

The Lake Lothing (Lowestoft) Third Crossing Order 201[*]



Lake Lothing
**THIRD
CROSSING**

**Document 6.3: Environmental Statement
Volume 3 Appendices**

Appendix 11E

Reptile Survey Report



Suffolk County Council

LAKE LOTHING THIRD CROSSING

Appendix 11E Reptile Survey Report





Suffolk County Council

LAKE LOTHING THIRD CROSSING

Appendix 11E Reptile Survey Report

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 62240712

OUR REF. NO. 1069948-WSP-EGN-LL-RP-LE-0002

DATE: OCTOBER 2017

WSP
Three White Rose Office Park
Millshaw Park Lane
Leeds
LS11 0DL
Phone: +44 113 395 6200
Fax: +44 113 395 6201
WSP.com



QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks				
Date	17/10/16	03/08/17	20/10/17	
Prepared by	J.Rowlands	B.Bailey	B.Bailey	
Checked by	B.Bailey	A.Bascombe	H Roberts	
Authorised by	A.Bascombe	H.Roberts	A. Bascombe	
Project number	62240712	62240712	62240712	
Report number				
File reference				



CONTENTS

1	INTRODUCTION	1
1.1	BACKGROUND	1
1.2	SURVEY AREA LOCATION	1
1.3	STUDY RATIONALE AND OBJECTIVES	1
2	METHODS	2
2.1	FIELD SURVEY	2
2.2	ARTIFICIAL REFUGIA SURVEYS	2
2.3	FIELD SURVEY LIMITATIONS	2
3	RESULTS AND EVALUATION	4
3.1	FIELD SURVEY RESULTS	4
3.2	INCIDENTAL RECORDS	5
4	DISCUSSION	6

TABLES

Table 1 – Locations, date and number of refugia used for reptile surveys	2
Table 2 - 2016 survey results (Areas C, D and E)	4
Table 3 - 2017 spring survey results (Area B)	4
Table 4 - 2017 spring/summer survey results (Area F)	5
Table 5 - 2017 Autumn survey results (Area A)	5

1 INTRODUCTION

1.1 BACKGROUND

WSP (formerly Mouchel) was commissioned by Suffolk County Council (the "Applicant") to undertake surveys to inform the proposed construction of a third river crossing over Lake Lothing, Lowestoft, hereinafter the Scheme.

This report presents the findings of a survey for reptiles undertaken between September 2016 and October 2017. The survey was undertaken following recommendations made in the Lake Lothing Third Crossing: Phase 1 Survey Report (Mouchel, 2015) that had noted the presence of areas of habitat suitable to support reptiles within the study area of the phase 1 survey.

Surveys to identify the presence of reptiles has therefore been undertaken upon land within or immediately adjacent to the Scheme Order limits (the reptile survey area) as shown in Figure 11.4 to the Environmental Statement. This survey area was identified through consultation and with the agreement of the ecology officer of Suffolk County Council.

1.2 SURVEY AREA LOCATION

Lake Lothing is a tidal lake connected to the North Sea situated in the centre of Lowestoft, Suffolk (central grid reference: TM540927). It once housed a thriving boat building and repair industry which has declined in use over recent decades. It is classed as a salt water lake and lies east of the Broads National Park, opening into the North Sea at its eastern end.

1.3 STUDY RATIONALE AND OBJECTIVES

The surveys investigated the presence of reptiles using standard survey methods (Froglife, 1999)¹. The surveys set out to:

- Determine whether a population of reptiles was present;
- If so, estimate the population size;
- Recommend mitigation strategies where appropriate.

¹ Froglife (1999) Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

2 METHODS

2.1 FIELD SURVEY

Surveys investigating the presence of reptiles were undertaken in areas of suitable reptile habitat (identified in this report as sites A-F) present within the reptile survey area. The survey area incorporates these six areas as shown on Figure 11.4 of the Environmental Statement). Surveys were undertaken by experienced ecologists between September 9th 2016 and October 18th 2017 during suitable weather conditions in accordance with the standard method. The surveys were undertaken using two techniques: artificial refugia searches and incidental visual inspection surveys, both of which are described in greater detail below.

2.2 ARTIFICIAL REFUGIA SURVEYS

Artificial refugia were placed within areas of suitable habitat within the survey area. Refugia comprised 500mm x 1000mm sheets of heavy duty flame-activated bitumen which were placed at a density of approximately 100 per hectare.

During the surveys, refugia were positioned in areas of suitable habitat, including tall ruderal/scrub, unimproved grassland, and bare ground with fringing tall ruderal vegetation.

Table 1 – Locations, date and number of refugia used for reptile surveys

Survey Location	Central Grid Reference	Date	Number of Mats
C	TM538926	Autumn 2016	19
D	TM538926	Autumn 2016	10
E	TM539926	Autumn 2016	30
B	TM541928	Spring 2017	29
F	TM538925	Summer 2017	25
A	TM538929	Autumn 2017	30

After initial placement, in accordance with best practice, refugia were left to ‘settle in’ for two weeks prior to the first survey visit. During each survey visit, refugia were first inspected from a distance, prior to being lifted and turned over, searching for the presence of reptiles. In addition, natural refugia present within the survey area, including debris, logs and large stones, were also searched for reptiles.

Surveys were carried out on different occasions each of which was separated by at least 24 hours, during suitable weather conditions and temperatures (JNCC, 2003). Where weather conditions did not fall within acceptable parameters, repeat visits were undertaken.

2.2.1. Incidental visual inspections

Whilst undertaking other ecological surveys (see Appendices 11A, 11B and 11D to the Environmental Statement) within their survey area, each area of suitable reptile habitat was inspected so as to spot any basking reptiles. This technique works especially well for common lizard and adder, as these species will often sit in exposed places, quickly moving out of sight when disturbed.

2.3 FIELD SURVEY LIMITATIONS

Examination of refugia is an extremely effective method of confirming the presence of snakes and slow worms, but numbers of lizards may be under-recorded during optimal weather conditions because of their rapid movement and sensitivity to disturbance (JNCC, 2003). The inclusion of incidental visual inspection within the method used will offset this and the risk of this bias has been taken into account so as not to affect the validity of the survey findings.

Numbers of reptiles observed are also likely to be affected by weather conditions, with reptiles being more evident during sunny weather with relatively low air temperatures and little wind. While reptiles are active throughout the summer, the months of April, May and September tend to be better for surveying, when



temperatures typically fall in the range from 9°C to 18°C (Froglife, 1999)². However, each species responds to temperature differently; adders tend to bask in temperatures up to 16 °C, lizards up to temperatures of 18 °C and grass snakes up to 20 °C.

On several occasions, surveys were undertaken during ambient temperatures higher than optimal conditions. In these cases, wherever possible, repeat surveys were undertaken. Notwithstanding this factor, with the weight of survey work undertaken across two years, an appreciation of reptile populations within the study area appropriate for the purposes of this report has been obtained.

Weather conditions in autumn 2017 curtailed the surveys on Area A. However, as this site is immediately adjacent to Site B where 8 survey visits have been undertaken, and as the habitats of both sites are connected, sufficient information has therefore been obtained to make appropriate recommendations with regards to the reptile population at this site. These areas are shown on Figure 11.4.

² Froglife (1999) Reptile survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth

3 RESULTS AND EVALUATION

3.1 FIELD SURVEY RESULTS

3.1.1. 2016

Table 2 shows the results of reptile surveys in 2016. Surveys were undertaken in September and October 2016 on sites C, D and E. No reptiles were recorded during surveys of refugia or by incidental observation.

Table 2 - 2016 survey results (Sites C, D and E)

Survey	Date	Temp (°C)	Weather	Results:
1	09/09/2016	20	Dry, cloud 6/8, wind 1	No reptiles found
2	13/09/2016	20	Dry, wind 1	No reptiles found
3	16/09/2016	19	Light rain, cloud 8/8, wind 1	No reptiles found
4	20/09/2016	16	Dry, cloud 7/8, wind 1	No reptiles found
5	29/09/2016	15	Dry, cloud 1/8, wind 1	No reptiles found
6	30/09/2016	14	Dry, cloud 0/8, wind 1	No reptiles found
7	05/10/2016	14	Dry, cloud 2/8, wind 1	No reptiles found

3.1.2. 2017

Tables 3, 4 & 5 below show the results of the Lake Lothing reptile surveys in 2017.

Table 3 shows the results of the surveys covering Site B (Network Rail land). Surveys were undertaken in April and May 2017 and a maximum count of 8 common lizards was recorded. The Froglife (1999) guidance suggests this count to be indicative of the presence of a 'Good Population' at this site.

Table 3 - 2017 spring survey results (Sites B)

Survey	Date	Temp (°C)	Weather	Results:
1	05/04/2017	6	Dry, cloud 0/8, wind 3	No reptiles found
2	13/04/2017	6	Dry, cloud 0/8, wind 1	8 common lizard
3	18/04/2017	8	Light showers, cloud 6/8, wind 3	No reptiles found
4	21/04/2017	8	Dry, cloud 8/8, wind 4	1 common lizard
5	28/04/2017	7	Light rain, cloud 7/8, wind 4	No reptiles found
6	02/05/2017	10	Dry, cloud 1/8, wind 1	2 common lizard
7	08/05/2017	11	Dry, cloud 1/8, wind 1	3 common lizard
8	09/05/2017	11	Dry, cloud 0/8, wind 1	1 common lizard

Table 4 shows the results of the surveys undertaken at area F. Surveys were undertaken between June and August 2017 and no reptiles were recorded during surveys of refugia or by incidental observation.

Table 4 - 2017 spring/summer survey results (Site F)

Survey	Date	Temp (°C)	Weather	Results:
1	06/06/2017	14	Light showers, cloud 8/8, wind 3	No reptiles found
2	09/06/2017	17	Dry, cloud 1/8, wind 2	No reptiles found
3	20/06/2017	16	Dry, cloud 0/8, wind 0	No reptiles found
4	27/06/2017	16	Dry, cloud 7/8, wind 3	No reptiles found
5	22/06/2017	21	Dry, cloud 1/8, wind 2	No reptiles found
6	30/06/2017	17	Dry, cloud 7/8, wind 2	No reptiles found
7	05/07/2017	17	Dry, cloud 0/8, wind 1	No reptiles found
8	03/08/2017	17	Dry, cloud 3/8, wind 4	No reptiles found

Table 5 shows the results of the surveys covering Site A. Surveys were undertaken in September and October 2017 and a maximum count of 2 common lizards was recorded. The Froglife (1999) guidance suggests this indicates the presence of a 'Low Population' at this site.

Table 5 - 2017 Autumn survey results (Site A)

Survey	Date	Temp (°C)	Weather	Results:
1	14/09/2017	10	Light rain, cloud 8/8, wind 4	1 common lizard
2	19/09/2017	12	Dry, cloud 2/8, wind 1	2 common lizard
3	26/09/2017	12	Dry, cloud 8/8, wind 1	No reptiles found
4	28/09/2017	12	Dry, cloud 8/8, wind 1	No reptiles found
5	06/10/2017	12	Dry, cloud 8/8, wind 3	No reptiles found
6	18/10/2017	15	Dry, cloud 8/8, wind 2	No reptiles found

3.2 INCIDENTAL RECORDS

A single common lizard was recorded basking at grid reference TM 53269 92743 on both the 27th and 28th September 2017 during a Phase 1 habitat survey undertaken to inform the PEA. This location is shown on Figure 11.4 of the Environmental Statement.

4 DISCUSSION

Reptiles have been confirmed to be present in some areas of suitable habitat in the vicinity of the Scheme.

A single common lizard was recorded on the south side of Lake Lothing in an area of land adjacent to Brooks Business and Industrial Park. This is approximately 350m away from the Order limits, and is separated by hard standing and buildings. This area is not linked by contiguous suitable habitat that might allow reptiles to move from this area to the site works.

A 'Good Population' of common lizard was identified at survey site B to the north of Lake Lothing. This population is associated with grassland habitats within the land adjoining the East Suffolk line and may be subject to disturbance during the construction of the Scheme.

A 'Low Population' of common lizard was identified at survey site A to the north of Lake Lothing. This population is associated with the grassland and tall ruderal habitats immediately adjacent to site B. It is considered that this is a component part of the 'Good Population' and that both populations should be considered together in further evaluations and assessments.





Three White Rose Office Park
Millshaw Park Lane
Leeds
LS11 0DL

wsp.com