

APPENDIX E

AGEAS BOWL REDEVELOPMENT, EASTLEIGH

REPTILE SURVEY TECHNICAL NOTE

1 INTRODUCTION

This Technical Note presents the results of reptile surveys conducted in 2020 within areas of suitable habitat across the Ageas Bowl and Boundary Lakes Golf Club site (hereafter referred to as 'the Site'), in Botley, Hampshire. It also presents a summary of the historic surveys for reptiles carried out by Entec in 2007/2008 within suitable habitat at the Boundary Lakes Golf Course.

Reptiles are known to be present within the wider Ageas Bowl site following surveys undertaken in 2007 and 2017. These historic surveys informed planning applications for the initial development of the Ageas Bowl golf course and the land adjacent to Thorneydown Farm. Particular areas of habitat have since been managed to minimise impacts to dormouse and to provide optimum habitat for this species.

Historically, only a small number of individual common reptile species have been recorded in limited locations at the Site. The aim of the current survey is to update the historic baseline and re-confirm presence or likely absence of common reptiles at the Site. The results of the 2020 survey assist in an assessment of the nature conservation value of the population and inform any necessary additional mitigation/enhancement measures that may be required as part of the current redevelopment proposals.

2 METHODOLOGY

2.1 HABITAT SUITABILITY

A walkover survey of site was completed in May 2020 to confirm suitable areas of habitat for reptiles and to target areas for reptile surveys using artificial refugia.

2.2 REPTILE PRESENCE/ABSENCE SURVEY

A suitably experienced ecologist from Johns Associates undertook reptile surveys on six occasions between May and the start of July 2020. A further seven survey visits were conducted in September 2020, in suitable weather conditions and in line with guidance from the Joint Nature Conservation Committee¹ and Froglife (1999)².

¹ JNCC. 1998. *Herpetofauna workers manual*. JNCC. Peterborough.

² Froglife. 1999. *Reptile Survey, an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*.

A total of 70 artificial refugia, comprising 0.5m x 0.5m and 1m x 0.5m squares of roofing felt and corrugated iron 'tins', were laid out within areas of suitable habitat across the Site and left to 'bed-in' before the survey visits commenced. This survey area is referred to as 2020a on Figure 1. The second phase of surveys planned for September 2020 included this original area and a further 200-250 refugia and is shown as 2020b on Figure 1.

On each subsequent survey visit, all artificial refugia were checked for the presence of basking reptiles. Natural refugia such as logs, rocks and potential basking spots including areas of bare ground were also surveyed where these features were present on Site. Other artificial refugia such as discarded plastic sheeting and other refuse objects were also observed for evidence of reptiles.

The surveys were conducted between 08:00 and 11:00 or between 16:00 and 19:00, and/or during suitable weather conditions throughout the day, (suitable weather conditions being cloudy and/or with sunny breaks with temperatures between 9°C and 20°C), when the refugia will be warmer than the surrounding habitat.

Results of the refugia survey visits were used to provide an indication of the size of any reptile population at the Site, based on the Key Reptile Sites Register (Froglife, 1999); however, additional survey visits would be required to enable a more accurate assessment of population size. The Key Reptile Sites Register assesses the likely size of a population based on the maximum number of adults recorded during any one survey visit (peak adult count), which may inform an objective evaluation of the importance of the reptile population at a Site. The criteria are reproduced in Table 1 below.

Table 1: Estimate of population size based on peak adult counts

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 AND CONSTRAINTS

Survey conditions were variable during May to early July (cold and hot) and the surveys at this time did not cover the entire area of suitable habitat due to the re-opening of the golf course following the easing of Covid-19 restrictions.

3 SUMMARY OF HISTORIC SURVEYS

In 2007 artificial refugia were installed within localised areas of suitable perimeter habitat across the Ageas Bowl and Boundary Lakes sites (all these areas were largely retained during the historic redevelopment of the site with suitable habitats being restored). Results of these surveys confirmed the presence of slow worm in seven different locations across the Site with the peak count per survey visit being sixteen individuals.

4 RESULTS

4.1 HABITAT SUITABILITY

Semi-natural habitats suitable for use by common reptiles were found across the Site (including retained areas of habitat around the perimeter and those newly created as part of the Ageas Bowl and golf course refurbishment works). Suitable habitats include areas of longer semi-improved grassland, hedgerows, landscape bunds, scrub, tall ruderal,

standing/running water and areas of woodland (including edge habitats). These all provide habitat suitable for basking, foraging and hibernating reptiles.

Please refer to a Appendix B: Phase 1 Habitat Survey Technical Note (Johns Associates, 2021) for full details of the distribution of these habitats.

4.2 ARTIFICIAL REFUGIA

Artificial refugia and visual observation surveys were carried out in May-June 2020 and again in September 2020.

Table 2 shows the weather conditions encountered during each survey visit. All surveys were conducted in suitable weather conditions.

Table 2: Weather conditions during survey visits

Survey visit	Date & Time	Temp (°C) at start	Cloud Cover (0/8 – oktas)	Rain	Wind (Beaufort scale)
1	14/05/20 09:00 – 10:30	9	2/8	0	3
2	20/05/20 16:30-17:30	17	1/8	0	2
3	10/06/20 09:00 – 10:30	12	8/8	0	2
4	17/06/20 16:30-17:30	16	3/8	0	3
5	26/06/20 09:00 – 10:30	14	2/8	0	1
6	06/07/20 16:30-17:30	22	1/8	0	1
7	10/09/20 09:30 – 11:30	12	2/8	0	0
8	14/09/20 11:20 – 13:20	19	2/8	0	2
9	16/09/20 08:00 – 10:30	16	2/8	0	1
10	18/09/20 09:30 – 11:45	16	0/8	0	2
11	28/09/20 14:00 – 16:30	16	8/8	0	2
12	29/09/20 13:30 – 15:45	18	5/8	0	1
13	30/09/20 10:00 – 13:30	15	8/8	0	4

Table 3 sets out the results from the survey visits. Locations of species identified during the course of the survey visits is shown in Figure 1.

No reptiles were observed at any time during the surveys carried out during May to early July 2020.

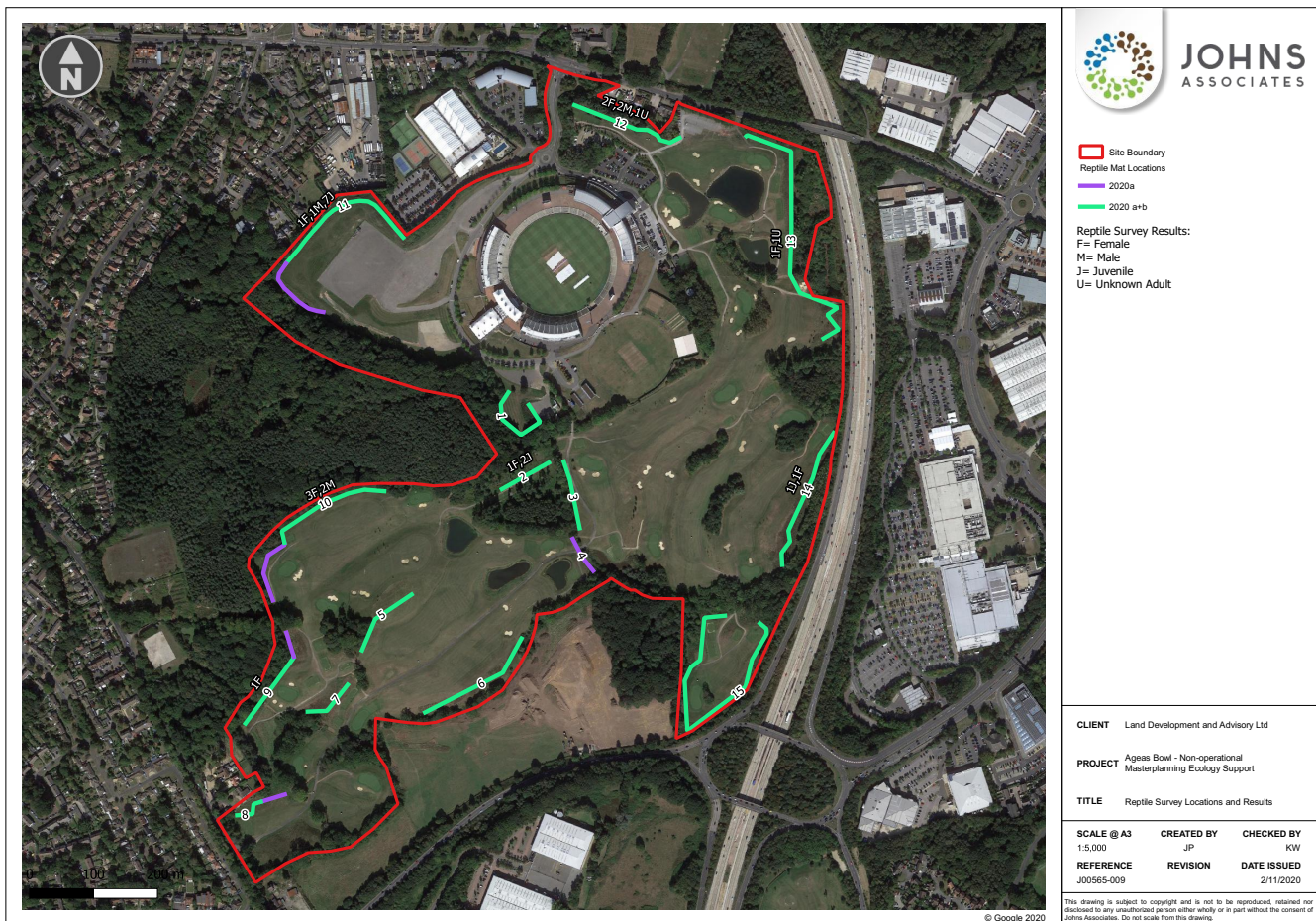
Table 3: Reptile survey results

Visit	Observations approaching refugia	Observations on refugia	Observations under refugia
1	None	None	None
2	None	None	None
3	None	None	None
4	None	None	None
5	None	None	None
6	None	None	None
7	None	None	1 M, 1 F, 2 Juv (slow worms)
8	None	None	1 M, 2 F (slow worms)
9	None	None	1 F, 2 Juv (slow worms)
10	None	None	2 M, 1 F, 1 Juv (slow worms)
11	None	None	2 F, 2 Juv, 2 Unk (slow worms)
12	None	None	2 F, 2 Juv (slow worms)
13	None	None	1 M (slow worm)

4.3 WALKING TRANSECT

One slow worm was observed in cell 2 during the walking transect on the 16th September 2020.

Figure 1: Reptile Mat Locations and Survey Results



SUMMARY

Historically, only low numbers of common reptiles have been recorded at the Site, with suitable mitigation/safeguarding measures being put in place to avoid the risk of injury/killing and to retain and restore suitable habitats.

Results of the survey have confirmed the presence of a low population of slow worm within the surveyed area, with a peak count of six individuals. Slow worms were recorded at seven different locations. No common lizards were recorded during the 2020 surveys; however, on a precautionary basis it should be assumed that common lizards are present on Site having been recorded during previous surveys.

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