



One Earth Solar Farm

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Appendix 6.9: Reptile Baseline

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A.6 Reptile Baseline

A.6.1 Introduction

- A.6.1.1. This Appendix should be read in conjunction with Chapter 6 of the Environmental Statement (ES) which is provided in support of the delivery of an Environmental Impact Assessment (EIA) associated with the One Earth Solar Farm, hereafter referred to as the 'Proposed Development'.
- A.6.1.2. This Appendix describes the survey methodologies used and summarises the results of the reptile surveys undertaken in 2024; with emphasis on open grassland habitats including those containing complex ditch and hedgerow networks that have the potential to support reptile populations.

Purpose of this appendix

- A.6.1.3. The purpose of the Appendix is to present the results of the reptile survey which was undertaken to identify the presence or likely absence of reptiles within habitats potentially impacted by the Proposed Development.
- A.6.1.4. Surveys were completed within the optimal survey period (between May and October 2024) when reptiles are most likely to be encountered. Surveys followed recognised methodologies as discussed in Section 2.
- A.6.1.5. The surveys were designed to identify the presence or likely absence of reptiles within an appropriate sampling area within the DCO Order Limits. This sampling area targeted habitats representative of the DCO Order limits that are more likely to support reptile assemblages. Following the completion of the surveys, evolution of the Order Limits has removed some of the sampled area from the project.

Structure of this appendix

- A.6.1.6. This appendix is structured as follows:

- > Section 2: Methods;
- > Section 3: Results;
- > Section 4: References.

A.6.2 Methods

- A.6.2.1. A review of satellite imagery and Ordnance Survey mapping, and a habitat survey undertaken between April 2023 and June 2023, was used to identify suitable habitat for supporting reptiles within the Site. These areas of habitat

were subject to a reptile presence / absence survey following methodology described in Froglife Advice sheet 10 (1999) and the Herpetofauna Workers' Manual (Gent, T and Gibson, S, 1998).

- A.6.2.2. Artificial refugia comprising of corrugated survey sheets/felts measuring 100cm x 50cm were deployed in suitable habitats across the Site. A total of 120 artificial refugia were deployed, with each numbered and geographical position recorded using GPS. These refugia were deployed on 30/05/2024 and allowed to 'bed in' for at least two weeks prior to survey visits commencing. The approximate location of the artificial refugia is shown on Figure 1.
- A.6.2.3. Once the artificial refugia had bedded in, a total of nine survey visits were made in appropriate weather conditions (appropriate temperature range (between 9-18°C), with no heavy or persistent rain) to record the presence of reptiles. Two visits (Visit 4 and Visit 9) were conducted over two-successive days. The dates, times and weather conditions during each of the visits is provided in Table 2-1.
- A.6.2.4. During the survey visits, surveyors carefully walked along the lines of artificial refugia surveying the ground for the presence of reptiles. Surveyors inspected refugia from a distance first to record any reptiles basking on the surface without causing disturbance. Refugia were then approached quietly, lifting them to examine underneath. Any reptiles present were noted with species, life stage and sex recorded (where possible). In addition, searches for reptiles around and beneath other debris (e.g. deadwood, rubble) and habitat features (e.g. bare earth banks) was also undertaken.
- A.6.2.5. Survey visits were carried out by suitably qualified and experienced ecologists: Kelly Jones BSc (Hons) MRes MCIEEM, Louis Bikeri Morwani MSc and Rakshita Sah MSc.

Table 2-1: Survey Visit Information

Visit	Date	Time	Min/Max temp (°C)	Cloud Cover (%)	Wind (Beaufort)	Conditions
Set up	30/05/2024	-	-	-	-	-
1	11/06/2024	09:25-14:25	11-14	60-100	1-3	Dry
2	19/06/2024	09:00-13:00	14-17	60-90	2-3	Dry
3	25/06/2024	08:20-11:40	17-23	5-100	0-2	Light drizzle
4.1	8/07/2024	13:15-14:30	18-19	60-70	2-4	Dry
4.2	9/07/2024	09:10-12:00	16-19	100	2-3	Light drizzle

Visit	Date	Time	Min/Max temp (°C)	Cloud Cover (%)	Wind (Beaufort)	Conditions
5	18/07/2024	07:55-09:40	17-20	5-10	3-5	Dry
6	24/07/2024	08:15 -13:15	16-23	40-90	2-4	Dry
7	18/09/2024	10:00-14:20	15-20	30-90	3-4	Dry
8	15/10/2024	14:45-18:30	14-16	100	4-4	Dry
9.1	21/10/2024	15:00-18:30	12-14	70-100	3-4	Dry
9.2	22/10/2024	09:15- 12:00	10- 11	50-60	3-4	Dry

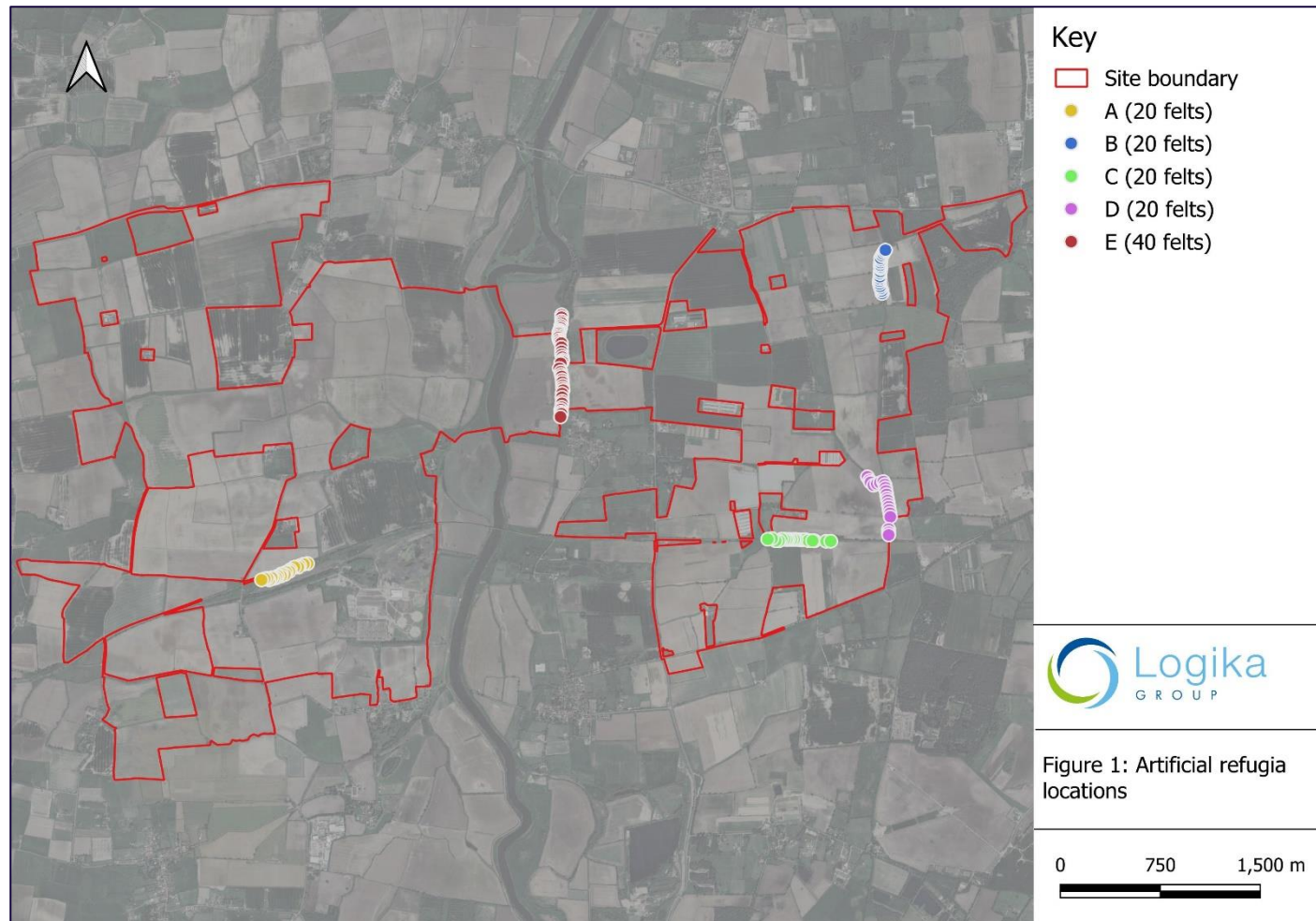


Figure 1: Artificial refugia locations

A.6.3 Limitations

- A.6.3.1. During the survey period, some limitations were encountered that could potentially influence survey results. A total of approximately 86 felts were found to be missing, damaged, or destroyed due to various activities, including agricultural operations and interference from local land users. Specifically:
- > Ten felts were removed from Location C prior to Visit 2.
 - > Six felts were missing across the survey area at Visit 3.
 - > 18 felts were damaged at Location B, and four felts were damaged at Location E prior to Visit 4.
 - > 39 felts were destroyed, and nine felts were missing from all survey locations prior to Visit 9.
- A.6.3.2. Felts lost or damaged before Visit 4 were replaced during the following visits and left to bed in for a sufficient period before subsequent surveys. In addition, visual searches within a radius of 3 to 4 meters around the felts were conducted to supplement the survey effort.
- A.6.3.3. On a single visit (Survey 6, Location A), temperatures exceeded the optimal survey range of 9 to 18°C, with maximum recorded temperatures ranging from 22 to 23°C. Despite this higher temperature, reptiles were still observed during the visit, and the temperature variation is not considered to have had a significant impact on the survey findings.
- A.6.3.4. Given the measures taken to mitigate the missing and damaged felts, as well as the ability to detect reptiles during the temperature fluctuations, these limitations are not considered likely to have impacted the overall outcome of the survey in terms of determining reptile presence or absence at the Site.

A.6.4 Results

- A.6.4.1. The reptile survey identified the presence of grass snake and common lizard on the Site. No reptiles were recorded in Location A or Location C. Reptiles were recorded in low numbers across Location B (one record), Location D (five records) and Location E (14 records). Full survey results are provided in Table 3.1.

Table 2-1: of survey results

Visit	Grass snake	Common lizard
1	1 adult, Location E	N/A
2	2 adults, 1 semi-adult, 1 juvenile Location E	3 adults (including one Gravid female) Location D
3	1 adult, 1 semi-adult and 1 juvenile Location E	1 adult Location B
4	2 adults Location E	N/A
5	2 juveniles and 1 semi-adult Location E	N/A
6	2 juveniles Location E	1 adult Location D
7	1 juvenile Location D	N/A
8	N/A	1 adult Location D
9	N/A	N/A

A.6.4.2. Slow-worm and adder were not recorded within the Site. The habitat is considered to be largely unsuitable for these species.

A.6.4.3. Additional observations included a grass snake slough discovered under felt 16 in Location E on 25th June 2024, and a gravid common lizard in Location D on 18th July 2024, suggesting potential reproduction and the presence of additional individuals that may not have been observed during the survey. Additionally, dry skin resembling that of a common lizard tail was found in Location D.

A.6.5 References

Froglife (1999) Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth

Gent, T. & Gibson, S. (Eds.) (2003) Herpetofauna Worker's Manual. Joint Nature Conservation Committee, Peterborough.



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