



**The Great Grid Upgrade**

Sea Link

# Sea Link

**Volume 6: Environmental Statement**

Document: 6.3.2.2.E  
Part 2 Suffolk  
Chapter 2 Appendix 2.2.E  
Reptile Survey Report

Planning Inspectorate Reference: EN020026

Version: A  
March 2025

Infrastructure Planning (Applications: Prescribed Forms and  
Procedure) Regulations 2009 Regulation 5(2)(a)

**nationalgrid**

**Page blank intentionally**

# Contents

<b>1.</b>	<b>Reptile Survey Report</b>	<b>1</b>
<b>1.1</b>	Introduction	1
<b>1.2</b>	Legislation, Policy and Guidance	2
<b>1.3</b>	Methodology	2
<b>1.4</b>	Results	5
<b>1.5</b>	Discussion	10
	<b>References</b>	<b>11</b>
	<b>Annex 2.E.1 Detailed Presence/Absence Results</b>	<b>12</b>

## Table of Tables

Table 1.1	Summary of artificial refugia installed in each land parcel	3
Table 1.2	Categories for establishing reptile population size (Froglife, 1999)	4
Table 1.3	Desk study results	6
Table 1.4	Reptile presence/absence survey weather conditions	7
Table 1.5	Summary of reptile presence/absence survey results for Survey Area B	9

# 1. Reptile Survey Report

## 1.1 Introduction

### Background

- 1.1.1 The Sea Link Project (hereafter referred to as the ‘Proposed Project’) is a proposal by National Grid Electricity Transmission plc (hereafter referred to as National Grid) to reinforce the transmission network in the southeast and East Anglia. The Proposed Project is required to accommodate additional power flows generated from renewable and low carbon generation, as well as accommodating additional new interconnection with mainland Europe. This would be achieved by reinforcing the network with a High Voltage Direct Current (HVDC) Link between the proposed Friston substation in the Sizewell area of Suffolk and the existing Richborough to Canterbury 400 kV overhead line close to Richborough in Kent.
- 1.1.2 The purpose of this document is to:
- summarise relevant legislation and policy;
  - describe the methodologies used for desk and field-based assessments;
  - describe any limitations to the surveys undertaken; and,
  - detail the results of presence/ likely absence surveys for common reptiles conducted in relation to the Suffolk Onshore Scheme.
- 1.1.3 The baseline findings of this report provide information on any potential ecological constraints associated with reptiles for incorporation into **Application Document 6.2.2.2 Part 2 Suffolk Chapter 2 Ecology and Biodiversity** for the Suffolk Onshore Scheme.
- 1.1.4 Details of avoidance, mitigation, compensation and enhancement measures relating to reptiles are not included in this report but are instead reported within **Application Document 6.2.2.2 Part 2 Suffolk Chapter 2 Ecology and Biodiversity**.
- 1.1.5 This appendix should be read in conjunction with the following figures:
- **Application Document 6.4.2.2.E.1 Suffolk Reptile Locations and Results.**

### Scope

- 1.1.6 This report details the results of surveys undertaken to confirm the presence or likely absence of reptiles within the Suffolk Onshore Scheme Order Limits through appropriate surveys.
- 1.1.7 The findings of reptile surveys within the Suffolk Onshore Scheme Order Limits have informed the ecological impact assessment and identification of mitigation measures (where required) which are reported in **Application Document 6.2.2.2 Part 2 Suffolk Chapter 2 Ecology and Biodiversity**.

### Survey Area

- 1.1.8 Two areas were identified as requiring reptile surveys. Suitable areas were identified based on an initial assessment via aerial imagery and habitat assessment made during the Extended Phase 1 walkover surveys. The locations of these surveys and refugia locations placed are shown in **Application Document 6.4.2.2.E.1 Suffolk Reptile Locations and Results**.

## 1.2 Legislation, Policy and Guidance

### Widespread Reptiles

- 1.2.1 All UK native reptile species are protected against intentional killing or injuring under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981). It should be noted that, where it is predictable that reptiles are likely to be killed or injured by an activity (such as clearance) this could legally constitute “intentional killing or injuring”, even if that was not the intention of the activity.
- 1.2.2 There are four ‘widespread species’ of reptile in the UK: common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*), grass snake (*Natrix helvetica*) and adder (*Vipera berus*). All four widespread reptile species are listed as species of principal importance under Section 41 of the NERC Act 2006 (as amended) (HM Government, 2006) (and further amended by the Environment Act (HM Government, 2021)), making them a material consideration in the planning process.

### Rare Reptiles

- 1.2.3 The other two native reptile species to the UK, sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*), are European Protected Species and as such receive full protection under the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981) and The Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017). The Suffolk Onshore Scheme Order Limits and surrounding area does not contain suitable habitat for these species. These species are therefore not discussed further in relation to the Suffolk Onshore Scheme.

## 1.3 Methodology

### Desk Study

- 1.3.1 A desk study was undertaken as part of the Preliminary Environmental Information Report (PEIR). The desk study requested records of common reptiles within the preceding ten years and within a 2 km radius of the Suffolk Onshore Scheme from the Suffolk Biodiversity Information Centre.
- 1.3.2 The desk-study was undertaken on 6 June 2022 and updated on 4 October 2024 to obtain records of protected and notable species (JNCC, 2020), (HM Government, 2006), (Suffolk Biodiversity Planning Group, 2012) within the land within the Suffolk Onshore Scheme Order Limits and appropriate Zones of Influence (ZOI).

### Zone of Influence

- 1.3.3 The potential impact(s) of a development are not always limited to the boundaries of the site concerned. A development may also have the potential to result in impacts upon

ecologically important sites, habitats or species that are located beyond the site boundaries.

- 1.3.4 The area over which a development may impact ecologically important features is known as the ZOI. The ZOI is determined by the source/type of impact, the potential pathway(s) for that impact and the location and sensitivity of the ecologically important feature(s) beyond the Order Limits. The potential ZOI of a project in relation to reptiles is used to determine the extent of the reptile survey and study areas.
- 1.3.5 The ZOI was determined as all suitable habitats within the Order Limits and relevant adjacent habitats (boundary scrub, tree lines and hedgerows), also noting any obvious territorial behavior that encompassed both the Order Limits and adjacent fields. This was used to establish the required extent of the reptile survey.

### Presence/Absence Surveys

- 1.3.6 Reptile presence/absence surveys followed best practice guidance set out in the Herpetological Workers' Manual (Gent & Gibbons, 1998). This involved placing artificial refugia flush to the ground in suitable habitat to provide basking and sheltering opportunities for reptiles. Artificial refugia comprised roofing tin and bitumen roofing felt measuring approximately 0.5 m x 0.75 m.
- 1.3.7 A total of 289 artificial refugia were deployed within the Suffolk Onshore Order Limits in locations that were identified as being attractive to reptiles (e.g. sunny areas adjacent to scrub, often south-facing). Refugia were deployed in early April 2024 and left in-situ to 'bed in' for at least two weeks. The locations of these artificial refugia are shown in **Application Document 6.4.2.2.E.1 Suffolk Reptile Refugia Locations and Results**.
- 1.3.8 A summary of the number of artificial refugia installed in each land parcel is provided in Table 1.1.

**Table 1.1 Summary of artificial refugia installed in each land parcel**

Survey Area	Land Parcel Reference	Number of Artificial Refugia Installed
A	91 and 91e	90
B	152	128
	193	71

- 1.3.9 A total of seven survey visits for each survey area were undertaken between April and September 2024, during which all artificial refugia were checked for reptiles within a constant temperature range of between 10°C and 17°C and during appropriate weather conditions (Gent & Gibbons, 1998). The survey conditions are detailed in Table 1.4
- 1.3.10 Refugia were initially inspected from a suitable distance to identify any reptiles that may be basking on top without causing disturbance. Refugia were then approached quietly and carefully, and lifted swiftly to examine the ground beneath for reptiles. In addition, suitable habitat such as basking areas and natural refugia were inspected visually for reptiles. The species, life stage and sex of any reptiles encountered were recorded.

- 1.3.11 Data collected during the presence/absence surveys were used to provide an indication of the population sizes of the species recorded, using guidance set out in Reptile Survey – Froglife Advice Sheet 10 (Froglife, 1999). Twenty survey occasions would be required to fully determine population size. However, an initial estimate of population size based on the information obtained during the summer of 2024 has been provided. This is based on peak adult counts recorded by surveyors in a single visit.
- 1.3.12 Reptiles were broadly classed as either adult, sub-adult or juvenile for the purposes of estimating size class based on individual characteristics, guidance from Froglife Advice Sheet 10 (Froglife, 1999) and surveyor experience.
- 1.3.13 The placement of refugia met the density requirements (ten refugia per hectare) for population estimates. Populations were classed as Exceptional, Good or Low (Table 1.2).

**Table 1.2 Categories for establishing reptile population size (Froglife, 1999)**

Species	Exceptional Population	Good Population	Low Population
Common Lizard	>20	5-20	<5
Slow Worm	>20	5-20	<5
Grass Snake	>10	5-10	<5
Adder	>10	5-10	<5

- 1.3.14 Population estimates described in Table 1.2 are based on placing and surveying ten refugia per hectare of suitable habitat.

## Limitations

- 1.3.15 Visit 7 was conducted over two consecutive days in May for Survey Area B and in September for Survey Area A (access constraints preventing an earlier survey from occurring). All surveys were conducted during recommended months; therefore, this is not deemed to be a limitation to the validity of the survey results, or the conclusions drawn from these results.
- 1.3.16 Visit 3 was conducted in a temperature range of 8-11°C, the lower end of this range, encountered at the start of the survey, is below the recommended 10 – 17°C range. As this was on one visit out of seven and only for part of the survey, this is not considered to impact the validity of the overall survey results.
- 1.3.17 It should be noted that ecosystems are dynamic and constantly changing, and therefore the distribution and/or size of populations may vary between years. For this reason, and in accordance with current guidance, the field survey data detailed in this report are valid for a period of two years from the date of survey (The Chartered Institute of Ecology and Environmental Management, 2019). After this date update surveys are likely to be required, and advice should be sought from an appropriately qualified ecologist to determine a proportionate survey scope to confirm there have been no notable changes in the baseline.

## 1.4 Results

### Desk Study

- 1.4.1 Table 1.3 contains a summary of the results obtained from the desk study for the Suffolk Onshore Scheme, showing records for protected and notable species of reptiles within 2 km of the Suffolk Onshore Scheme Order Limits.

**Table 1.3 Desk study results**

Common Name	Scientific Name	Legally Protected Species	Species of Principal Importance	Other Notable Species	Present on Site	Present/Potentially Present in wider ZOI	Latest Record	Closest Record
Slow worm	<i>Anguis fragilis</i>	Y	Y	-	-	Y	Approximately 2 km north 2016	1.8 km north 2015
Grass snake	<i>Natrix helvetica</i>	Y	Y	-	-	Y	Approximately 0.8 km south 2020	0.2 km south 2015
Adder	<i>Vipera berus</i>	Y	Y	-	-	Y	Approximately 0.4 km south 2022	0.2 km north 2015
Common lizard	<i>Zootoca vivipara</i>	Y	Y	-	-	Y	Approximately 0.9 km northwest 2022	0.3 km north 2017

## Presence/Absence Survey Results

### Weather conditions

- 1.4.2 Prior to the surveys commencing, both temperature and weather conditions were recorded to ensure that the surveys were conducted in appropriate conditions based on the species being surveyed for. This included wind strength, cloud coverage, and precipitation state.
- 1.4.3 Survey conditions have the potential to impact field survey results for reptile surveys. All surveys, except for visit 3 were conducted in suitable conditions summarized in Table 1.4. Visit 3 commenced at a temperature 2°C below the recommended temperature. However, temperatures rose to suitable levels during the course of the survey.
- 1.4.4 Field survey results are presented in Table 1.5.

**Table 1.4 Reptile presence/absence survey weather conditions**

Survey Visit	Date	Temperature Range During Survey (°C)	Weather Conditions
1	18/04/24	10-12	Light breeze (2), dry, 20-40% cloud coverage
2	22/04/24	9-11	Gentle breeze (3), dry, 0-20% cloud coverage
3	25/04/24	8-11	Gentle breeze (3), dry, 80-20% cloud coverage
4	02/05/24	14-18	Gentle breeze (3), dry, 20% cloud coverage
5	07/05/24	15-16	Calm wind (0), 80% dry, cloud coverage
6	16/05/24	15-16	Light breeze (2), damp (no rain), 80% cloud coverage
7 (Area B)	30/05/24	12-13	Light breeze (2), dry, 80% cloud coverage
	31/05/24	12-13	Gentle breeze (3), damp from rain in morning, 90% cloud coverage
7 (Area A)	25/09/24	14	Gentle breeze (3), dry, partly cloudy

### Habitats present

- 1.4.5 Survey Area A was predominately arable fields, with boundaries of hedgerow and/or small areas of woodland. Refugia were placed along the boundaries of the fields adjacent to the woodland/hedgerow areas.

- 1.4.6 Survey Area B comprised managed grassland bordered by hedgerow, bramble (*Rubus fruticosus* agg.), woodland or bracken (*Pteridium aquilinum*). To the west the southern border of the Order Limits was largely woodland separating the Order Limits from Aldeburgh golf course. Within the grassland small areas of bramble and gorse (*Ulex europaeus*) were present, as were newly planted hedgerow and a new pine (*Pinus* sp.) plantation. To the east there were small areas of scrub bordering parts of the Order Limits, two small areas of woodland and an extensive line of bracken as well as more traditional hedgerows. Sward length varied within the Order Limits.

#### **Presence/absence reptile survey**

- 1.4.7 No reptiles were recorded in Survey Area A. Table 1.5 provides a summary of the reptile presence/absence survey results for Survey Area B. **Annex 2.E.1** provides full results for Survey Area B.
- 1.4.8 Data is provided for the identified species (common lizard, slow worm, grass snake and adder) and for life stage and gender for each species.

**Table 1.5 Summary of reptile presence/absence survey results for Survey Area B**

Visit/Date	Common Lizard			Slow Worm			Grass Snake			Adder		
Life Stage	Adult	Sub-adult	Juvenile	Adult	Sub-adult	Juvenile	Adult	Sub-adult	Juvenile	Adult	Sub-adult	Juvenile
1 (18/04/24)	0	0	0	6	1	0	0	0	1	0	0	0
2 (22/04/24)	3	0	0	6	1	2	0	0	2	0	0	0
3 (25/04/24)	6	0	0	3	0	0	0	0	0	0	0	0
4 (02/05/24)	4	0	1	3	1	0	0	1	1	0	0	1
5 (07/05/24)	4	0	2	1	0	0	0	0	2	1	0	0
6 (16/05/24)	9	0	0	1	2	0	0	1	0	1	1	0
7 (30/05/24 and 31/05/24)	1	2	1	5	1	0	0	0	0	3	0	0
<b>Peak Count per Species</b>	<b>9</b>			<b>6</b>			<b>0</b>			<b>3</b>		
<b>Population Size</b>	<b>Good</b>			<b>Good</b>			<b>Low</b>			<b>Low</b>		

## 1.5 Discussion

- 1.5.1 The habitat in Survey Area A is considered to be suboptimal for reptiles. Furthermore, no reptiles were recorded in Survey Area A indicating likely absence of reptiles.
- 1.5.2 Records of common lizard, slow worm, grass snake and adder were returned for Survey Area B.
- 1.5.3 The peak count of common lizard was nine adults on the 16 May 2024, indicative of a Good population size. Sub-adult and juvenile lizards were also recorded, indicating the presence of a breeding population.
- 1.5.4 The peak count of slow worm was six adults recorded 18 April 2024, indicative of a Good population size. Sub-adult and juvenile slow worms were also recorded, indicating the presence of a breeding population.
- 1.5.5 The peak count of grass snake was zero adults, indicative of a Low population. However, sub-adult and juvenile grass snake were recorded, confirming the presence of a breeding population.
- 1.5.6 The peak count of adder was three adults recorded 30 May 2024, indicative of a Low population. Juvenile and sub-adults were recorded, indicating the presence of a breeding population.

# References

- Froglife. (1999). *REPTLE SURVEY: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Peterborough: Froglife.
- Gent, A., & Gibbons, S. (1998). *Herpetofauna Workers' Manual*. Peterborough: JNCC.
- HM Government. (1981). *Wildlife and Countryside Act 1981*. Retrieved July 11, 2024, from Legislation.gov.uk: <https://www.legislation.gov.uk/ukpga/1981/69/contents>
- HM Government. (2006). *Natural Environment and Rural Communities Act 2006*. Retrieved July 11, 2024, from Legislation.gov.uk: <https://www.legislation.gov.uk/ukpga/2006/16/contents>
- HM Government. (2017). *The Conservation of Habitats and Species Regulations 2017*. Retrieved July 11, 2024, from Legislation.gov.uk: <https://www.legislation.gov.uk/uksi/2017/1012/contents/made>
- HM Government. (2021). *Environment Act 2021*. Retrieved from Legislation.gov.uk: <https://www.legislation.gov.uk/ukpga/2021/30/contents>
- JNCC. (2020, Jan). *Red Lists in Great Britain*. Retrieved from jncc.gov.uk: <https://jncc.gov.uk/our-work/red-lists-in-great-britain/>
- Suffolk Biodiversity Planning Group. (2012). *Suffolk Biodiversity Action Plan and Planning*. Retrieved from Suffolkbis.org.uk: <https://www.suffolkbis.org.uk/planning/BAP>
- The Chartered Institute of Ecology and Environmental Management. (2019). *Advice note on the Lifespan of Ecological Reports and Surveys*. CIEEM.

## Annex 2.E.1 Detailed Presence/Absence Results

### A.1 Survey Area B

**Table A.1 Full reptile presence/absence in Survey Area B**

Visit	Date	Refugia No.	Species	Count	Life Stage	Sex
1	18/04/24	09	Slow worm	1	Adult	Female
		45	Slow worm	1	Adult	Male
		49	Slow worm	1	Sub-adult	Female
		60	Slow worm	1	Adult	Male
		67	Slow worm	1	Adult	Female
		67	Grass snake	1	Juvenile	-
		68	Slow worm	1	Adult	Female
		153	Slow worm	1	Adult	-
2	22/04/24	10	Slow worm	1	Adult	-
		45	Slow worm	1	Sub-adult	-
		49	Slow worm	2	Adult	Female
		62	Slow worm	1	Adult	Female
		64	Slow worm	1	Adult	Female
		64	Grass snake	1	Juvenile	-
		68	Grass snake	1	Juvenile	-
		68	Slow worm	1	Juvenile	-
		69	Slow worm	1	Adult	Female
		69	Slow worm	1	Juvenile	-
		129	Common lizard	1	Adult	Female
		144	Common lizard	1	Adult	-
		189	Common lizard	1	Adult	-
			Common lizard			
			Common lizard			
3	25/04/24	04	Common lizard	2	Adult	Female
		09	Common lizard	1	Adult	Female
		60	Slow worm	1	Adult	Female
		138	Slow worm	1	Adult	-
		153	Common lizard	1	Adult	Female
		177	Common lizard	1	Adult	Male
		189	Slow worm	1	Adult	-
		192	Common lizard	2	Adult	Female
		192	Common lizard	1	Adult	Male

Visit	Date	Refugia No.	Species	Count	Life Stage	Sex
4	02/05/24	04	Common lizard	2	Adult	Female
			Common lizard	1	Adult	Female
			Common lizard	1	Adult	-
			Common lizard	1	Adult	Female
			Common lizard	1	Juvenile	-
			Slow worm	1	Adult	Female
			Slow worm	1	Adult	Female
			Grass snake	1	Juvenile	-
			Slow worm	1	Sub-adult	Female
			Adder	1	Adult	-
			Slow worm	1	Sub-adult	-
			Common lizard	1	Adult	-
			Grass Snake			
			Common lizard			
5	07/05/24	04	Common lizard	1	Adult	Male
			Common lizard	1	Juvenile	-
			Common lizard	1	Juvenile	-
			Common lizard	1	Adult	Female
			Grass snake	1	Juvenile	-
			Slow worm	1	Adult	Female
			Grass snake	1	Adult	-
			Common lizard	1	Adult	Female
			Common lizard	1	Juvenile	-
			Common lizard	1	Adult	-
			Adder			
			Common lizard			
			Common lizard			
			Common lizard			
6	16/05/24	01	Common lizard	1	Adult	Female
			Common lizard	2	Adult	Female
			Common lizard	2	Adult	Male
			Common lizard	1	Adult	Male

Visit	Date	Refugia No.	Species	Count	Life Stage	Sex
		09	Common	2	Adult	-
		14	lizard	1	Adult	Female
		64	Common	2	Sub-adult	-
		64	lizard	1	Sub-adult	-
		118	Common	1	Adult	Female
		136	lizard	1	Adult	-
		138	Common	1	Sub-adult	-
			lizard			
			Slow worm			
			Grass snake			
7	30/05/24	01	Slow worm	1	Adult	Male
		04	Common	2	Sub-adult	-
	31/05/24	26	lizard	1	Adult	Female
		32	Slow worm	1	Adult	Male
		36	Slow worm	1	Adult	-
		50	Slow worm	1	Sub-adult	-
		71	Slow worm	1	Adult	-
		88	Common	1	Adult	-
		112	lizard	1	Adult	-
		137	Adder	1	Adult	-
		154	Adder	1	Adult	Male
		169	Adder	1	Juvenile	-
			Slow worm			
			Common			
			lizard			

National Grid plc  
National Grid House,  
Warwick Technology Park,  
Gallows Hill, Warwick.  
CV34 6DA United Kingdom

Registered in England and Wales  
No. 4031152  
[nationalgrid.com](http://nationalgrid.com)