



# FIVE ESTUARIES OFFSHORE WIND FARM

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REPTILE SURVEY REPORT - SOUTH OF  
A120

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A	Mar 2024	Environmental Statement	SLR	GoBe	VEOWFL



**ECOLOGY**  
RESOURCES

# **Reptile Survey Report**

**Five Estuaries  
Offshore Wind  
Farm Ltd**

**August 2022**



Status	Name	Date
Draft	Georgina Davey BSc, MSc, ACIEEM	10/11/2022
Rev 1	Gavin Mullan Ba Hons, MCIEEM	11/11/2022
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Rev 3	Janine McMahon BSc (Hons) ACIEEM	12/04/2022

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## EXECUTIVE SUMMARY

Ecology Resources Limited was commissioned by Royal HaskoningDHV on behalf of Five Estuaries Offshore Wind Farm Limited (VE OWFL), to undertake reptile presence / likely absence surveys within the Five Estuaries Offshore Wind Farm (VE) onshore project area plus a 100m buffer.

Eleven survey sites within the onshore project area (plus a 100m buffer) were identified as areas with suitable habitat to support common reptiles. The full suite of seven reptile survey visits were completed on nine of these sites. Two further survey sites, 99446 and 99581, had three and four visits respectively due to access restrictions midway through the suite of surveys preventing the full survey effort from being completed.

Common reptiles were found to be present on seven of the nine fully surveyed sites. 'Good' populations of common lizard *Zootoca vivipara* were recorded on three of these sites. 'Low' populations of common lizard were recorded on four sites. 'Low' populations of grass snake *Natrix helvetica* were recorded on four sites. No sites recorded more than two common reptile species. No slow worm *Anguis fragilis* or adder *Vipera berus* were recorded throughout the suite of surveys; however, these were recorded incidentally while on other ecological surveys.



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## 1. INTRODUCTION

Ecology Resources Limited was commissioned by Royal HaskoningDHV on behalf of Five Estuaries Offshore Wind Farm Limited (VE OWFL), to undertake reptile presence / likely absence surveys of suitable habitat within the Five Estuaries Offshore Wind Farm (VE) onshore project area plus a 100m buffer.

### 1.1 Project Background

VE is a proposed extension to the operational Galloper Offshore Wind Farm (OWF) which consists of 56 wind turbine generators (WTGs). The 5 Estuaries will comprise up to 79 WTGs situated within two array areas to the east of the operational Galloper OWF. The array areas will be located approximately 30km off the coast of Suffolk, England.

Cables will connect the turbines to the offshore substation platforms and then export the power generated to shore. It is expected that there will be a number of inter-array cables, up to four export cables and up to two offshore substations platforms.

A landfall area has been identified between Holland-on Sea and Frinton-on-Sea on the Essex coast. The landfall point is yet to be determined but will be located within this area of coastline. A new VE onshore substation will be needed and will be constructed in an area to the north of the A120.

The VE cables will be installed underground between the landfall and the grid connection point north of the A120. A preferred corridor has not yet been determined with several corridors still under consideration at the time of writing. Potential substation land parcels and a associated corridor options north of the A120 also remain under review at the time of writing.

A more detailed description of the project, several elements of which have yet to be finalised at this time, will be provided in the PEIR and ES in due course.

### 1.2 Legislation

There are four common species of reptile in the UK: grass snake (*Natrix helvetica*), adder (*Vipera berus*), common lizard (*Zootoca vivipara*) and slow worm (*Anguis fragilis*). Two further species can also be found; smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*), however, these are rarer, more restricted in range and protected under additional legislation; neither are considered to be present in Essex.

All UK reptiles are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which makes it illegal to deliberately kill, injure (or sell) these species; offences which could occur as a result of construction activities. Sand lizard and smooth snake receive additional protection against disturbance as European Protected Species (EPS) under Annex IV of the European Habitats Directive and the Conservation of Habitats and Species Regulations 2017 (as amended).

All reptiles are listed as species of principal importance for the conservation of biodiversity in England, in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Under Section 40 of the NERC Act (2006) public bodies (including local planning authorities) have a duty to have regard for the conservation of species of principal importance when carrying out their functions, including determining planning applications.

## 2. METHODOLOGY

Reptile surveys were completed in accordance with best practice guidelines (Froglife, 1999).

The Preliminary Ecological Appraisal (PEA) (SLR Consulting Ltd., 2022) indicated that moderate or highly suitable reptile habitat in the form of hedgerows, scrub, woodland, and grassland (except for modified grassland) occurs at many locations within the onshore project area plus a 100m buffer.

Presence / likely absence surveys were undertaken at areas of moderate or highly suitable habitat where permanent habitat loss and / or significant impacts to populations are possible.

Surveys for reptiles in areas that would only be subject to relatively small-scale temporary loss were not considered necessary provided Reasonable Avoidance Measures are employed during construction. Further details of proposed Reasonable Avoidance Measures will be provided in the PEIR and ES.

Holland Haven Marshes Site of Special Scientific Interest (SSSI) has been scoped out of reptile surveys as there is no potential for significant effect due to proposed use of Horizontal Directional Drilling (HDD) to avoid direct effects on the SSSI.

### 2.1 Presence / likely absence survey

Reptile presence / absence surveys were undertaken over two survey windows (May – June) and (September – October) during 2022. The surveys avoided the sub optimal survey period (Gent & Gibson, 1998) during summer (July – August), when daytime temperatures are high and the use of artificial refugia by reptiles is more variable (Froglife, 1999).

The surveys were undertaken at locations ('survey sites') that offer the most suitable habitat for common reptiles, i.e., structurally diverse grassland habitats with areas of bare ground/short vegetation and transitional 'edge' habitats.

Artificial refugia comprising of roofing felt tiles were placed within each survey site, in accordance with good practice guidelines (Froglife, 1999). Survey sites represent suitable reptile habitat within a wider landscape, and artificial refugia were sited at 'hotspot' locations with the greatest chance of encountering reptile species. In some survey sites, this meant artificial refugia were grouped along e.g. hedgerows at the boundary of an arable field, and this achieved a density of more than 10 refugia per hectare within the survey area.

The artificial refugia were cut to measure 0.5m<sup>2</sup> and placed dark side up in order to absorb the most thermal radiation, which is favourable to basking reptiles. These were then left to 'bed-in' for two weeks prior to the first survey visit. The dates of refugia deployment are detailed in Appendix A and total number of refugia deployed per site are detailed in Table 2.

Seven surveys were conducted during suitable weather conditions (temperatures between 9°C and 20°C, little/no wind, no precipitation). During each survey visit, every tile was carefully viewed on approach to identify any reptiles basking on top before being disturbed. Once the tile was reached it was carefully lifted and the area below inspected. Any natural refugia (e.g., log piles, stumps, compost mounds) within the site were also visually inspected for reptiles and surveyors were vigilant for incidental encounters with reptiles. All reptiles observed were recorded, noting species, life stage and gender where possible.

### 2.1.1 Field survey personnel

Surveys were led by Johnnie Johnson (qCIEEM) who has over seven years' experience conducting herpetofauna surveys. Johnnie is the secretary for Essex Amphibian and Reptile Group (EARG), which published the distribution map of great crested newt (*Triturus cristatus*) within Essex between 1995 and 2002, and the Amphibian and Reptile Map of Essex. Surveys were supported by Stephen Treadwell and Nick Losset, ecologists with over four years' experience of commercial and voluntary reptile surveys with EARG.

All surveyors are either members of the Chartered Institute of Ecology and Environmental Mangers (CIEEM) or adhere to CIEEM's professional Code of Conduct.

### 2.2 Population size class estimate

Reptile population classes are assessed in accordance with criteria from Froglife (1999). This system classifies populations of individual reptile species into three distinct categories (Table 1), based on the total number of adult animals observed during individual survey occasions.

**Table 1: Population size class estimates (Froglife, 1999). Figures in the table refer to maximum number of adults seen by observation and/or under refugia (placed at a density of up to 10 per hectare), by one person in one day.**

Species	Low Population	Good Population	Exceptional Population
Adder	<5	5 – 10	>10
Grass snake	<5	5 - 10	>10
Common lizard	<5	5-20	>20
Slow worm	<5	5-20	>20

### 2.3 Survey Limitations

Seven sites (99581, 99582, 99583, 99584, 99585, 5ERE275 and 5ERE277) were not identified in the survey scope until summer 2022 and as such artificial refugia were deployed at these survey sites during the second survey window, on 31<sup>st</sup> August 1<sup>st</sup> September and 2<sup>nd</sup> September 2022, with surveys completed between 19<sup>th</sup> September and 14<sup>th</sup> October.

Site 99531 required artificial refugia to be re-deployed on 31<sup>st</sup> August 2022, due to the original refugia having been trampled by livestock. These were allowed two weeks to bed in before the next survey, and it is not considered that this was a significant limitation to the results.

Two survey sites, 99446 and 99581 (Figure 3), had access refused by the landowners and therefore had three and four surveys, respectively. Neither of these sites had any reptiles recorded, however it is considered that access restrictions posed a significant limitation, and these results cannot reliably be used to determine likely absence of reptiles from these sites.



A density of more than 10 refugia per hectare is not considered a limitation to the survey, as a greater number of refugia placed in suitable habitat will have a greater chance of being found and utilised by common reptiles. The population size class assessment was adjusted to take refugia density into account.

### 3. RESULTS

#### 3.1 Presence / likely absence survey

The results of the surveys conducted across all 11 survey sites in the 2022 survey season are outlined in Tables 2 and 3, below. Full metadata for each survey can be found in Appendix B. Survey results for each site are shown in Figures 2a-g.

**Table 2: Species recorded and estimate of population size at each survey site during 2022.**

Site ID	No. Refugia	Area (ha)	Refugia density/ha	No. Surveys	Species Recorded	Peak Count (adults)	Population Size Estimate
99426	70	3.4	20.6	7	Common lizard	4	Low
					Grass snake	1	Low
99446	81	3.6	22.5	3	None	N/A	N/A
99525	117	3.5	33.4	7	Common lizard	9	Low
					Grass snake	1	Low
99531	30	0.4	75	7	None	N/A	N/A
99581	27	2.5	10.8	4	None	N/A	N/A
99582	71	6.1	11.6	7	None	N/A	N/A
99583	34	3.7	9.2	7	Common lizard	7	Good
99584	41	7.8	5.3	7	Common lizard	5	Good
99585	67	3.9	17.2	7	Common lizard	3	Low
					Grass snake	1	Low
5ERE275	50	3.1	16.1	7	Common lizard	5	Good
5ERE277	65	2.9	22.4	7	Common lizard	2	Low

Site ID	No. Refugia	Area (ha)	Refugia density/ha	No. Surveys	Species Recorded	Peak Count (adults)	Population Size Estimate
					Grass snake	0 (juvenile only)	Low

No amphibians were recorded beneath any artificial refugia during these surveys.

### 3.2 Incidental records

Incidental findings of reptiles were observed during other ecological surveys undertaken within the onshore project area during 2022. These are detailed in Table 3 and shown in Figure 1.

**Table 3. Incidental reptile sightings across Five Estuaries proposed onshore project route, 2022.**

Incidental Record ID	Date	Species	Location	Notes
1	13.05.22	Common lizard	X 611190, Y 228337	Female common lizard seen during water vole survey.
2	17.05.22	Grass snake	X 623009, Y 218287	Adult. Observed in Holland Haven Marshes during great crested newt eDNA survey.
3	24.05.22	Common lizard	X 620105, Y 220047	Basking on log pile.
4	28.09.22	Adder	X 620306, Y 219687	2x juvenile adders seen along hedgerow on dormouse survey.
5	28.10.22	Slow worm	X 620273, Y 219683	1x adult female slow worm seen under felt along hedgerow on dormouse survey.

## 4. CONCLUSION

Seven of eleven sites were recorded with reptile presence. Of these sites, three were identified as having a 'good' population of common lizard, according to guidance in Froglife (1999). A further four sites recorded low populations of common lizard. Three sites had low populations of grass snake according to Froglife (1999).

An additional site, 5ERE277, is considered to host a low population of grass snake based upon a count of a single juvenile recorded on survey, which suggests a breeding population is present nearby. Survey site 99525 had a peak count of nine adult common lizard, however the survey site had a refugia density of more than 10 per hectare and therefore this corresponds to a low population.

No adder or slow worm were recorded during the surveys; however, these were observed incidentally.

None of the surveyed sites recorded more than two species of common reptile.

Two sites, 99581 and 99446, were only able to be surveyed three and four times respectively due to access restrictions partially imposed by the landowners as a response to the Avian Influenza outbreak. No reptiles were recorded during the completed visits on these survey sites, however a minimum of seven visits is required in order to reliably conclude a likely absence of reptiles.

## 5. REFERENCES

Froglife (1999) Reptile survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife advice sheet 10.

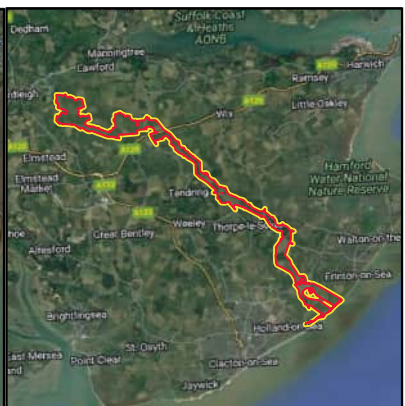
Gent, A.H. & Gibson, S.D. *eds.* (1998) *Herpetofauna Workers' Manual*. Peterborough, Joint Nature Conservation Committee.

Herpetofauna Groups of Britain and Ireland (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practices and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). Herpetofauna Groups of Britain and Ireland, c/o Froglife, Halesworth.

SLR Consulting Ltd. (2022) Five Estuaries Offshore Wind Farm Preliminary Ecological Appraisal.

## APPENDIX A: Figure 1 Location and Survey Site Plan





**LEGEND**

- VE Onshore Cable Route
- 100m Buffer
- Incidental Reptile Records

Reptile survey areas

<span style="border: 2px solid red; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99426	<span style="border: 2px solid blue; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99583
<span style="border: 2px solid cyan; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99446	<span style="border: 2px solid green; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99584
<span style="border: 2px solid grey; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99525	<span style="border: 2px solid orange; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99585
<span style="border: 2px solid yellow; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99531	<span style="border: 2px solid blue; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 275
<span style="border: 2px solid purple; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99581	<span style="border: 2px solid grey; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 277
<span style="border: 2px solid lightgreen; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></span> 99582	

Figure 1. Reptile Survey Sites and Incidental Records

**PROJECT**  
Five Estuaries Offshore Wind Farm

**CLIENT:**  
Royal HaskoningDHV

**DATE:**  
24.01.2023

**PRODUCED**  
G. Davey

**REF:** 22043



**ECOLOGY**  
RESOURCES



## APPENDIX B: Reptile survey metadata

<b>99426</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	19/04/22				
1	13/05/22	16°C. Dry, light breeze.	09:00	10:00	Stephen Treadwell, Nick Losset
2	18/05/22	15°C. Overcast, slight breeze.	10:30	11:45	Stephen Treadwell
3	26/05/22	17°C. Dry, light breeze. Clouds forming.	07:00	08:00	Stephen Treadwell
4	28/09/22	13°C. Dry and overcast. Light breeze.	07:15	08:30	Stephen Treadwell
5	03/10/22	14°C. Dry, patchy cloud. Light breeze.	09:40	10:20	Stephen Treadwell
6	07/10/22	15°C. Dry and warm, slight breeze.	08:15	09:45	Stephen Treadwell
7	09/10/22	14°C. Dry, slight breeze, no cloud.	10:50	11:30	Stephen Treadwell
<b>99446</b>					
Survey visit	Date	Weather conditions	Start time	End Time	Surveyor(s)
Deployment	20/04/22				
1	13/05/22	14°C. Dry, light breeze.	07:00	08:30	Stephen Treadwell, Nick Losset
2	18/05/22	15°C. Dry, light breeze.	09:00	10:00	Stephen Treadwell
3	26/05/22	17°C. Dry, light breeze. Clouds forming.	08:00	09:15	Stephen Treadwell
<b>99525</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	20/04/22				
1	13/05/22	17°C. Dry, light breeze.	10:30	12:00	Stephen Treadwell and Nick Losset
2	17/05/22	14°C. Dry with patchy cloud.	10:30	11:45	Stephen Treadwell
3	24/05/22	14°C. Dry, overcast with a mild breeze.	07:00	08:30	Stephen Treadwell
4	29/09/22	12°C. Dry and bright, no cloud.	07:10	08:45	Stephen Treadwell
5	04/10/22	15°C. Dry but overcast, slight breeze.	11:00	12:55	Stephen Treadwell
6	06/10/22	15°C. Dry with slight breeze.	08:15	10:15	Stephen Treadwell
7	09/10/22	13°C. Dry and bright, no cloud.	09:25	10:45	Stephen Treadwell
<b>99531</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	20/04/22				



1	09/05/22	13°C. Cool, light breeze and intermittent drizzle.	09:20	11:00	Stephen Treadwell and Nick Losset
2	17/05/22	13°C. Dry with a slight breeze.	09:30	10:15	Stephen Treadwell
3	24/05/22	15°C. Warm and hazy with light mist.	08:45	09:30	Stephen Treadwell
Re-deployment	31/08/22				
4	26/09/22	13°C. Dry but overcast.	13:00	13:40	Stephen Treadwell
5	03/10/22	14°C. Dry with patchy cloud.	08:30	09:30	Stephen Treadwell
6	05/10/22	15°C. Dry and mild, overcast.	08:00	09:30	Stephen Treadwell
7	09/10/22	12°C. Dry and mild with a slight breeze.	08:20	09:20	Stephen Treadwell
<b>99581</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	31/08/22				
1	19/09/22	11°C. Dry, patchy cloud with slight breeze	07:15	08:30	Stephen Treadwell
2	24/09/22	14°C. Dry with patchy cloud.	08:00	09:00	Johnnie Johnson
3	27/09/22	14°C. Overcast with intermittent showers.	09:00	10:00	Stephen Treadwell
4	30/09/22	13°C. Overcast with light shower prior to survey, dry during survey.	16:00	17:00	Stephen Treadwell
<b>99582</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	02/09/22				
1	21/09/22	11°C. Dry, light breeze and patchy cloud.	09:30	10:00	Stephen Treadwell
2	24/09/22	16°C. Dry and warm, no wind or cloud.	10:30	11:00	Johnnie Johnson
3	26/09/22	14°C. Dry with patchy cloud.	14:45	15:50	Stephen Treadwell
4	29/09/22	14°C. Dry and bright, no cloud.	14:50	15:50	Stephen Treadwell
5	01/10/22	15°C. Dry and warm, patchy cloud.	08:00	08:30	Johnnie Johnson
6	04/10/22	15°C. Dry and mild, with patchy cloud.	08:00	08:50	Stephen Treadwell
7	09/10/22	13°C. Dry and bright, no cloud.	09:00	10:00	Stephen Treadwell
<b>99583</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	02/09/22				
1	22/09/22	12°C. Misty with patchy cloud.	08:30	10:00	Stephen Treadwell
2	24/09/22	15°C. Dry and bright, no cloud.	09:30	10:10	Johnnie Johnson

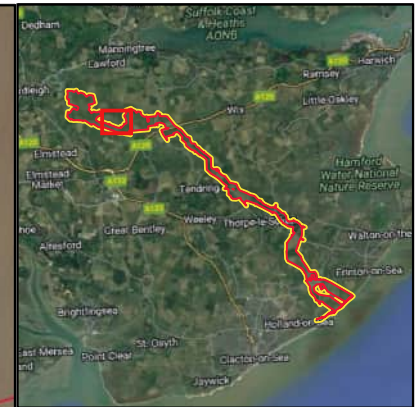


3	26/09/22	14°C. Dry, patchy cloud. Light breeze.	15:00	16:00	Stephen Treadwell
4	29/09/22	14°C. Dry and bright, no cloud.	16:00	17:30	Stephen Treadwell
5	01/10/22	15°C. Dry but overcast.	08:30	09:10	Johnnie Johnson
6	04/10/22	15°C. Dry, patchy cloud and light breeze.	08:50	09:40	Stephen Treadwell
7	09/10/22	13°C. Dry and bright, no cloud.	10:00	11:00	Johnnie Johnson
<b>99584</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	01/09/22				
1	22/09/22	12°C. Misty with patchy cloud.	11:00	13:00	Stephen Treadwell
2	24/09/22	15°C. Dry and bright, no cloud.	08:45	09:55	Johnnie Johnson
3	26/09/22	14°C. Dry, patchy cloud. Light breeze.	17:00	18:10	Stephen Treadwell
4	29/09/22	14°C. Dry and bright, no cloud.	18:00	19:00	Stephen Treadwell
5	01/10/22	15°C. Dry but overcast.	09:00	10:00	Johnnie Johnson
6	04/10/22	15°C. Dry, patchy cloud and light breeze.	09:50	10:40	Stephen Treadwell
7	09/10/22	13°C. Dry and bright, no cloud.	11:00	12:55	Johnnie Johnson
<b>99585</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	02/09/22				
1	23/09/22	15°C. Dry with patchy cloud.	10:45	12:00	Stephen Treadwell
2	25/09/22	15°C. Dry with patchy cloud.	08:00	08:50	Johnnie Johnson
3	27/09/22	14°C. Dry, patchy cloud, light breeze.	10:20	12:00	Stephen Treadwell
4	30/09/22	12°C. Dry but overcast with some mist.	07:30	09:00	Stephen Treadwell
5	02/10/22	16°C. Mild and still, but overcast.	08:00	09:30	Johnnie Johnson
6	08/10/22	10°C. Chilly, patchy cloud. Light breeze.	08:00	09:10	Stephen Treadwell
7	14/10/22	10°C. Chilly but dry and bright, no cloud.	16:20	17:30	Stephen Treadwell
<b>5ERE275</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	02/09/22				
1	19/09/22	12°C. Dry, patchy cloud with slight breeze.	10:15	12:45	Stephen Treadwell
2	25/09/22	16°C. Dry and clear.	09:00	10:00	Johnnie Johnson
3	28/09/22	15°C. Dry, patchy cloud, light breeze.	11:00	13:00	Stephen Treadwell

4	30/09/22	12°C. Overcast and misty.	09:10	10:30	Stephen Treadwell
5	02/10/22	17°C. Light breeze and patchy cloud.	10:00	11:25	Johnnie Johnson
6	08/10/22	11°C. Dry and bright with some breeze	09:20	10:50	Stephen Treadwell
7	14/10/22	11°C. Dry, no cloud, light breeze.	08:15	09:30	Stephen Treadwell
<b>5ERE277</b>					
Survey visit	Date	Weather conditions	Start time	End time	Surveyor(s)
Deployment	31/08/22				
1	23/09/22	14°C. Dry with patchy cloud.	08:00	09:45	Stephen Treadwell
2	25/09/22	16°C. Dry with patchy cloud.	10:00	11:10	Johnnie Johnson
3	28/09/22	15°C. Dry with patchy loud and light breeze	09:00	10:15	Stephen Treadwell
4	30/09/22	14°C. Overcast, light shower before survey.	14:15	15:30	Stephen Treadwell
5	02/10/22	18°C. Dry and very mild. Patchy cloud.	11:50	13:05	Johnnie Johnson
6	08/10/22	14°C. Dry and bright, slight breeze.	11:00	13:50	Stephen Treadwell
7	11/10/22	12°C. Dry with no cloud, light breeze.	10:00	11:30	Stephen Treadwell



## APPENDIX C: Reptile survey results – Figures 2A-G



**LEGEND**

- VE Onshore Cable Route
- 100m Buffer
- Incidental Reptile Records
- Reptile Refugia and Survey Site ID
- 99581
- Reptile Survey Results
- + Adder (adult)
- ▲ Common Lizard (adult)
- ▲ Common Lizard (juvenile)
- ◆ Grass Snake (adult)
- ◆ Grass Snake (juvenile)

Figure 2a. Reptile Site 99581 Survey Results

**PROJECT**  
Five Estuaries Offshore Wind Farm

**CLIENT:**  
Royal HaskoningDHV

**DATE:**  
24.01.2023

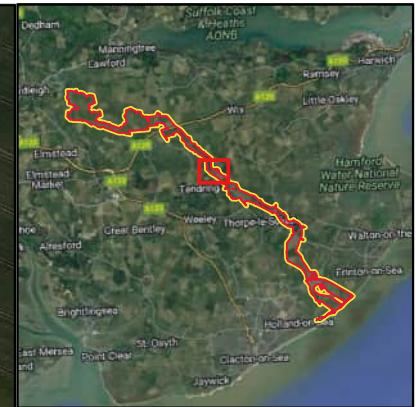
**PRODUCED**  
G. Davey

**REF:** 22043



**ECOLOGY**  
RESOURCES





**LEGEND**

- VE Onshore Cable Route
- 100m Buffer
- Incidental Reptile Records
- Reptile Refugia and Survey Site ID
- 99525
- 99531
- Reptile Survey Results
- + Adder (adult)
- ▲ Common Lizard (adult)
- ▲ Common Lizard (juvenile)
- ◆ Grass Snake (adult)
- ◆ Grass Snake (juvenile)

Figure 2b. Reptile Sites 99525 and 99531 Survey Results

**PROJECT**  
Five Estuaries Offshore Wind Farm

**CLIENT:**  
Royal HaskoningDHV

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24.01.2023

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G. Davey

**REF:** 22043



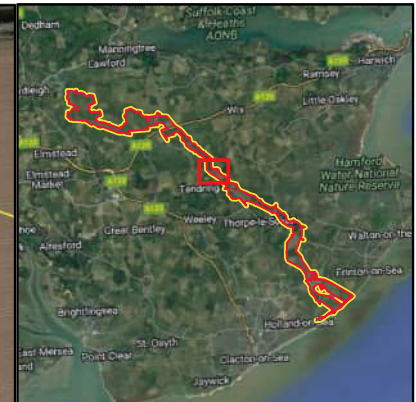
**ECOLOGY**  
RESOURCES

225000

0 0.2 0.4 0.6 km

615000





**LEGEND**

- VE Onshore Cable Route
- 100m Buffer
- Incidental Reptile Records
- Reptile Refugia and Survey Site ID
- 99582
- 99583
- 99584
- Reptile Survey Results
- + Adder (adult)
- ▲ Common Lizard (adult)
- ▲ Common Lizard (juvenile)
- ◆ Grass Snake (adult)
- ◆ Grass Snake (juvenile)

Figure 2c. Reptile Sites 99582, 99583, 99584 Survey Results

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Five Estuaries Offshore Wind Farm

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RESOURCES

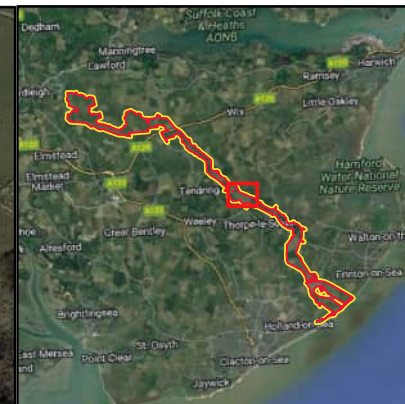
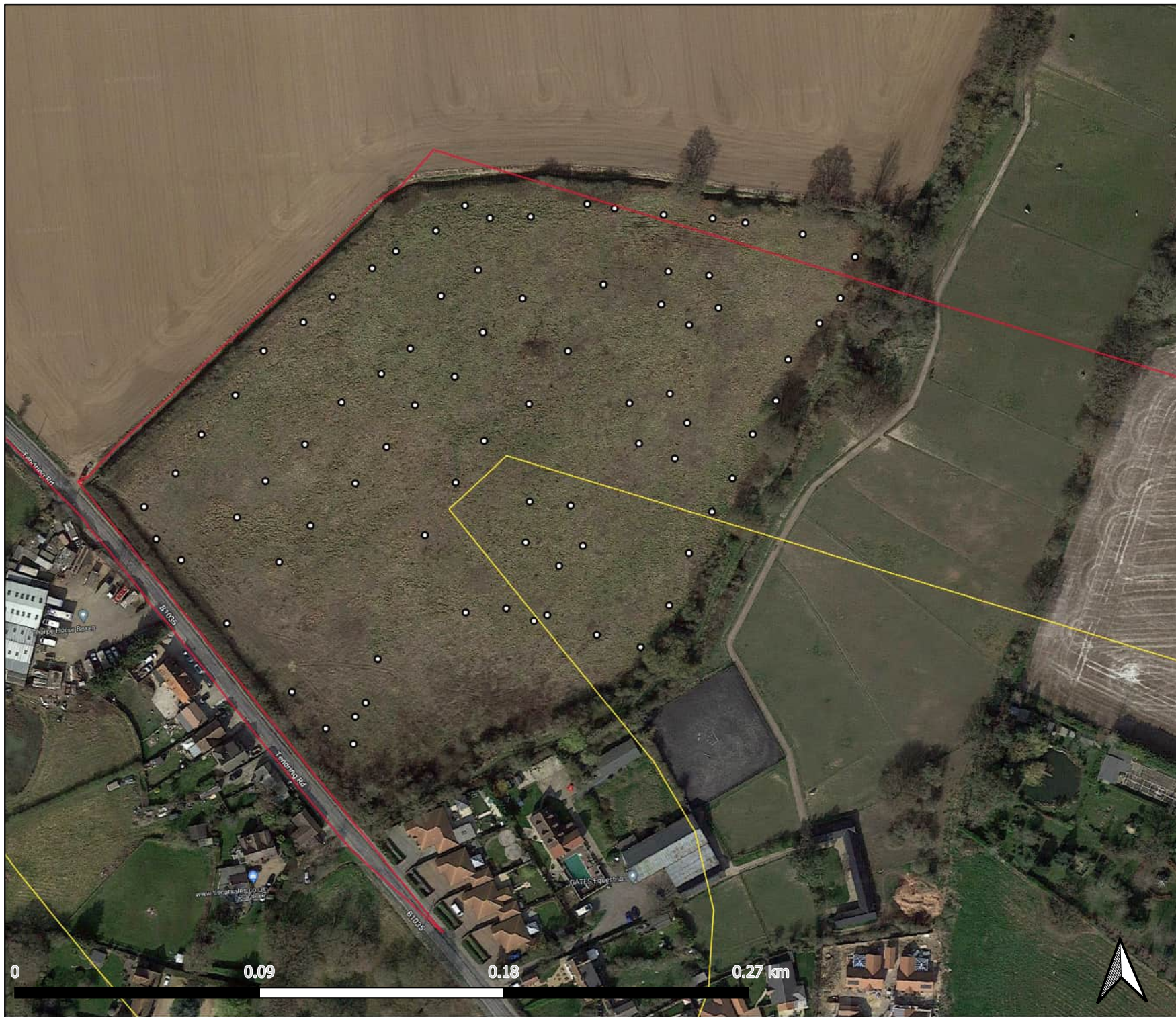
224000

0 0.1 0.2 0.3 km



616000





**LEGEND**

- VE Onshore Cable Route
- 100m Buffer
- Incidental Reptile Records
- Reptile Refugia and Survey Site ID
- 99446
- Reptile Survey Results
- + Adder (adult)
- ▲ Common Lizard (adult)
- ▲ Common Lizard (juvenile)
- ◆ Grass Snake (adult)
- ◆ Grass Snake (juvenile)

Figure 2d. Reptile Site 99446 Survey Results

**PROJECT**  
Five Estuaries Offshore Wind Farm

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Royal HaskoningDHV

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24.01.2023

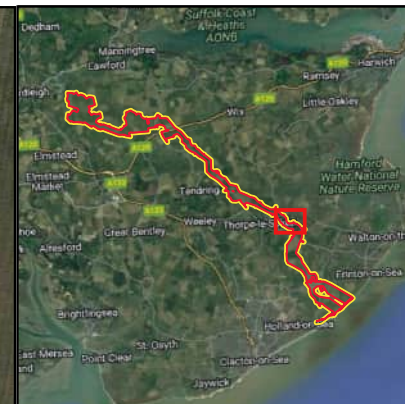
**PRODUCED**  
G. Davey

**REF:** 22043



**ECOLOGY**  
RESOURCES





**LEGEND**

- VE Onshore Cable Route
- 100m Buffer
- + Incidental Reptile Records
- Reptile Refugia and Survey Site ID
- 99426
- Reptile Survey Results
- + Adder (adult)
- ▲ Common Lizard (adult)
- ◆ Grass Snake (adult)
- ◆ Grass Snake (juvenile)

Figure 2e. Reptile Site 99426  
Survey Results

**PROJECT**  
Five Estuaries Offshore Wind Farm

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Royal HaskoningDHV

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24.01.2023

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**REF:** 22043

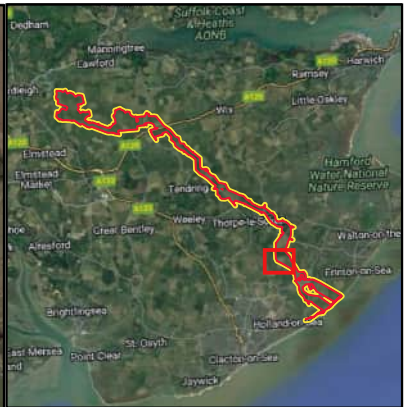


**ECOLOGY**  
RESOURCES









**LEGEND**

- VE Onshore Cable Route
- 100m Buffer
- Incidental Reptile Records
- Reptile Refugia and Survey Site ID**
- 275
- 277
- Reptile Survey Results**
- Adder (adult)
- Common Lizard (adult)
- Common Lizard (juvenile)
- Grass Snake (adult)
- Grass Snake (juvenile)

Figure 2g. Reptile Sites 275 and 277 Survey Results

**PROJECT**  
Five Estuaries Offshore Wind Farm

**CLIENT:**  
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24.01.2023

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G. Davey

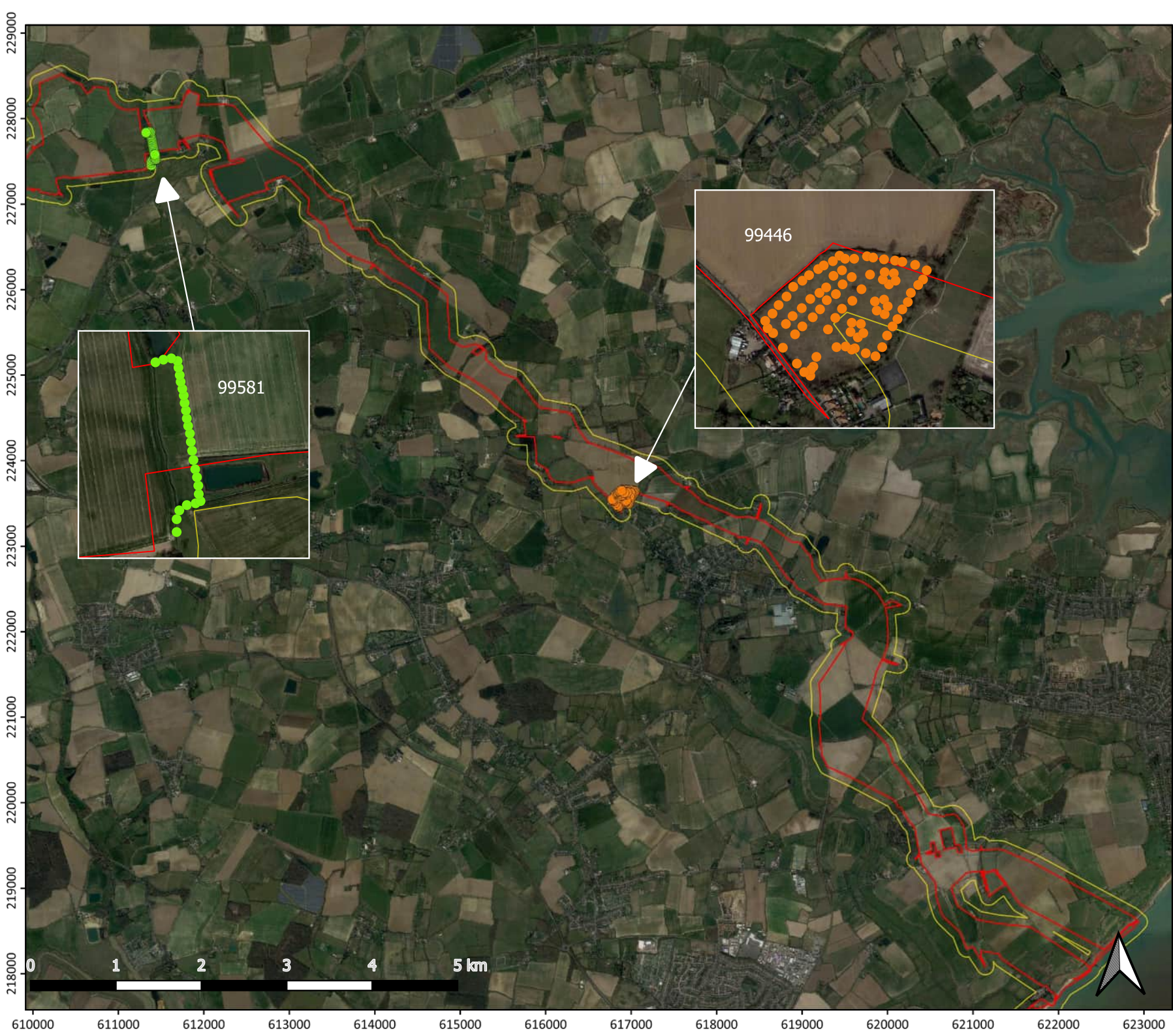
**REF:** 22043



**ECOLOGY**  
RESOURCES

## APPENDIX D: Figure 3 Reptile Mats with Incomplete Dataset





**LEGEND**

- VE Onshore Cable Route
  - 100m Buffer
- Reptile Mats**
- 3 more survey visits needed
  - 4 more survey visits needed

**REPTILE MATS LEFT TO SURVEY  
FIGURE 3**

**PROJECT TITLE:**  
Five Estuaries Offshore Wind Farm

**CLIENT:**  
Royal HaskoningDHV

**DATE:**  
12.04.2023

**PRODUCED BY:**  
J. McMahon

**REF:** 22043



**ECOLOGY  
RESOURCES**





**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

