff understand the likelihood of the species' presence;
- all vegetation clearance and site clearance works will take place during the active season for Great Crested Newts (March-October inclusive). No works will take

place when air temperatures are consistently below 5°C;

- margins will be cleared to 150mm prior to works taking place and kept at this level;
- keeping piles of materials away from the boundaries of the site;
- keeping materials stored on pallets rather than mounds on the ground;
- no excavations to be left uncovered overnight and any concrete pours to be protected overnight and if this is not possible any open excavations will be checked for animals each morning prior to any works being carried out; and
- in the unlikely event of Great Crested Newt being found during works on site all works will cease immediately and a suitably qualified ecologist called.

10.92 The enhancements proposed for the site include improving the habitats along linear features, which will improve the quality and connectivity of the habitats for use by amphibians. In particular the closest ponds to site will have habitat improvements adjacent

to the ponds locations to ensure the highest likelihood of benefit.

- 10.93 The pond on site is very shallow, clogged with silt and leaf litter and shaded and work will be undertaken to excavate this pond and to remove shading around one third of the pond to enhance its suitability for the species as well as other amphibians. This work will take place in the winter to reduce the likelihood of impact to any amphibians breeding. A hibernacula will be created here.
- 10.94 The habitat additions and pond enhancement will lead to an impact that will be direct and long term and will result in a positive impact.

Reptiles

- 10.95 The addition of hedgerows and treeline and change from arable to wildflower planting will lead to an impact that will be direct and long term and will result in a positive effect.
- 10.96 No additional Mitigation and Monitoring will be required.

CUMULATIVE IMPACTS

Demolition and Construction

- 10.97 Whilst all individual projects or actions affect their environment, the combined or cumulative effects of multiple projects or actions can be greater than the sum of their individual parts. This is especially pertinent where these individual projects are similar, and any resultant impact will affect similar ecological receptors.
- 10.98 One proposed PV development is proposed approximately 470m to the north-west of the site. No other Cumulative Schemes have been identified within 1km of the Application Site boundary.
- 10.99 Given the information available for Cumulative Schemes and the nature of the developments this does not indicate any significant impacts. The predicted impacts within the Environmental Statement conclude no significant impact on any receptor, and it is unlikely that it would cause a significant cumulative impact to biodiversity at any geographical level.

Completed EIA Development

10.100 The information available for Cumulative Schemes does not indicate any significant impacts. The predicted impacts of this development are not significant and it is unlikely that it would cause a significant cumulative impact to biodiversity at any geographical level.

BIODIVERSITY NET GAIN

10.101 During the meeting with the local planning authority it was agreed that no Biodiversity Net Gain metric would be required on site. This agreement was made given the range of enhancements being made on site and limited impacts.

10.102 The above shows that overall the extensive enhancements to all habitats on site (arable, hedgerow and trees) will ensure that a Biodiversity Net Gain is achieved by the proposed development.

SUMMARY IMPACTS

10.103 A summary of impacts is provided in **Table 10.3 on page 176.**

Completed development							
Effect	Receptor	Sensitivity	Temporal Scale	Likely Significant Effect	Mitigation and Monitoring	Enhancement	Residual Effect of the EIA Development
None	Bramford Meadows LNR	Medium-High	na	None	na		Negligible – not significant
None	Little Blackenham Pit SSSI	High	na	None	na		Negligible – not significant
Total loss	Arable	Negligible	Medium term	Minor Adverse		Additional of grassland and wildflower	Moderate benefit
Very minor loss	Hedgerow	Low	Permanent	Minor adverse	Retaining majority of hedgerow	Gapping up of hedgerows	Moderate benefit
None	Trees	Low	na	None	Retaining trees on site	Addition of trees	Moderate benefit
None	Pond	Low	na	Negligible		Pond clearance and management	Minor benefit
Reduction of foraging habitat and disturbance of potential roosting locations	Bats	Low-Medium	Medium	Minor adverse	Lighting plan and avoidance of features	Addition of hedgerow and trees	Moderate benefit

Completed development							
Effect	Receptor	Sensitivity	Temporal Scale	Likely Significant Effect	Mitigation and Monitoring	Enhancement	Residual Effect of the EIA Development
Loss of habitat	Birds	Low-Medium	Medium	Minor adverse		Addition of hedgerows and trees	Minor benefit
Disturbance or destruction of setts	Badger	Low	Permanent	Minor adverse	Avoidance of setts	Addition of foraging area	Minor benefit
Loss of habitat	Great Crested Newt	Low-Medium	Permanent	Negligible		Addition of hedgerows and trees	Minor benefit
Loss of habitat	Reptiles	Low-Medium	Permanent	Minor adverse		Addition of hedgerows and trees	Minor benefit

Table 10.3 - Summary of Impacts

REFERENCES

Department for Communities and Local Government, 2018, Draft Revised National Planning Policy Framework.

CIEEM, 2018, Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

