Greater Cambridge Partnership

CAMBOURNE TO CAMBRIDGE

Environmental Statement
Technical Report 5: Ecology, Appendix 5.13: Reptile Survey Report (Draft)

Greater Cambridge Partnership

Cambourne to Cambridge

Reptile Survey Report (Draft)

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WSP

62-64 Hills Road
Cambridge
CB2 1LA

Phone: +44 1223 558 050

Fax: +44 1223 558 051

WSP.com

Contents

Annexes

1 INTRODUCTION

1.1 Project Background

1.1.1. The Cambourne to Cambridge project (C2C) is a proposed new 13.6km public transport route linking Cambourne and Cambridge. It will include a dedicated busway serving communities in Cambourne and the proposed Bourn Airfield development, as well as in Hardwick, Coton and the West Cambridge campus. A service road, to be used as a path for active travel, particularly by cyclists and pedestrians, will run alongside the busway. A new travel hub will be provided at Scotland Farm.

1.1.2. Scheme details are provided in the main report to the Environmental Statement (ES).

1.2 Ecological Background

1.2.1. Reptile surveys were completed for the Scheme in 2018 and 2021 (Cambridge Ecology, 2018; 2021). The surveys were undertaken across a survey area of up to 250 m from the Scheme boundary and were confined to areas where land access was available. The survey areas were defined from the Scheme boundary at the time of survey, which has subsequently been revised.

1.2.2. Two species of reptile, Grass Snake *Natrix helvetica* and Common Lizard *Zootoca vivipara* were identified during the 2018 reptile survey and a population size estimate was made from the survey results. A low population of Grass Snake was identified within the eastern end of the survey area on land just south of the West Cambridge site, adjacent to the University Sports Ground. A low population Common Lizard was identified within the grassland associated with the covered reservoir on the Waterworks site. Other areas of grassland habitats throughout the survey area were considered suitable to support the life cycle of Common Lizard (Cambridge Ecology, 2018).

1.2.3. An update survey undertaken in 2021 again recorded the presence of low populations of Grass Snake and Common Lizard only, however this survey focussed only on the areas where reptiles were previously recorded. The presence of juvenile Grass Snake indicated that this species was still breeding within and/or directly adjacent to the survey area. The Grass Snake population was located towards the eastern end of the survey on land just west and south of the West Cambridge Site of the University of Cambridge, adjacent to the University Sports Ground. The low population of Common Lizard was still located on the grassland associated with the covered reservoir south of the A1303 at Madingley Rise next to Long Road (Cambridge Ecology, 2021). It should be noted that populations of Common Lizard and Grass Snake identified through the 2018 and 2021 reptile surveys were recorded outside of the 2022 Scheme boundary.

1.2.4. The 2021 survey focussed on areas that previously supported reptiles only. Due to access constraints, it was not possible to survey some sections of the route. In addition, the Scheme boundary has changed significantly since these surveys were undertaken. Reptile

surveys were therefore required in 2022 to provide an up to date and complete baseline for reptiles within the Scheme and to inform the requirement for mitigation.

1.3 Brief and Objectives

1.3.1. Greater Cambridge Partnership (GCP) commissioned WSP UK Ltd to complete a reptile survey in accordance with best practice guidance (Highways Agency, 1997, Froglife, 1999 and Gent & Gibson, 1998) to:

- Determine reptile species presence from areas not subject to survey in 2018 or 2021; and
- Summarise the complete baseline (for planning application boundary) for reptiles for the survey area.

2 METHODS

2.1 Survey Area

2.1.1. The survey area selected consisted of suitable habitats in the Scheme boundary which have not been surveyed by Cambridge Ecology during their 2021 reptile surveys. Bourn Airfield was not included in the survey area, which was surveyed by Thomson Environmental Consultants. Due to access issues during the Cambridge Ecology surveys and changes to the Scheme boundary, there are areas of suitable reptile habitat on site which were not surveyed for reptiles. The areas of the site (in order of East to West, as displayed on the Study & Survey Areas Map within **Annex 5.13.1**) that were selected were:

- LP1 – University Sports Ground
- LP22 – Rectory Farm
- Coton Orchard
- LP48 – Scotland Road Roundland
- LP50 – National Highways
- Bourn Airfield

2.1.2. The area of suitable reptile habitat totalled approximately 14.88 hectares; by using 216 refugia the density exceeded the minimum density as recommended by best practice guidance (Draper, 2015). This guidance states the number of tins used 'will depend on many factors, such as likelihood of disturbance, size of site and what the survey is attempting to achieve' and recommends a minimum of 5-10 refugia per hectare for 'general survey purposes'. Although the Froglife guidance forms the current, recognised, best survey practice, it should be noted that it is not specifically designed for use in demonstrating absence of reptiles from a development site, rather the focus is on identifying key reptile sites and increasing recording of reptiles. For this reason, the density of refugia has been increased for this survey to increase confidence in results, should likely absence be concluded.

2.1.3. The locations of the refugia deployed for the 2022 surveys were recorded and are displayed in the Study & Survey Areas within **Annex 5.13.1.**

2.2 Reptile Presence/Likely Absence Survey

2.2.1. The survey comprised seven survey visits, each incorporating two elements:

- Survey of artificial refugia; and
- Visual observation of habitats and natural refugia present.

2.2.2. A total of 216 refugia (Froglife, 1999), were installed within suitable habitat for reptiles present within the Scheme on the 16th and 17th of August and were allowed to bed in for three weeks prior to the beginning of the survey visits.

2.2.3. Artificial refugia consisted of 0.5m x 0.5m sheets of heavy-duty roofing felt, 0.5m x 0.5m corrugated metal and 0.5m x 0.5m corrugated bitumen sheets. Refugia were sited in

suitable basking spots, close to cover, within habitat parcels that identified during an initial walkover of the Scheme and from aerial imagery.

2.2.4. The reptile surveys comprised seven survey visits in September 2022, which falls within the appropriate season for reptile surveys (Froglife, 2015). The surveys were conducted within peak weather conditions, in line with published guidance (Froglife, 1999; Froglife, 2015). Weather conditions during surveys ranged between 12ºC and 20ºC in temperature, with cloud cover of between 1 and 8 oktas. Full details are displayed in **Table 5.13.2- 1** of **Annex 5.13.2**.

2.2.5. The surveys were led by ecologists that meet the criteria of practical experience, set out in the Competencies for Species Survey, in relation to Reptiles. Therefore, the surveyors demonstrate a strong understanding of the ecology of native reptile species (CIEEM, 2014).

The 2022 surveys were completed on the following dates:

- 6 September 2022;
- 9 September 2022;
- 13 September 2022;
- 15 September 2022;
- 20 September 2022;
- 22 September 2022; and
- 27 September 2022.

2.3 Notes and Limitations

2.3.1. Within the 2022 survey period, refugia 12-15, and 17-20 on land parcel 48 was discovered missing on the first survey visit. The missing refugia accounts for less than 1% of the total deployed refugia and refugia density remained greater than that recommended in published guidelines (Froglife, 2015). Therefore, this limitation is not expected to affect the validity of results from the survey.

3 Legislation and Policy Context

3.1.1. Native, widespread reptile species (Common Lizard, Adder *Vipera berus*, Grass Snake and Slow Worm *Anguis fragilis*) are partially protected under Schedule 5 of The Wildlife and Countryside Act (1981), under part of Section 9(1) and all of Section 9(5). Subject to the provisions of this Part, if any person:

a) sells, offers or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead wild animal included in Schedule 5, or any part of, or anything derived from, such an animal; or
b) publishes or causes to be published any advertisement likely to be understood as conveying that he buys or sells, or intends to buy or sell, any of those things, he shall be guilty of an offence.

3.1.2. All species of reptile are also listed as a Species of Principal Importance (SPI) for the Conservation of Biodiversity in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Under Section 40 of the NERC Act public bodies, including local planning authorities have a duty to have regard for SPI when carrying out their functions, including determining planning applications.

4 Results

4.1.1. The seven surveys conducted in September 2022 were undertaken in appropriate weather conditions but recorded no reptile species within the Scheme boundary.

5 Summary

5.1.1. The surveys carried out in 2018, 2021 and 2022 have found no known reptile populations within the Scheme boundary.

5.1.2. Low populations of Grass Snake were recorded in 2018 and 2021 within the eastern end of the survey area, adjacent to the University Sports Ground. This is approximately 40m outside of the Scheme boundary.

5.1.3. Low populations of Common Lizard were recorded in 2018 and 2021 on the grassland associated with the covered reservoir south of the A1303 at Madingley Rise next to Long Road. This is approximately 70m outside of the Scheme boundary. On this basis, it is considered unlikely that significant reptile populations are present. Habitat considered suitable for reptiles has however been identified and the presence of low-density populations cannot be completely excluded.

6 REFERENCES

6.1 Project References

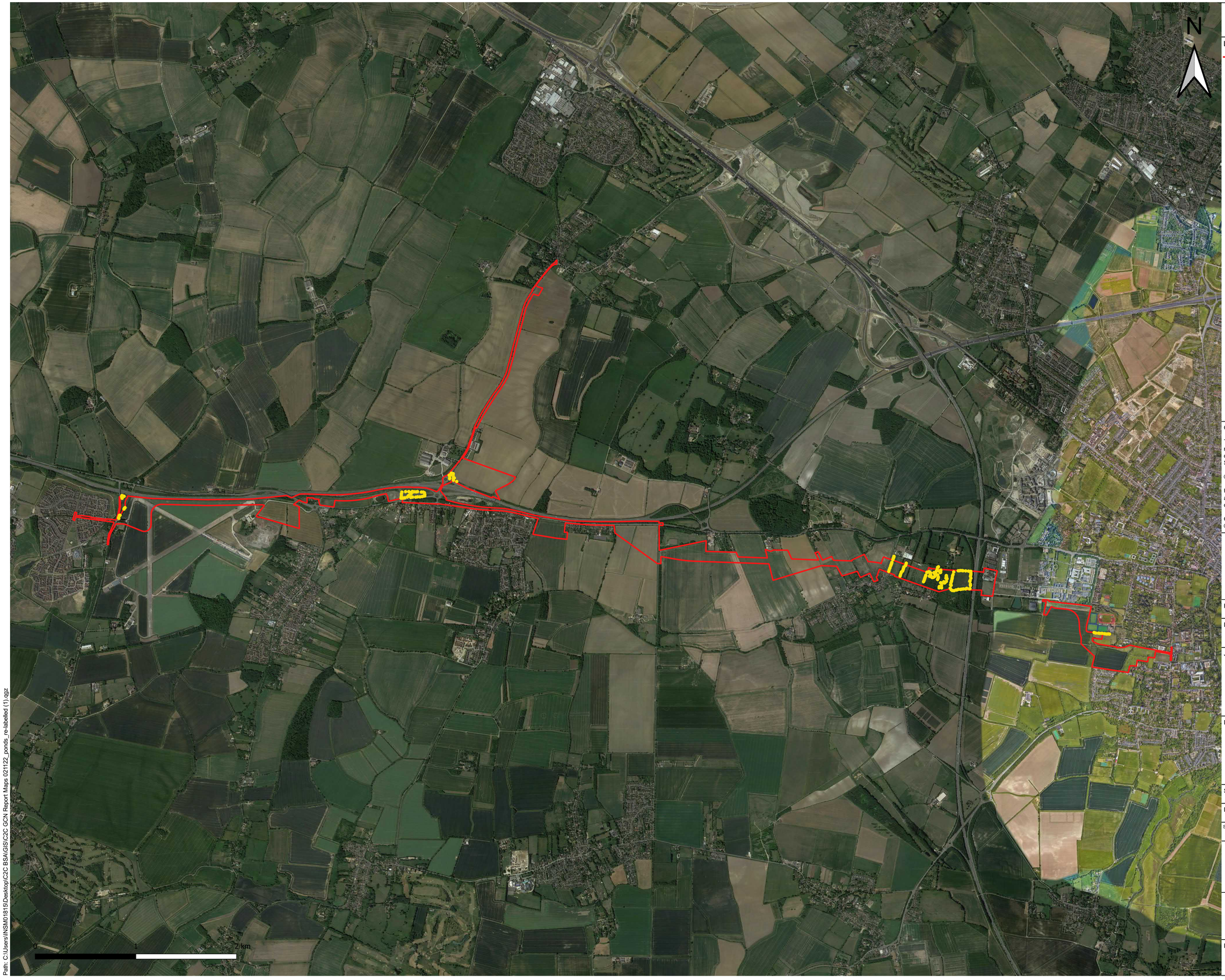
- Cambridge Ecology. (2018). Reptile survey of land associated with the catchment area for a potential transport infrastructure development option 3a between Bourn Airfield and Grange Road, Cambridge. Cambridge: Cambridge Ecology.
- Cambridge Ecology. (2021). Cambourne to Cambridge Better Public Transport: Reptile Survey 2021. Cambridge: Cambridge Ecology.

6.2 Technical References

- CIEEM. (2014). Competencies for Species Survey: Reptiles. Retrieved from CIEEM.net: https://cieem.net/wp-content/uploads/2019/02/CSS-REPTILES-October-2014.pdf
- Froglife (1999). Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice sheet 10. Froglife, Halesworth.
- Froglife (2015). Surveying For Reptiles. Retrieved from Froglife: https://www.froglife.org/wp-content/uploads/2013/06/Reptile-survey-booklet-3mm-bleed.pdf
- Gent, A and Gibson, S. (1998). Herpetofauna Workers Manual, Joint Nature Conservation Committee, Peterborough.
- Her Majesty's Stationary Office (HMSO) (1981). Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000)
- Highways Agency (1997). Design Manual for Roads and Bridges, Volume 10, Section 4, Part 7: Nature Conservation Advice in Relation to Reptiles and Roads.
- Her Majesty's Stationary Office (HMSO) (2006). Natural Environment and Rural Communities (NERC) Act.

Annex 5.13.1

Study & Survey Areas



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

Legend

- Scheme Boundary
- Reptile Mat locations August 2022

Revision Details	By / Check	Date	Suffix

Drawing Status: FINAL

Job Title: Greater Cambridge Partnership Cambourne to Cambridge

Drawing Title: Figure 1: GCN Reptile Mat Locations

Scale at A1: 1:17,000

Drawn: INSM01815

Stage 1 Check	Stage 2 Check	Originated	Date
CP	MP	SM	29/11/2022

0 200 400 600 800 1,000 m

Drawing Number: 70086660-XX-0002

Path: C:\Users\INSM01815\Desktop\C2C BSA\GIS\C2C GCN Report Maps 021122_ponds_re-labelled (1).qgz

Annex 5.13.2

Weather Conditions

Table 5.13.2- 1 - Weather conditions during survey.

Survey Visit Number		1	2	3	4	5	6	7
Date		06/09/2022	09/09/2022	13/09/2022	15/09/2022	20/09/2022	22/09/2022	27/09/2022
Start	Time	8:41	10:30	10:42	9:20	9:15	9:20	13:45
	Air Temp. (°C) (shade)	18	16	18	15	12	13	12
	Cloud Cover (oktas)	7	8	5	6	8	1	6
	Wind Speed	1	2	1	1	1	1	2
End	Time	11:10	15:00	12:10	12:30	11:30	12:30	15:20
	Air Temp. (°C) (shade)	20	20	17	15	17	19	12
	Cloud Cover (oktas)	6	2	4	6	8	1	7
	Wind Speed	3	2	0	2	1	2	3
Description / Notes		Overcast, breezy, and humid throughout survey.	Overcast with sunny spells throughout survey period. Progressively getting warmer towards the end of the survey.	Overcast and cloudy throughout survey. A slight breeze at the start of survey, no wind at the end.	Overcast and cloudy with a breeze throughout survey period.	Overcast	Partly cloudy with sunshine	Overcast with patches of broken clouds.

62-64 Hills Road
Cambridge
CB2 1LA

wsp.com