




F I V E   
ESTUARIES  
OFFSHORE WIND FARM

FIVE ESTUARIES  
OFFSHORE WIND FARM  
ENVIRONMENTAL STATEMENT

VOLUME 6, PART 6, ANNEX 4.16: REPTILE  
SURVEY REPORT NORTH OF A120

Application Reference	EN010115
Application Document Number	6.6.4.16
Revision	A
APFP Regulation	5(2)(a)
Date	March 2024





Project	Five Estuaries Offshore Wind Farm
Sub-Project or Package	DCO Application
Document Title	Volume 6, Part 6, Annex 4.16: Reptile Survey Report North of A120
Application Document Number	6.6.4.16
Revision	A
APFP Regulation	5(2)(a)
Document Reference	005024262-01

COPYRIGHT © Five Estuaries Offshore Wind Farm Ltd

All pre-existing rights reserved.

This document is supplied on and subject to the terms and conditions of the Contractual Agreement relating to this work, under which this document has been supplied, in particular:

#### LIABILITY

In preparation of this document Five Estuaries Offshore Wind Farm Ltd has made reasonable efforts to ensure that the content is accurate, up to date and complete for the purpose for which it was contracted. Five Estuaries Offshore Wind Farm Ltd makes no warranty as to the accuracy or completeness of material supplied by the client or their agent.

Other than any liability on Five Estuaries Offshore Wind Farm Ltd detailed in the contracts between the parties for this work Five Estuaries Offshore Wind Farm Ltd shall have no liability for any loss, damage, injury, claim, expense, cost or other consequence arising as a result of use or reliance upon any information contained in or omitted from this document.

Any persons intending to use this document should satisfy themselves as to its applicability for their intended purpose.

The user of this document has the obligation to employ safe working practices for any activities referred to and to adopt specific practices appropriate to local conditions.

Revision	Date	Status/Reason for Issue	Originator	Checked	Approved
A	Mar-24	ES	SLR	GoBe	VE OWFL

# FIVE ESTUARIES OFFSHORE WIND FARM

## Reptile Report: North of the A120

Prepared for: GoBe Consultants (on behalf of Five  
Estuaries Offshore Wind Farm Ltd)

SLR Ref: 404.V05356.00010  
Version No: 1  
April 2023



Document Control	
Document Properties	
Organisation	SLR Consulting Ltd.
Project Name	Five Estuaries Offshore Wind Farm
Report Title	Reptile Report
Author(s)	Hannah McBlain
Draft version/final	FINAL
Document reference	230404_404.V05356.00010_Five Estuaries Reptile Report

Date	Revision No	Prepared By	Reviewed By	Approved By	Status	Comments
04/04/23	1	Hannah McBlain	Jess Colebrook		Draft	
05/02/24					FINAL	

## BASIS OF REPORT

This document has been prepared by SLR Consulting Limited with reasonable skill, care and diligence, and taking account of the manpower, timescales and resources devoted to it by agreement with Five Estuaries (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

## CONTENTS

<b>1.0 INTRODUCTION</b> .....	<b>2</b>
1.1 Survey Area.....	2
1.2 Purpose of this Report.....	2
1.3 Evidence of Technical Competence and Experience .....	3
<b>2.0 METHODOLOGY</b> .....	<b>4</b>
2.1 Field Survey(s).....	4
2.1.1 Habitat-based assessment.....	4
2.1.2 Presence/absence survey .....	4
2.1.3 Limitations .....	7
<b>3.0 RESULTS</b> .....	<b>8</b>
<b>4.0 DISCUSSION AND CONCLUSION</b> .....	<b>9</b>

## DOCUMENT REFERENCES

### TABLES

Table 1-1 Survey Staff.....	3
Table 2-1 Refugia number and location references .....	5
Table 2-2 Survey Dates and Weather Conditions.....	6
Table 3-1 Field Survey Reptile Records .....	8
Table 4-1 Scoring criteria for Key Reptile Sites.....	9

### FIGURES

Figure 2-1 Illustrative photograph of potential reptile habitat in the Survey Area .....	5
--	---

### DRAWINGS

Drawing 1	Reptile Survey Results
-----------	------------------------

## 1.0 Introduction

Five Estuaries Offshore Wind Farm (VE OWF) is a Nationally Significant Infrastructure Project (NSIP). An Environmental Impact Assessment (EIA) is being undertaken as part of a Development Consent Order (DCO) application under the Planning Act 2008.

SLR Consulting was commissioned by GoBe Consultants, on behalf of Five Estuaries Offshore Wind Ltd, to undertake a reptile survey of those relevant parts of the project site that may be affected by the construction and operation of the onshore aspects of the VE OWF project north of the A120. These comprise the installation of a cable within a working corridor and the construction of a substation (hereafter referred to as “onshore infrastructure”).

As the Five Estuaries project progresses, the emerging scheme design will continue to be refined and so the precise locations and final extent of the proposed scheme are subject to change. Therefore, the scheme details presented in this report may vary from those that are ultimately presented within the ES, but the survey area includes all areas currently under consideration at the time of survey.

### 1.1 Survey Area

In accordance with the PEA report<sup>1</sup>, the reptile survey comprised:

- Habitat suitability assessment at all parts of the Survey Area (as defined below); and
- Reptile presence/absence survey at moderate or high potential habitat where permanent habitat loss may occur.

Within this report the following terms are used:

- Study Area: This is the 2km zone around the Order Limits available at the time of survey.
- Survey Area: Within the RLB available at the time of survey, plus the surrounding area that is within 100 m (i.e. 100 m either side of the onshore export cable corridor (ECC) and to all sides of any other infrastructure or works areas such as Temporary Construction Compounds (TCCs) and access tracks).
- Areas other than these are specifically described.

### 1.2 Purpose of this Report

This report presents the findings of the 2022 reptile survey north of the A120. The report seeks to establish baseline conditions and identify habitats that may be important for this group of species. The assessment of impacts resulting from the onshore elements of Five Estuaries OWF is beyond the scope of this report and is covered in the Onshore Biodiversity and Nature Conservation chapter of the ES.

The main objectives of the work were to:

- identify the extent of suitable habitat for reptiles within the Survey Area;
- determine the presence/absence of reptiles at suitable habitats within the Survey Area, and if present the species and likely population size(s); and
- evaluate the importance of the reptile assemblage (if present) in a local, regional and national context.

---

<sup>1</sup> Five Estuaries Offshore Wind Farm: Preliminary Ecological Appraisal (Onshore), SLR Consulting, May 2022

### 1.3 Evidence of Technical Competence and Experience

A team of ecologists from SLR and Thomson Environmental Consultants (Thomson) undertook the field surveys. Details for the surveyors are detailed in Table 1-1.

**Table 1-1**  
**Survey Staff**

Name & Position	Professional Membership	Years of experience of reptile survey
Amy Gill Senior Field Ecologist	Qualifying Member of CIEEM.	3
Gemma Hill Project Ecologist	Qualifying Member of CIEEM.	1
Guy Ostler, Project Ecologist	Qualifying Member of CIEEM.	2
Sally Wilding, Senior Ecologist	Associate Member of CIEEM.	5
Lucy Grinstead (Thomson)	BSc (Hons) MSc	1
Liam Kelly (Thomson)	BSc (Hons) MSc Qualifying member of CIEEM	2
David Mahers (Thomson)	BSc (Hons) Qualifying member of CIEEM	3
Stephanie Rowe (Thomson)	BSc (Hons) Associate Member of CIEEM	3

Hannah McBlain, Project Ecologist at SLR authored this survey report and has 2 years' experience in ecological report writing including in support of PEAs, EIAs and species survey reports.

Jess Colebrook reviewed this report and is a Principal Ecologist at SLR Consulting with over 22 years' experience as a professional ecologist. She is a Chartered Environmentalist (CEnv) and a full member of CIEEM (MCIEEM). Jess is leading the onshore ecological work necessary to inform the EIA for the Five Estuaries Offshore Wind Farm project.

## 2.0 Methodology

### 2.1 Field Survey(s)

#### 2.1.1 Habitat-based assessment

A detailed habitat survey has been undertaken at the Survey Area using the UKHab v1.1 Classification<sup>2</sup>. The results from the survey have been used to determine the locations of habitat that may be broadly suitable for use by reptiles. These are considered to be as follows<sup>3</sup>:

- rough grassland;
- field margins;
- hedgerows;
- scrub;
- woodland edges;
- coastal sand dunes;
- coastal saltmarsh; and
- wetlands.

Additional factors which also strongly affect the presence and size of reptile populations include:

- vegetation structure – reptiles prefer variation in vegetation structure and cover to provide refuge, basking areas and foraging opportunities;
- land management;
- aspect and shading – to ensure suitable basking areas are present;
- connectivity to other areas of potential habitat; and
- presence of hibernacula.

#### 2.1.2 Presence/absence survey

The initial habitat assessment identified that twelve areas had moderate potential to support reptiles as grassland with an interface with hedgerows or scrub was present (refer to Drawing 1 for locations and Figure 2-1 for an example). Remaining agricultural grassland and cropland is less suitable for this species group due to the lack of nearby cover, therefore was not subject to detailed survey.

---

<sup>2</sup> For a copy of the Habitat and Hedgerow Survey undertaken in 2022 refer to Five Estuaries Offshore Wind Farm Environmental Statement Volume 5, Annex 4.2.

<sup>3</sup> As described in Chapter 4, Edgar, P., Foster, J. and Baker, J. (2010) Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth



**Figure 2-1**  
**Illustrative photograph of potential reptile habitat in the Survey Area**



Reptile presence/absence survey was carried out at all twelve locations, in accordance with standard methods<sup>4</sup>. A series of artificial refuges comprising 0.5m<sup>2</sup> to 1m<sup>2</sup> sections of heavy-duty roofing felt were positioned in areas of suitable habitat in August 2022. The locations of the refuges are shown in Drawing 1, with further detail provided in Table 2-1.

**Table 2-1**  
**Refugia number and location references**

Area reference	Extent (ha)	Number of refugia installed	Refugia reference numbers
1	0.23	10	1-10
2	1.38	20	11-30
3	0.46	10	31-40
4	0.58	10	41-50
5	1.57	21	51-70
6	0.2	10	71-80
7	0.59	11	81-90
8	1.21	20	91-110
9	0.39	10	111-120
10	2.51	30	131-160

<sup>4</sup> Froglife (1999). Froglife Advice Sheet 10: reptile survey. Froglife, London.

Area reference	Extent (ha)	Number of refugia installed	Refugia reference numbers
11	0.54	10	121-130
12	1.84	20	161-180

As Table 2-1 demonstrates, the refuges were deployed at a greater density than the recommended 10 refuges per hectare, thereby increasing the effectiveness of survey effort and the likelihood of recording reptiles.

The refuges were left to settle into the vegetation for at least two weeks to allow any reptiles present time to find them. They were then checked for basking and/or sheltering reptiles at least seven times when suitable weather conditions prevailed during the reptile active season. Ecologists on other surveys in the area also remained vigilant for reptiles. Each reptile-specific survey also included direct observation of the edges of tall/short vegetation or other likely basking spots such as vegetation tussocks.

Table 2-2 provides details for each survey date and the prevailing weather conditions.

**Table 2-2**  
**Survey Dates and Weather Conditions**

Date	AM/PM	Surveyor	Min temp. °C	Max temp. °C	Weather	Wind speed (km/h)
16/08/2022	n/a	G. Hill & G. Ostler	n/a - Refuges installed			
17/08/2022						
06/09/2022	AM	G. Hill & G. Ostler	21	22	Patchy Cloud	14
07/09/2022	AM	A. Gill & S. Wilding	17	17	Patchy cloud/hazy/none	11
07/09/2022	PM	G. Hill & G. Ostler	20	21	Overcast	14
08/09/2022	AM	A. Gill & S. Wilding	16	17	Patchy cloud	1-6
20/09/2022	AM	S. Rowe & L. Kelly	13	13	Patchy cloud	1
22/09/2022	AM	S. Rowe & L. Kelly	16	16	Hazy	8
24/09/2022	AM	S. Rowe & L. Kelly	16	16	Patchy cloud	9
26/09/2022	AM	D. Mahers & L. Grinstead	12	17	Cloudy / Overcast	4
28/09/2022	AM	D. Mahers & L. Grinstead	12	15	Patchy Cloud	3

### 2.1.3 Limitations

During the presence/absence survey one refuge tile went missing and six refugia were damaged by farming machinery and rendered less suitable for use. As soon as such damage or disturbance was noted, a replacement refuge was installed within 7 days.

An ecological study provides only a “snapshot” of the conditions prevailing at the time of survey. Lack of evidence at the time of survey does not necessarily preclude reptiles from being present within an area at a later date; common lizards for example are highly mobile and can move in response to changes in environmental factors.

Nevertheless, given the site context and the types of habitat present, the level of survey is considered to be sufficient to assess the likely presence/absence of reptile species within the areas surveyed, and to meet the purpose of this report set out in section 1.2.

## 3.0 Results

Common lizard was confirmed present in Area 2; reptiles were not recorded in the other survey areas. Details are provided in Table 3-1 and shown on Drawing 1.

**Table 3-1**  
**Field Survey Reptile Records**

Survey Date	Surveyor	Location	Species
07/09/2022	Gemma Hill & Guy Ostler	Area 2: Tile 15 Latitude: 51.90438812 Longitude: 1.075553745	Common lizard (adult)
07/09/2022	Gemma Hill & Guy Ostler	Area 2: Tile 28 Latitude: 51.90424807 Longitude: 1.069528833	Common lizard (juvenile)

## 4.0 Discussion and Conclusion

Low populations of common lizard were confirmed at Area 2, in accordance with Froglife criteria<sup>5</sup> set out in the table below.

**Table 4-1**  
**Scoring criteria for Key Reptile Sites**

Reptile species	Low population (score 1)	Good population (score 2)	Exceptional population (score 3)
Adder	<5	5-10	>10
Slow worm	<5	5-10	>10
Grass snake	<5	5-20	>20
Common lizard	<5	5-20	>20

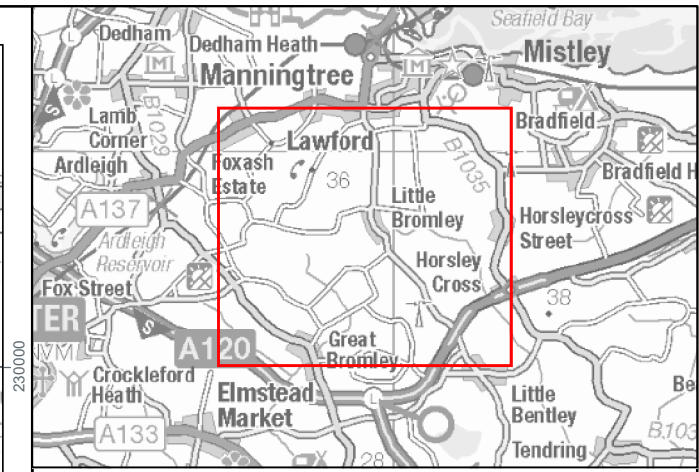
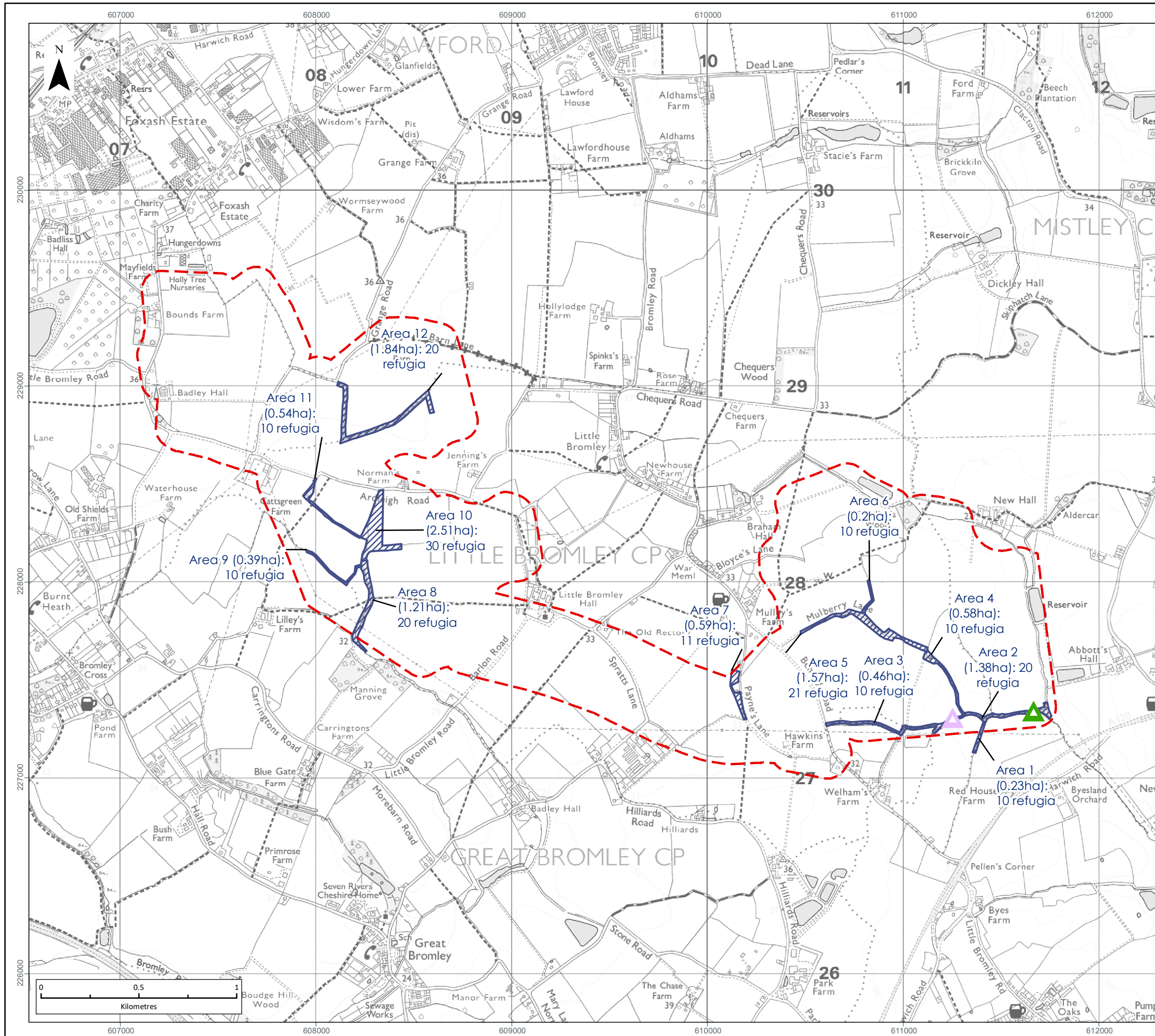
The population of common lizard at Area 2 is considered to be of up to Local value and the Survey Area does not meet the criteria for a 'Key Reptile Site'<sup>5</sup>. To qualify as a Key Reptile Site, an area must meet at least one of the following criteria:

1. Supports three or more reptile species;
2. Supports two snake species;
3. Supports an exceptional population of one species;
4. Supports an assemblage of species scoring at least 4; or
5. Does not satisfy 1-4 but is of particular regional importance due to local rarity.

<sup>5</sup> Refer to Froglife, 1999. Advice Sheet 10 – Reptile Survey.

# DRAWING 1

## Reptile Survey Results



**LEGEND**

- Survey Area
- Reptile Refugia Area

Reptile Record

- ▲ Adult Common Lizard x 1 recorded on 07.09.2022
- ▲ Juvenile Common Lizard x 1 recorded on 07.09.2022

Data Source:  
© Crown copyright [and database rights] (2022) 0100031673 OS OpenData.

**PROJECT TITLE:**  
FIVE ESTUARIES OFFSHORE WINDFARM  
REPTILE SURVEY NA120

**DRAWING TITLE:**  
**Reptile Survey Results**

VER	DATE	REMARKS	Drawn	Checked
1	13/04/2023	For Issue	QF	JO

**DRAWING NUMBER:**  
**DRAWING 1**

SCALE: 1:20,000    PLOT SIZE: A3    DATUM: OSGB 1936    COORDINATE SYSTEM: British National Grid



## EUROPEAN OFFICES

### United Kingdom

#### AYLESBURY

T: +44 (0)1844 337380

#### BELFAST

belfast@slrconsulting.com

#### BRADFORD-ON-AVON

T: +44 (0)1225 309400

#### BRISTOL

T: +44 (0)117 906 4280

#### CARDIFF

T: +44 (0)29 2049 1010

#### CHELMSFORD

T: +44 (0)1245 392170

#### EDINBURGH

T: +44 (0)131 335 6830

#### EXETER

T: + 44 (0)1392 490152

#### GLASGOW

glasgow@slrconsulting.com

#### GUILDFORD

guildford@slrconsulting.com

#### LONDON

T: +44 (0)203 805 6418

#### MAIDSTONE

T: +44 (0)1622 609242

#### MANCHESTER (Denton)

T: +44 (0)161 549 8410

#### MANCHESTER (Media City)

T: +44 (0)161 872 7564

#### NEWCASTLE UPON TYNE

T: +44 (0)191 261 1966

#### NOTTINGHAM

T: +44 (0)115 964 7280

#### SHEFFIELD

T: +44 (0)114 245 5153

#### SHREWSBURY

T: +44 (0)1743 23 9250

#### STIRLING

T: +44 (0)1786 239900

#### WORCESTER

T: +44 (0)1905 751310

### Ireland

#### DUBLIN

T: + 353 (0)1 296 4667

### France

#### GRENOBLE

T: +33 (0)6 23 37 14 14





F I V E   
ESTUARIES  
OFFSHORE WIND FARM

PHONE  
EMAIL  
WEBSITE  
ADDRESS

0333 880 5306  
fiveestuaries@rwe.com  
[www.fiveestuaries.co.uk](http://www.fiveestuaries.co.uk)

COMPANY NO

Five Estuaries Offshore Wind Farm Ltd  
Windmill Hill Business Park  
Whitehill Way, Swindon, SN5 6PB  
Registered in England and Wales  
company number 12292474

