

# East Stour PV Supplementary Ecology Information

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**Prepared for Engena**

**August 2024**

**Rev02**



## ***SURVEY AND REPORT VALIDITY***

It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases there will be specific guidance on this (such as for the age of data which may be used to support an EPS licence application) but in circumstances where such advice does not already exist, the Chartered Institute of Ecology and Environmental Management (CIEEM) has provided the general advice set out below.

<b><i>Age of Data / Survey / Report</i></b>	<b><i>Validity</i></b>
<b>Less than 12 months</b>	Likely to be valid in most cases.
<b>12-18 months</b>	Likely to be valid in most cases with the following exceptions: <ul style="list-style-type: none"> <li>• Where a site may offer existing or new features which could be utilised by a mobile species within a short timeframe;</li> <li>• Where a mobile species is present on site or in the wider area, and can create new features of relevance to the assessment;</li> <li>• Where country-specific or species-specific guidance dictates otherwise.</li> </ul>
<b>18 months to 3 years</b>	A professional ecologist will need to undertake a site visit and then review the validity of the report. Some or all of the other ecological surveys updated.
<b>Protected Species Licensing</b>	Licence applications usually only possible using data less than 2 years old

The likelihood of surveys needing to be updated increases with time and is greater for mobile species or in circumstances where the habitat or its management has changed significantly since the surveys were undertaken. Factors to be considered include (but are not limited to):

- Whether the site supports, or may support, a mobile species which could have moved on to site, or changed its distribution within a site;
- Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management;
- Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence.

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## 1 INTRODUCTION

### 1.1 Purpose of Report

This report has been produced to provide an update to the ecological baseline for a proposed PV project on Land South of the M20, Kent (22/00668/AS) in support of an appeal. Information provided has been requested by Kent County council Ecological Advisory Service (KCC EAS). The full details of the Ecological Assessment can be found in the Environmental Statement *Environmental Statement Volume 2A, Chapter 10 Ecology (Engena and Turnstone Ecology, 2021)*.

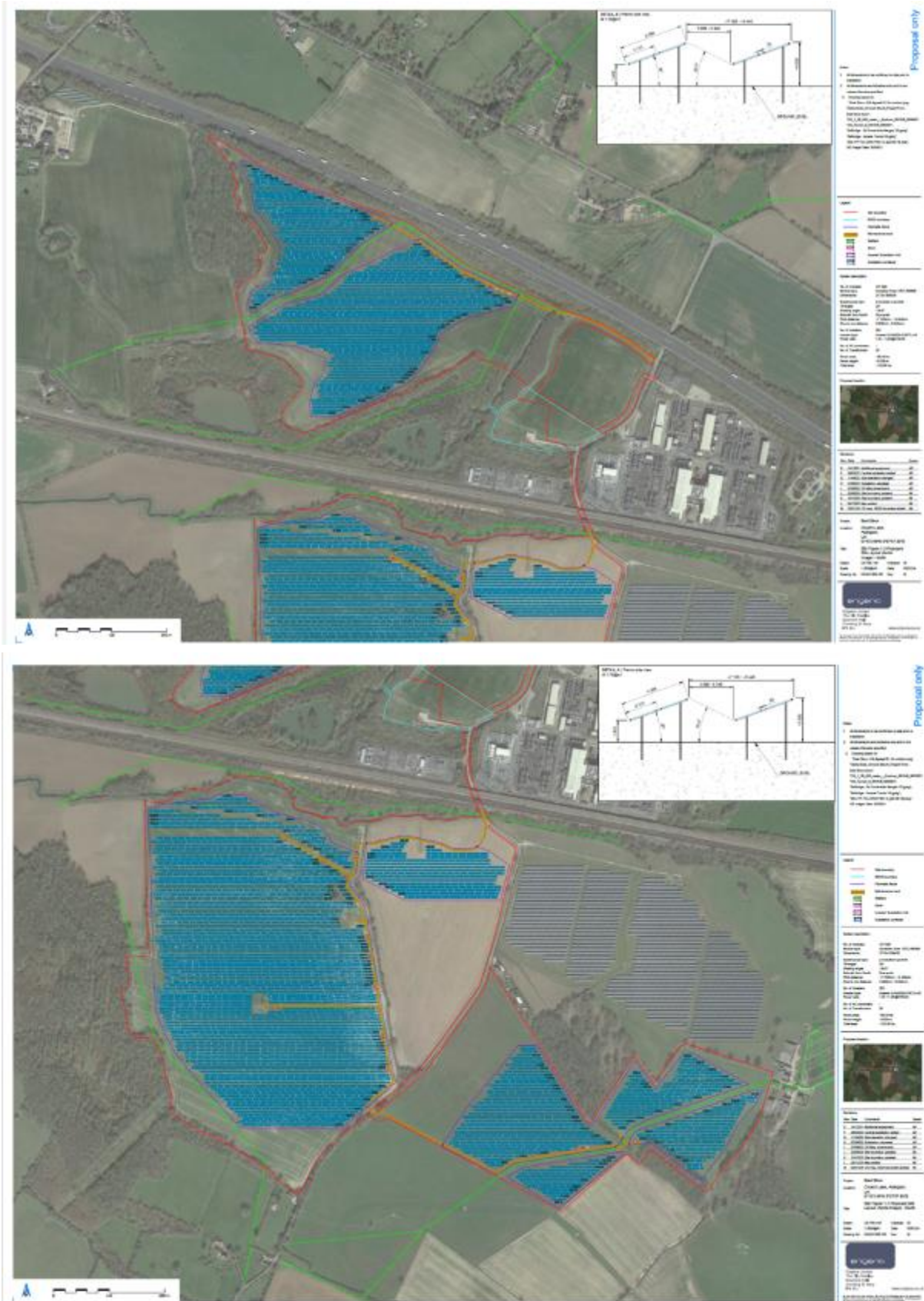
The proposals are to construct and operate a solar power plant within agricultural fields west of Sellindge, Kent (approximate Grid Reference TR 071 387). The location of the proposed development sites is shown in *Figure 1*.

A Preliminary Ecological Appraisal of the site was carried out on 7<sup>th</sup> April 2021 and consisted of a Phase 1 Habitat Survey and a Protected Fauna Survey which included a Habitat Suitability Index (HSI) survey of off-site ponds. eDNA surveys were completed in April 2021 and Breeding Bird Surveys were also completed in April, May and June 2021. The site was revisited on 29<sup>th</sup> July 2024. All surveys were completed by suitably experienced staff from Turnstone Ecology Ltd.

This report details survey methodology and results for the updated walkover in *Section 2* and the additional information requested by KCC EAS for; Breeding Birds in *Section 3* and Badger (*Meles meles*) in *Section 5*. In addition, *Section 4* provides further information in relation to Brown Hare (*Lepus europaeus*), in response to a video submitted by a member of the public. Due to the confidential nature of Badger records please note that sensitive information relating to Badgers in *Section 5* must be redacted before entering the public planning portal.

This report provides further information and clarification in response to comments from KCC EAS and members of the public, however it does not introduce any material changes to the mitigation proposed or assessments within the initial Environmental Impact Assessment.

Figure 1. Location of proposed development (application site)



## 1.2 Ecological Context

The application site is dominated by arable fields and sheep grazed, improved grassland. The site boundary is located within the field boundaries across the site, which includes several hedgerows. Features adjacent to the site include the East Stour River with associated riparian corridor, a tree lined brook which flows south to an area of fishing lakes and broad-leaved woodland.

A number of off-site ponds are present within 500m of the application boundary, including; a balancing pond adjacent to Church Lane; ponds within the woodland associated with the brook; and the fishing lake to the south of the Northern Array. There are no ponds within the redline application boundary.

The site is split by the high-speed London – Paris rail line and an existing substation, the wider landscape is dominated by arable and pasture fields with scattered woodlands and villages as well as extensive areas of the built environment associated with Ashford which is approximately 4.7 km north-west of the site and Hythe which is approximately 6.9 km south-east of the site.

## **2 2024 UPDATE WALKOVER**

### **2.1 Methodology**

The survey methods included a walkover of the entire site to ensure no changes to the main habitat types present or their suitability for protected fauna.

#### **2.1.1 Constraints**

July is an ideal time to undertake Phase 1 surveys as the majority of plants will be present and identifiable however, due to the high temperatures it was not an ideal time for sightings of Breeding Birds or Brown Hare. This is not considered a constraint to the recommendations provided in this report as extensive survey effort was undertaken previously at the appropriate time of year.

### **2.2 Results**

The survey confirmed no changes to the main habitat types present throughout the application site, Phase 1 habitat types are listed below and shown in *Figure 2* below.

- Arable
- Field Margins
- Improved grassland
- Hedgerows
- Ditches
- Brook
- Ponds
- East Stour River Corridor
- Woodland



Figure 2. Habitats present within the survey area



(N.B the above figure shows the survey area not the application site boundary, refer to Figure 1 for application site boundary.)

With the habitats on site remaining the same as during previous surveys the sites suitability for protected species remains the same. No further potential, evidence or sightings were recorded during the survey. Full details on the results and proposed impacts and mitigation can be found in the *Environmental Statement Volume 2A, Chapter 10 Ecology (Engena and Turnstone Ecology, 2021)*.

### 3 BREEDING BIRDS

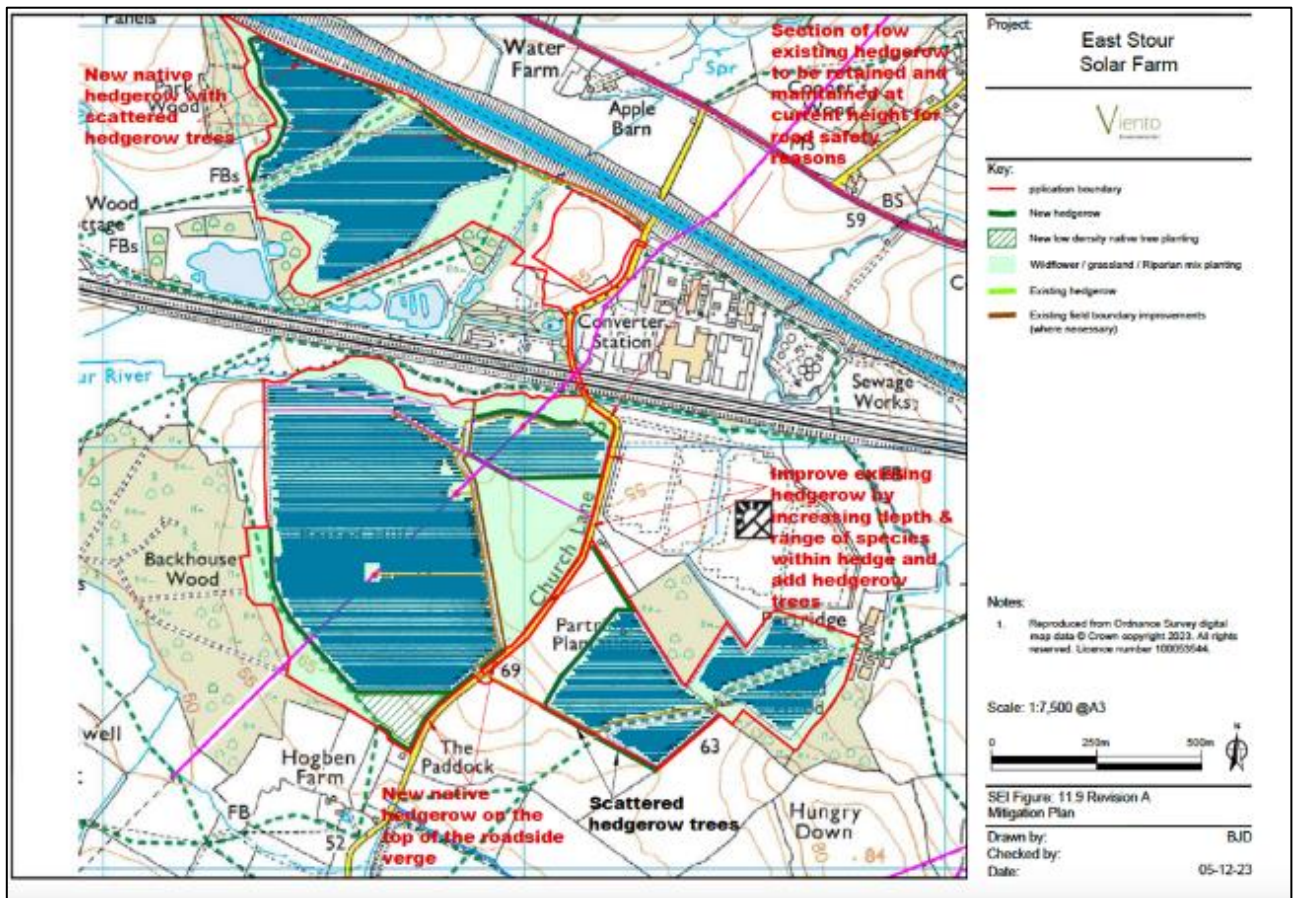
KCC EAS have requested more information regarding the design and management strategy for Skylark (*Alauda arvensis*) and Lapwing (*Vanellus Vanellus*) to ensure that proposed mitigation is sufficient for the loss of breeding territories of up to three pairs of Skylark and up to two pairs of Lapwing (probable breeding). Confirmation was also sought regarding the number of bird boxes that will be erected.

This section aims to provide further clarification on the above, however, it does not introduce any material changes to the mitigation or assessments proposed within the initial Environmental Impact Assessment.

During the completed surveys, up to two pairs of Lapwing were recorded as probably breeding in arable fields to the south of the M20. Birds were recorded displaying agitated behaviour on the May 2021 visit, which suggested that chicks could be present within the tall arable crop, although no young were observed, and breeding was not confirmed. As the fields are bounded by woodlands to the east, west and south as well as a tall shelter belt to the north (along the M20) they are considered sub-optimal breeding habitat, as ground nesting birds prefer an open aspect. Therefore, the proposals will result in the loss of sub-optimal Lapwing breeding habitat. The arable fields being lost to the proposals are considered to be supporting up to three pairs of Skylark.

The mitigation strategy for the solar park currently includes the enhancement of an area of approximately 7.5ha of arable to wildflower meadow to the east of the southern array (*Figure 3*). The hedgerow along the western side of Church Lane will be planted up and will be maintained at 3m in height. The hedgerow along the eastern side of Church Lane will be maintained in its current state at approximately 1.5 – 2m tall. A new hedgerow will be planted along the northern edge of the grassland area to the west of Church Lane to screen the solar panels and this hedgerow will be maintained at a height of approximately 3m and an additional new hedgerow will be planted along the northern edge of the northern array. The central hedge will be subject to improvements where necessary.

Figure 3. Habitat Mitigation Plan



The new area of grassland will be approximately 7.5ha in size (greater than the recommended 5ha plot required for nesting Lapwing) but will be partially enclosed by new or enhanced hedgerows. The grassland area will be of sufficient size to support up to two pairs of Lapwing.

There are three pairs of Skylark currently using the site footprint. Although the current habitat will be lost, proposed grassland habitats under the panels will be subject to low-density grazing and Skylark have been shown to forage under solar panels, using the panels to make frequent short trips to forage and then returning to an elevated position (RSPB, 2020).

The previous habitat within this land has been intensively farmed or sheep grazed, farmland. Nesting density varies from habitat and crop type, with studies showing that territory density increases with structural diversity (Miguet *et al.*, 2013). Habitats such as the proposed wildflower grassland provide much more suitable foraging habitat for Skylark, and they have been shown to nest more densely within this habitat (Browne *et al.*, 2000).

Given the significantly improved productivity of the proposed habitat, along with the increased productivity of adjacent nesting pairs, this level of mitigation adequately protects the species and their breeding success potential in future at the site.

In addition, further areas of grassland habitat will be created to the east and south of the northern array and whilst this grassland is unlikely to be used by breeding Lapwing and Skylark due to proximity to woodlands, these grassland areas will be suitable for foraging for additional nesting birds as well as birds surrounding the site.

The created grasslands will be managed as wildflower grassland and subject to single annual cuts in the late summer / early autumn. Follow-up, low-density grazing will be undertaken however all livestock will be removed from the grasslands in March such that the sward should develop to a suitable height in time for the breeding season.

The impact of the scheme on Skylark will be neutral at worst (*e.g.* no loss of breeding pairs) and the increase in suitable breeding and foraging habitat (created grassland habitats and grassland habitats under the solar arrays) could result in a minor positive impact.

The Project will also result in an increase in hedgerows through the creation / planting of new species-rich hedgerows as well as through the planting up of some of the poor quality, gappy hedgerows currently present across the site. This will result in an increase in suitable breeding and foraging habitat for a range of lowland-farmland bird species as well as improving habitat quality and connectivity for a range of small mammals and invertebrates.

Bird boxes are included in the mitigation strategy of the EIA and will consist of a total of 10 passerine boxes (5 x hole-nesting boxes for smaller birds, 3 x hole-nesting boxes for larger birds (*e.g.* Starling (*Sturnus vulgaris*)) 2 open-fronted boxes) as well as two pole or tree mounted Barn Owl (*Tyto alba*)/ Kestrel (*Falco tinnunculus*) boxes. The total number of bird boxes being erected is 12.

#### **4 BROWN HARE**

Since publication of the EcIA the possible presence of Brown Hare within the application site has been noted by local residents who have provided a video of Brown Hare in a property presented as adjacent to the site. The species was not recorded on any of the survey visits completed in 2021 to inform the EcIA, nor were they recorded on site in 2024 (albeit survey completed at a sub-optimal time). In 2021 and 2024 the following surveys were completed:

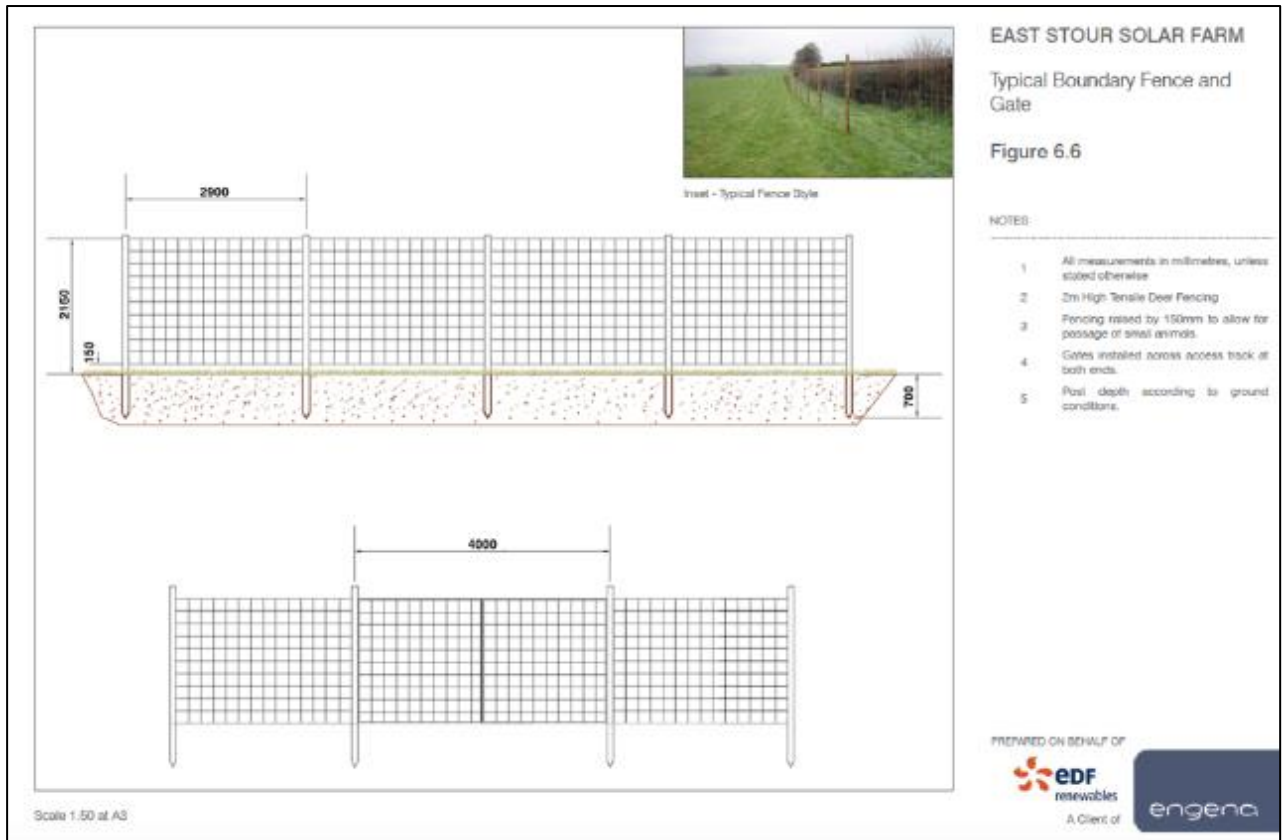
- Preliminary Ecological Appraisal - 7<sup>th</sup> April 2021 which consisted of a Phase 1 Habitat Survey and a Protected Fauna Survey which included a Habitat Suitability Index (HSI) survey of off-site ponds.
- eDNA surveys were completed in April 2021
- Breeding Bird Surveys were also completed in April, May and June 2021.
- Update Walkover Survey was completed on 29<sup>th</sup> July 2024

All of the above 2021 surveys were completed at a time of year where Brown Hare should have been active, however none were recorded by Turnstone Ecology. It is therefore considered that any Brown Hare present within the application site are present irregularly and in very low densities.

Direct impacts on Brown Hare are not anticipated as they are a highly mobile species, including new-born young, however it is recommended that a pre-construction survey is undertaken to ensure that forms containing very young leverets are not present in the working areas. Walkover surveys will be completed, along with the use of thermal imaging cameras to check the working areas for forms. Should active forms be identified an exclusion zone of 50m will be applied around each active form until it has been proven to be naturally abandoned (*e.g.* no leverets present), after which time the exclusion zone will be lifted. Any exclusion zone will ensure that commuting routes from edge habitats remain free of construction activities so females can still get to dependent young at night. If required exclusion zones around forms are likely to be in place for between three to eight weeks.

The ecological enhancement plan will result in the creation of large areas of grassland outside of the panels as well as the creation of grassland under the panels themselves. Site-wide 'deer' fencing will also be installed so that there is a 150mm gap (*Figure 4*) which will allow passage of Brown Hare across the site and in / out of newly created areas of grassland. The increase in grassland habitats will be of benefit to breeding and foraging Brown Hare and it is therefore considered that the Project is likely to have a minor positive impact on Brown Hare.

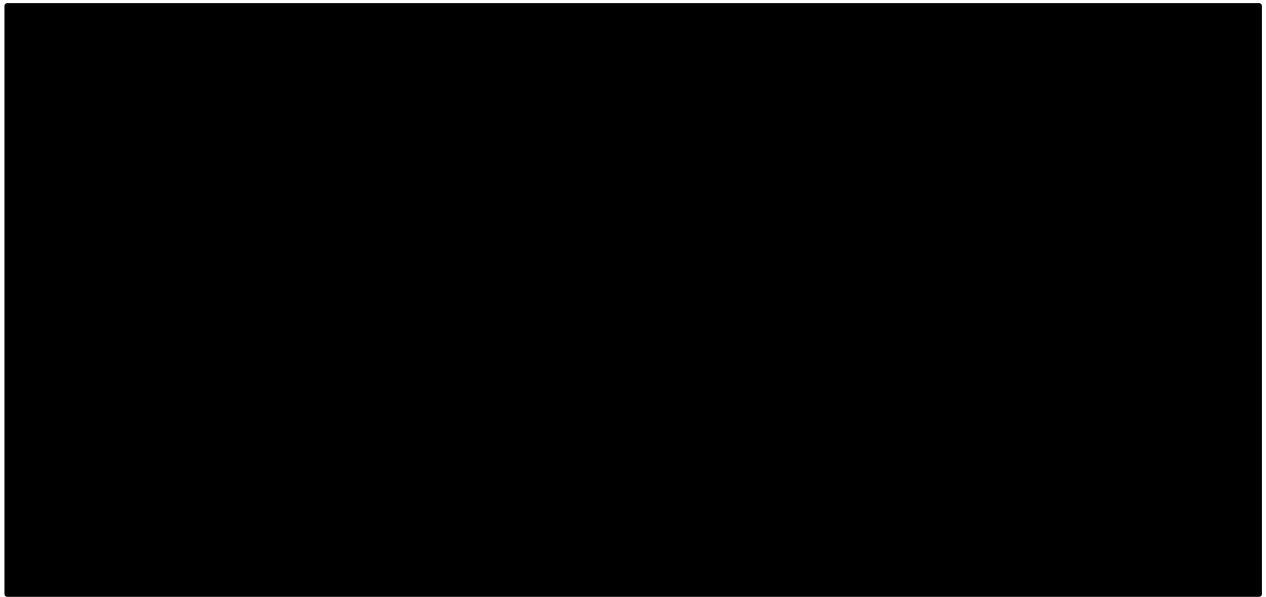
Figure 4. Proposed Boundary Fencing

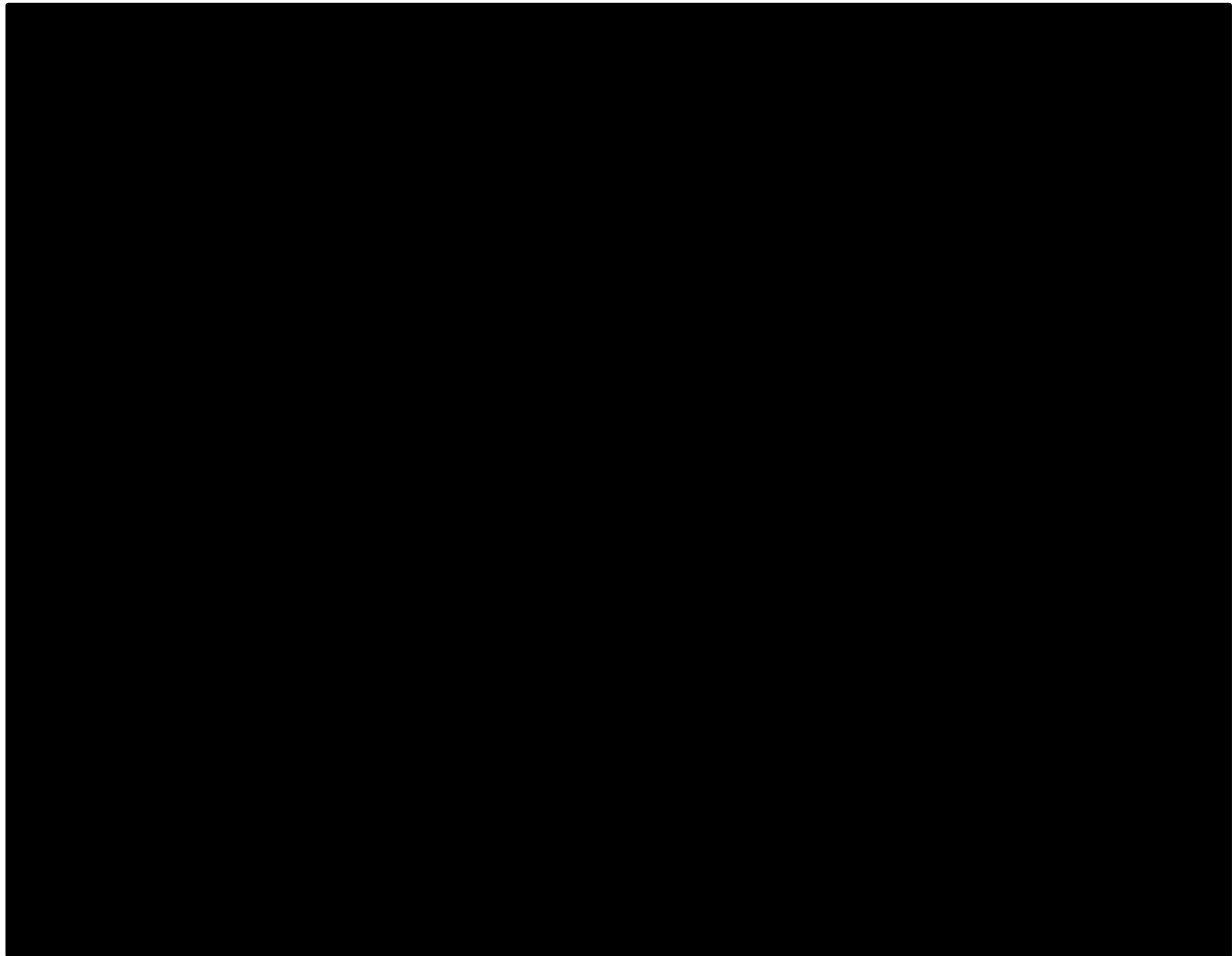


## 5 **BADGER**

During the 2024 Update Walkover Survey, where access allowed, a comprehensive assessment was carried out to identify areas that are used by Badgers for foraging and sett digging. A thorough check of the previously recorded Badger setts was undertaken. Signs of Badgers including setts, foraging signs, paths and latrines were recorded where present. No new setts, or additional evidence of Badger, were found across the site area.

During the Protected Species Walkover Survey completed on 7<sup>th</sup> April 2021 and 29<sup>th</sup> July 2024, three setts were identified and these are detailed below and are shown on *Figure 5*.





### *Impacts and Mitigation*

The Badger sett [REDACTED] (Sett 2) and the sett [REDACTED] (Sett 3) are outside of any working areas and will not be directly or indirectly affected by the works. The main sett along [REDACTED] (Sett 1) will not be directly affected by the works but indirect impacts and disturbance are possible. To enable works that may disturb Badgers, a *Badger Licence to Interfere with Setts for Development Purposes (A24)* will be sought from Natural England (NE) before any works commence. The following measures will be implemented and detailed in a method statement to ensure that significant indirect impacts are avoided during construction works.

- A pre-construction Badger survey to be undertaken to ensure that no new setts have been created in or close to working areas and to assess activity in and around Sett 1.
- A disturbance licence will be obtained from NE before any works within 30m of an active Badger sett begin.
- A stand-off distance of 10m will be established and maintained between the central hedgerow and perimeter fencing.
- A toolbox talk will be given to contractors prior to works to explain working areas and agreed mitigation for Badger.
- Fencing installation along the central hedgerow will be installed by hand / hand-tools and will proceed under a watching brief from a qualified Ecologist.



- Fence installation along the central hedgerow will take place between 1<sup>st</sup> July and 30<sup>th</sup> November. Timings for fence installation have been changed to reflect comments from KCC EAS as this is the period when Badger licences can be issued.
- Solar panels will be a minimum of 18m from [REDACTED] and therefore there is a risk of impacts during the installation process. If the installation process involves breaking ground these works these will be included in the licence application and subject to the same process as described above for the installation of the fencing. If the installation process will not involve breaking ground, these works will take place under a non-licenced method statement to ensure no disturbance impacts.
- No heavy plant or machinery will be tracked within 30m of an active Badger sett unless specified in the license.
- Monitoring visits to check the condition of the sett are proposed twice yearly for at least the first two years following works and during the monitoring checks the condition of and activity at the Badger sett will also be recorded and reported as part of the regular reporting process conditioned under the Badger licence.

Mitigation measures will also be put in place to ensure any foraging Badgers do not become trapped within any excavation works associated with construction works. Excavations should either not be left uncovered overnight or ways of escape for Badgers provided (wooden planks or graded earth banks).

Operational impacts on Badgers are not predicted. Site wide ‘deer’ fencing is to be installed around the solar arrays and this fencing will be installed such that it is raised 150mm from ground level, with substrate suitable for digging to create larger gaps if needed, to allow small mammals, including Badgers, access to newly created grassland habitats across the site as well as allowing commuting through the site (*Figure 4*).

The proposed habitat creation works, including wildflower meadow creation within and adjacent to the solar park and improvements to the hedgerow network and woodland coverage, will increase the available foraging habitat for Badgers. Therefore, it is expected that the residual impact of the project on Badger would be a minor positive, neutral at worst.

## **6 SUMMARY**

### **6.1 2024 Update Walkover**

An update walkover of the entire site in July 2024 confirmed the habitats on site remained the same as during previous surveys and the sites suitability for protected species remained the same. No further potential, evidence or sightings were recorded during the survey.

### **6.2 Breeding Birds**

The application site is considered to be supporting up to three pairs of Skylark, with up to two pairs of Lapwing recorded as probably breeding in arable fields to the south of the M20. The mitigation strategy for the solar park includes the enhancement of an area of approximately 7.5ha of arable to wildflower meadow (greater than the recommended 5ha plot required for nesting lapwing) but will be partially enclosed by new or enhanced hedgerows. The grassland area will be of sufficient size to support up to two pairs of Lapwing and up to three pairs of Skylark.

In addition, the habitat under the solar panels will be enhanced from arable to grassland with further areas of grassland habitat created to the east and south of the northern array. Whilst this grassland is unlikely to be used by breeding Lapwing and Skylark due to proximity to woodlands, these grassland areas will be suitable for foraging for additional nesting birds as well as birds surrounding the site.

Given the significantly improved productivity of the proposed habitat, along with the increased productivity of adjacent nesting pairs, this level of mitigation adequately protects the species and their breeding success potential in future at the site.

### **6.3 Brown Hare**

Whilst the possible presence of Brown Hare adjacent to the application site has been noted by local residents the species was not recorded on any of the survey visits completed in 2021 to inform the EcIA, nor were they recorded on site in 2024. It is therefore considered that any Brown Hare present within the application site are present irregularly and in very low densities.

Direct impacts on Brown Hare are not anticipated as they are a highly mobile species, however it is recommended that a pre-construction survey is undertaken to ensure that forms containing very young leverets are not present in the working areas.

The increase in grassland habitats across the site will be of benefit to breeding and foraging Brown Hare and it is therefore considered that the project is likely to have a minor positive impact on Brown Hare.

## 6.4 Badger

During the Protected Species Surveys completed in April 2021 and July 2024, three active Badger setts were identified. Sett 1, an active main, or well-used subsidiary, sett with 11 well-used holes, located [REDACTED]. Sett 2, an active main, or well-used subsidiary sett with five active holes, [REDACTED]. And Sett 3, an active well-used subsidiary sett with six well-used holes, located [REDACTED].

Sett 2 and 3 will not be directly or indirectly affected by the works. The main sett [REDACTED] (Sett 1) will not be directly affected by the works but indirect impacts and disturbance are possible. To enable works that may disturb Badgers, a *Badger Licence to Interfere with Setts for Development Purposes (A24)* will be sought from Natural England (NE) before any works commence. Fence installation along the central hedgerow will take place between 1<sup>st</sup> July and 30<sup>th</sup> November, in accordance with the Badger Licence.

The proposed habitat creation works, including wildflower meadow creation within and adjacent to the solar park and improvements to the hedgerow network and woodland coverage, will increase the available foraging habitat for Badgers. Therefore, it is expected that the residual impact of the project on Badger would be a minor positive, neutral at worst.