

EASTLEIGH BOROUGH COUNCIL

One Horton Heath

Appendix 10.10 Reptiles

1 NON-TECHNICAL SUMMARY

Johns Associates Ltd have carried out reptile surveys in areas of suitable habitat across the One Horton Heath site in September 2018 and an update survey was completed in September 2020 that focussed on areas of suitable reptile habitat that are most likely to be affected by the development proposals, if permitted.

The 2018 survey results recorded a total of 15 slow worms and a single juvenile grass snake. A peak count of six slow worms was recorded in area J on 20th September 2018 which represents a good population size within this area. The 2020 update surveys recorded one common lizard and one adult grass snake within the Site on the 9th September and 18th September, recorded in areas C & D respectively. This represents a low population of both species within these areas.

The habitat suitability for reptiles across the Horton Heath Site remains similar to that of the 2018 surveys. Therefore, it should be assumed that low populations of reptiles (common lizard, grass snake and slow-worm) remain present in all areas where previously recorded.

The suitability of habitats across the site is locally restricted and patchy with reptile presence largely restricted to the boundaries of the site, particularly in areas adjacent to woodland or domestic gardens.

2 INTRODUCTION

This report presents the results of reptile surveys undertaken during 2018 and updated in 2020 by Johns Associates in support of the development proposals and forthcoming planning application at One Horton Heath. It also provides a summary of historic surveys for reptiles carried out at One Horton Heath.

The aim of the surveys was to update the historic baseline and re-confirm the presence or absence of reptiles within the Site and to identify any constraints to development and opportunities that could be delivered through the development proposals.

3 METHODOLOGY

3.1 DESK STUDY

Hampshire Biodiversity Information Centre (HBIC) provided records in 2020 of protected/notable species within 2 km of the Site. This data was reviewed for previous records of reptiles on the Site or within 2km of the Site boundary.

Previous surveys of the Site conducted by Ecologica Associates Ltd in 2014 and 2015 were reviewed to provide baseline information on reptile populations on the Site.

3.2 SITE SURVEY

3.2.1 Review of Habitat Suitability

In order to identify survey areas and refugia locations a walkover of the site was conducted which assessed the habitat suitability. When assessing for suitable reptile habitat particular attention is made to the vegetation structure, extent of the habitat, the aspect i.e. is it south facing, the connectivity to other suitable habitats and the history (where reptiles have been found before). This assessment was focused on habitats, including; rough and tussocky grassland, rough pasture, scrub, woodland edges and glades. Piles of logs, rubble, manure / compost heaps and any stone walls or rubbish were also noted as these could be used as potential hibernacula (NARRS Reptile Habitat Guide). All suitable habitats were identified and marked on a map.

3.2.2 Reptile Presence/Absence Survey

Suitably experienced ecologists from Johns Associates Ltd undertook reptile surveys on seven occasions in September 2018. A further update reptile survey was completed in 2020, with seven reptile surveys completed in September, in line with guidance from <https://www.gov.uk/guidance/reptiles-protection-surveys-and-licences>, Natural England and Froglife (Natural England (2015) and Froglife (1999)).

In the 2018 reptile survey a total of 475 artificial refugia comprising of approximately 0.5m x 0.5m and 1m x 0.5m squares of roofing felt were laid out within 19 areas of suitable habitat (labelled A – S) (Figure 1). These areas reflected a mix of suitable reptile habitat including grassland, hedgerows, field boundaries, woodland edges and areas of scrub. Refugia were deployed on the 23rd August 2018 and left to bed in for 14 days before the survey visits commenced. South-facing areas were preferentially selected as these would not be shaded during early parts of the day and would warm quickly, thereby attracting reptiles.

In the update surveys in 2020 a total of 209 artificial refugia comprising of approximately 0.5m x 0.5m and 1m x 0.5m squares of roofing felt were laid out within 8 areas of suitable habitat (Figure 2). Survey areas chosen for the update 2020 surveys were focused on suitable habitat within areas of planned construction works. These areas reflected a mix of suitable reptile habitat including grassland, hedgerows, field boundaries, woodland edges and areas of scrub. Refugia were deployed on the 17th and 18th August 2020 and left to bed in for 14 days before the survey visits commenced. South-facing areas were preferentially selected as these would not be shaded during early parts of the day and would warm quickly, thereby attracting reptiles.

On each survey visit, all artificial refugia were checked for the potential presence of basking reptiles. Natural refugia (such as logs, rocks and rubble piles) and potential basking areas (such as bare ground) were included in each survey. Incidental records were also made of rustling vegetation (which may indicate a moving reptile) and visual identification of fleeing reptiles.

Where possible the surveys were conducted between 0800 and 1100 hours or between 1600 and 1900 hours, and/or during suitable weather conditions throughout the day, i.e. cloudy with sunny breaks and temperatures between 9 and 20°C, when the refugia were warmer than the surrounding habitat.

Results of the refugia survey visits were used to provide an indication of the size of common reptile populations at the site, based on the Key Reptile Sites Register (Froglife, 1999); however, additional survey visits would be required to enable 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 interest within the site. The criteria are reproduced in Table 1 below. It must be noted that population counts are difficult to interpret, and additional surveys are recommended in order to form a more accurate representation of population levels.

Table 1 – Estimated 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

3.3 LIMITATIONS AND CONSTRAINTS

During the course of the 2018 survey period there was some interference with reptile mats whereby members of the public had removed or stacked them up. This was only seen in field 'I' which has a public footpath running through it. This impacted less than 5% of the overall mats for only a short period of time. As such it is considered not to be a substantial limitation of the overall result.

Two surveys in 2018 were undertaken in sub-optimal weather conditions; however, this is not considered to limit the results due to increased numbers of reptiles being recorded on these days.

There were no constraints to the 2020 reptile surveys.

Figure 1: Reptile Survey Areas 2018

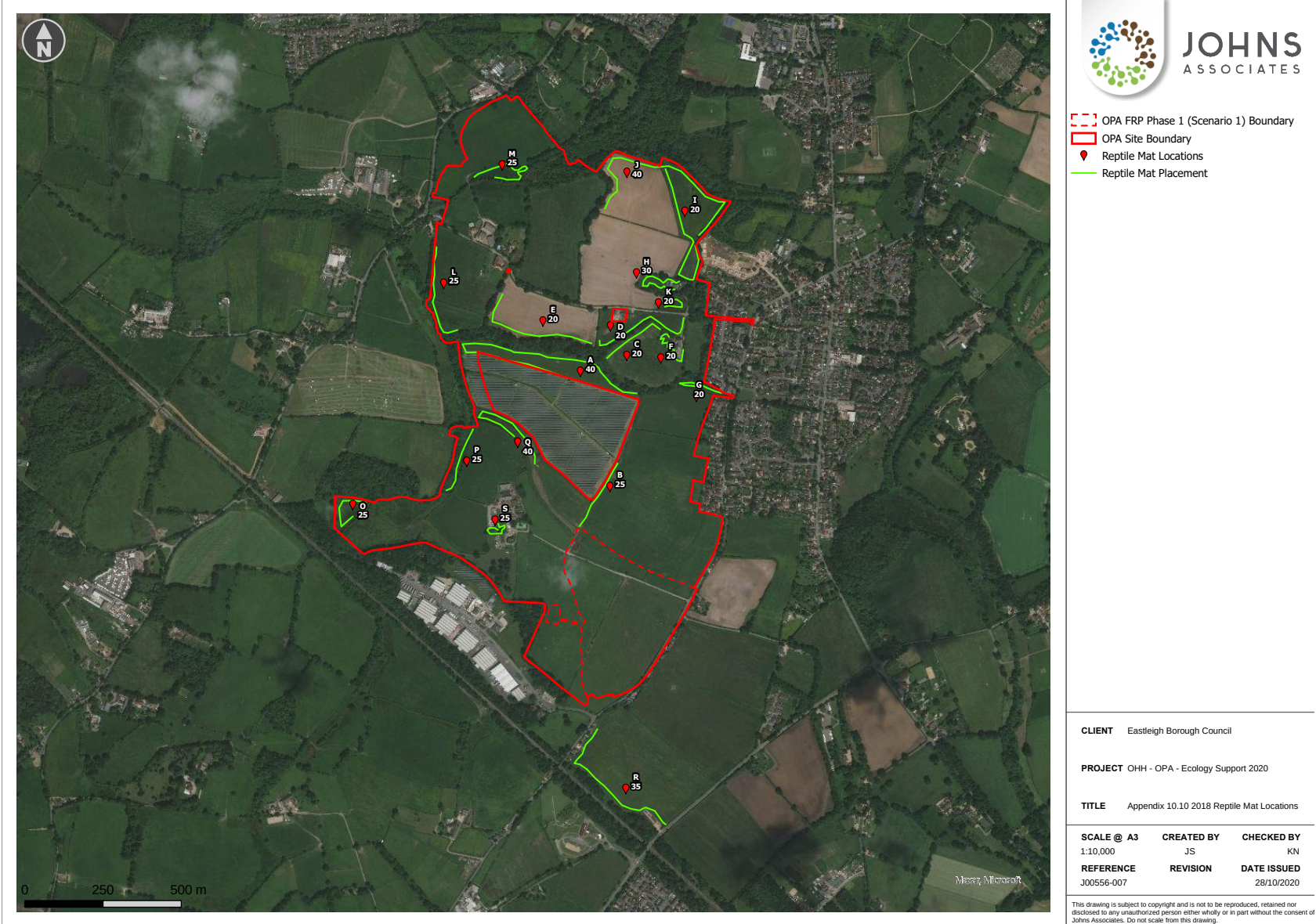


Figure 2: Reptile survey areas 2020



4 RESULTS

4.1 DESK STUDY

Data was provided by Hampshire Biodiversity Information Centre. There are no historic desk study records for any reptile species within the site boundary within the last ten years. The nearest record of slow worm (*Anguis fragilis*) is approximately 350m north east of the site adjacent to Botley Road. The closest record for grass snake (*Natrix helvetica*) is 1.1km north east of the site in Fairoak. The nearest record of common lizard (*Zootoca vivipara*) is approximately 100m north of the site close to Quobleigh pond. There are no records of adder (*Vipera berus*) within 2km of the site.

4.2 HISTORIC SURVEYS

Previous surveys undertaken by Ecologica Associates Ltd in 2014 recorded six grass snake, five common lizard and 76 slow worm in total over the survey period. The repeat survey in 2015 recorded one common lizard and 27 records of slow worm in total. All records are associated with field boundaries, with most of the records associated with the northern most boundary of the site. The results of both survey seasons are summarised in Figure 3 and Figure 4 below.

Figure 3: Ecologica reptile survey results 2014

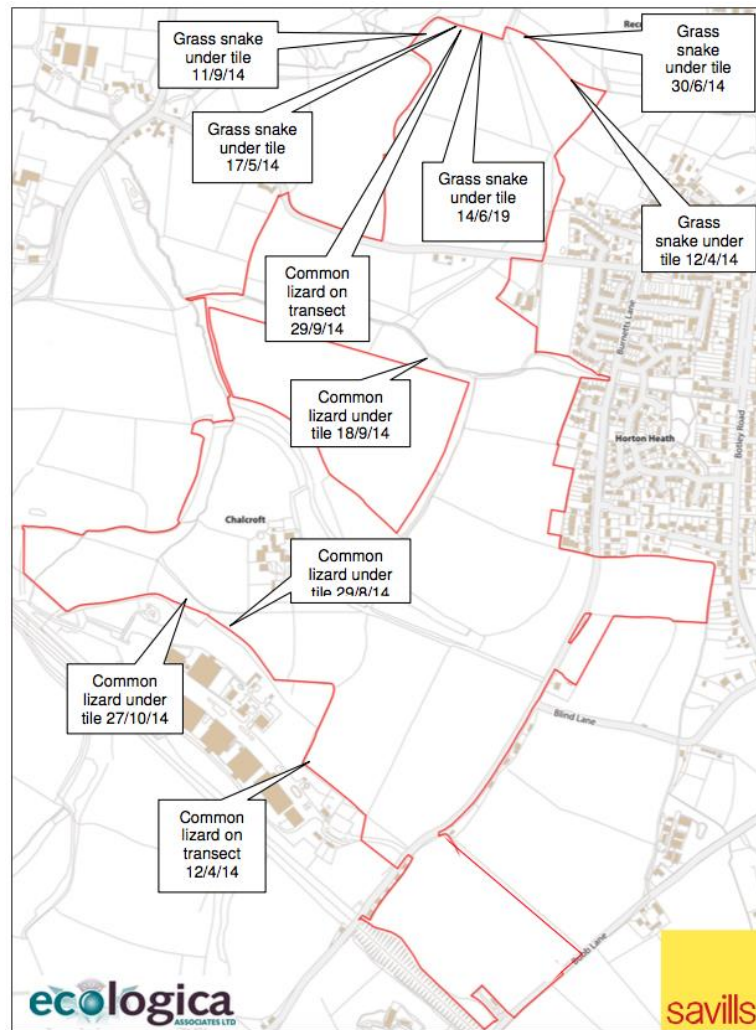
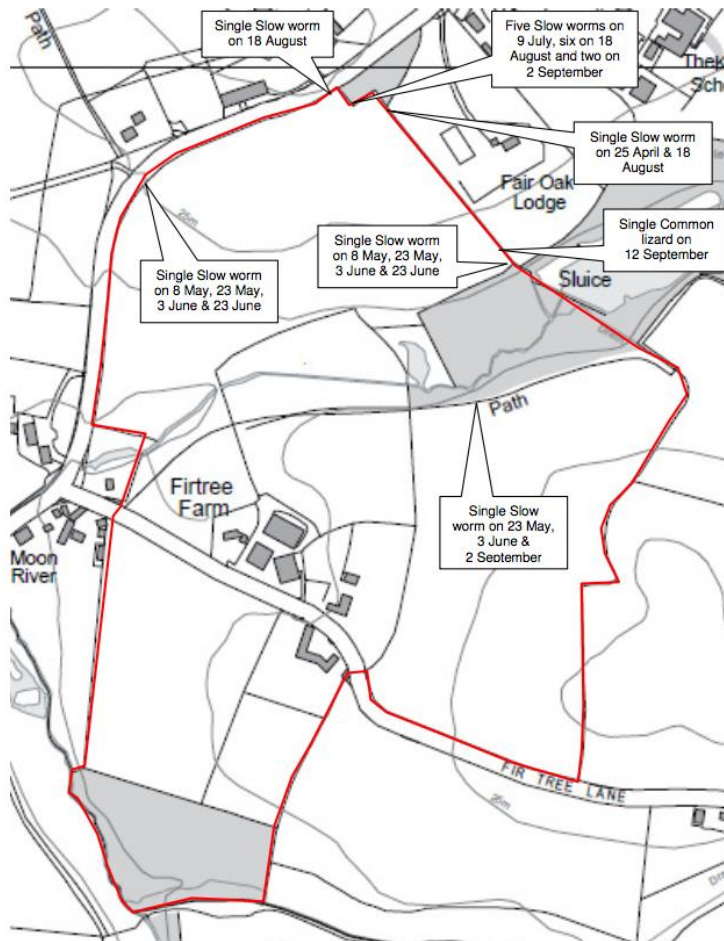


Figure 4: Ecological reptile survey results 2015



4.3 HABITAT SUITABILITY

The vast majority of the Site comprises a combination of heavily-grazed pasture and arable land which is unsuitable as reptile habitat. Although there are small pockets of semi-natural habitat comprising tussocky grassland and marshy grassland within the Site, the key available habitats for reptiles comprise a network of linear habitats i.e. hedgerows, unmanaged field boundaries, and woodland edge. However, it should be noted that much of this linear habitat in the southern part of the Site in particular is intensively grazed, which significantly reduces suitability for reptiles.

4.4 SURVEY RESULTS

4.4.1 2018 surveys

Over the course of the survey, a total of 15 slow worms were recorded within the Site, with a peak count of six slow worms recorded in area J on 20th September 2018 which represents a good population size within this area.

A single juvenile grass snake was recorded on the 18th September within area J.

Weather conditions during the fourth and fifth visits (19th and 20th September 2018) were sub-optimal (with wind at Beaufort 5); however, these surveys returned higher numbers of reptile recordings than during other visits during more suitable weather, and so are not considered to be a limitation to the results.

Table 2 sets out the dates and weather conditions of each survey visit and Table 3 shows the results of the surveys. Figure 5 shows the location of reptiles identified during the 2018 surveys.

Table 2: Weather conditions during the 2018 surveys

Survey visit	Date & Time	Temp (°C) at start	Cloud Cover (0/8 – oktas)	Wind (Beaufort Scale)	Rain
1	06/09/18 09:50 – 14:25	15	1/8	0	0
2	13/09/18 12:00 – 16:00	17	1/8	2	0
3	18/09/18 09:35 – 13:35	17	7/8	5	0
4	19/09/18 08:30 – 13:30	17	8/8	5	0
5	20/09/18 10:30 – 14:30	17	8/8	3	0
6	24/09/18 09:30 – 14:00	9	1/8	1	0
7	26/09/18 09:30 -13:30	12	0/8	1	0

Table 3 – Reptile survey results 2018

Visit	Observations (see Figure 5 below)	Area (see Figure 1 above)
1	None	N/A
2	1 x Female slow worm	J
3	1 x Female slow worm 1 x Juvenile grass snake	J
	1 x Female slow worm	R
4	1 x Female slow worm	J
5	3 x Male slow worm 2 x Female slow worm 1 x Juvenile slow worm	J
	2 x Male slow worm	R
6	1 x Female slow worm	D
7	1 x Male slow worm	J
	1 x Female slow worm	

4.5.1 2020 Surveys

Over the course of the surveys a total of one common lizard and one adult grass snake were recorded within the Site on the first and fifth visit, recorded in areas C & D respectively. This represents a low population of both species in these areas.

Table 4 sets out the dates and weather conditions of each survey visit and Table 5 shows the results of the 2020 surveys. Figure 6 shows the location of reptiles identified during the updated 2020 surveys.

Table 4: Weather conditions during the 2020 surveys

Survey visit	Date & Time	Temp (°C) at start	Cloud Cover (0/8 – oktas)	Wind (Beaufort Scale)	Rain
1	09/09/2020 12:05 – 15:00	19	4	3	0
2	10/09/2020 10:00 – 12:45	14	2	1	0
3	14/09/2020 08:10 - 10:35	13	1	2	0
4	16/09/2020 9:00 – 12:00	18	0	0	0
5	18/09/2020 09:00 – 12:00	18	2	0	0
6	22/09/2020 09:00 – 12:00	16	2	0	0
7	23/09/2020 08:00 – 11:00	16	8	0	0

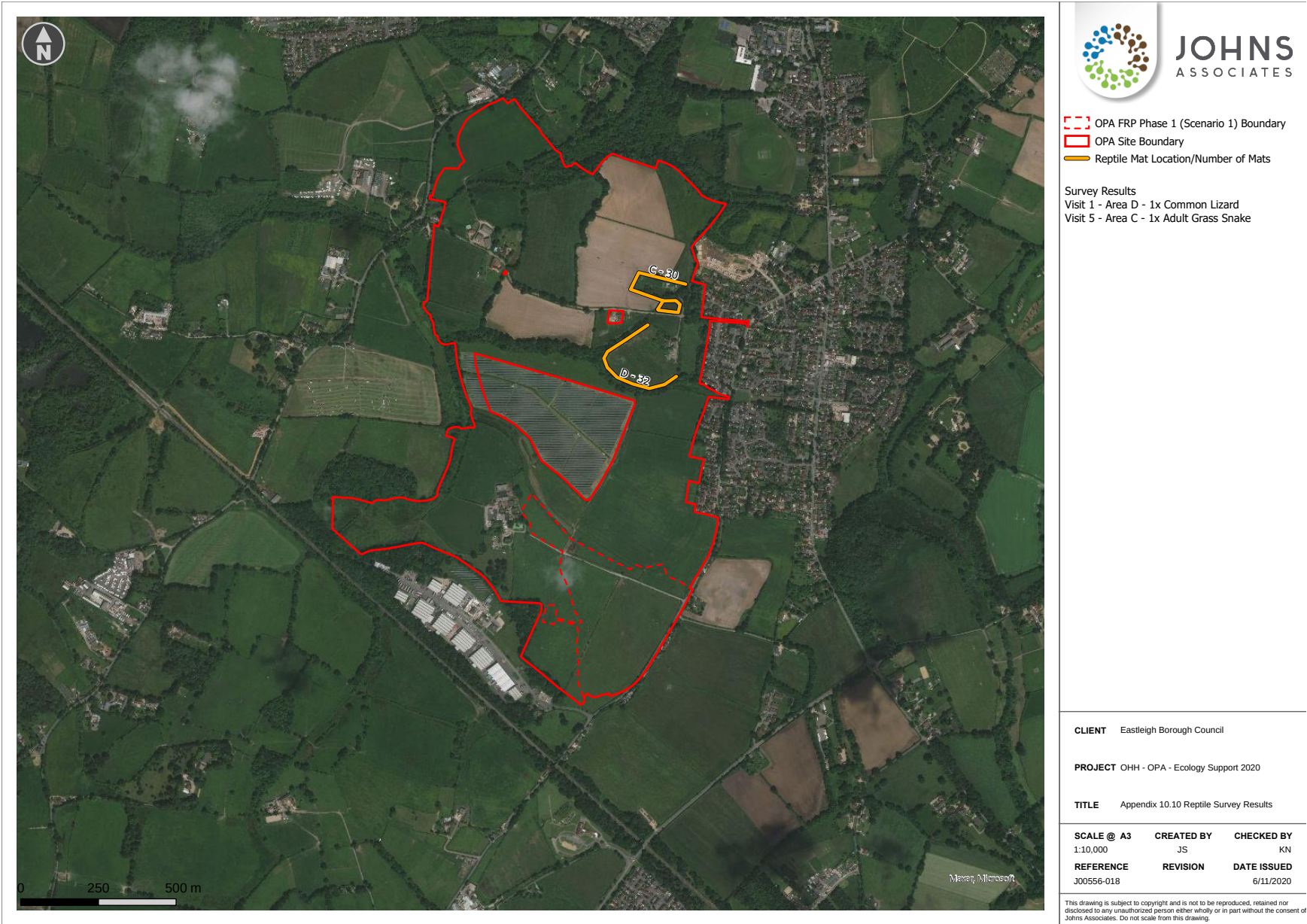
Table 5 – Reptile survey results 2020

Visit	Observations (see Figure 6 below)	Area (see Figure 2 above)
1	1 x Common lizard	D
2	No reptiles found	N/A
3	No reptiles found	N/A
4	No reptiles found	N/A
5	1 x Adult grass snake	C
6	No reptiles found	N/A
7	No reptiles found	N/A

Figure 5: Reptile Survey Results 2018



Figure 6: Reptile Survey Results 2020



5 CONCLUSIONS

2018 field surveys concluded that both slow worm and grass snake are present on site in small numbers and predominantly associated with woodland edge and field boundary habitats. Area J was found to have the highest population of reptiles on site with peak count of five slow worms (which equates to a 'good' population). These records were associated with the field boundaries adjacent to Quobleigh Wood (see Figure 1).

No common lizard was recorded during the 2018 surveys however previous surveys conducted by Ecologica in 2014-15, found small populations of this species. In addition, smaller population counts of reptiles across a reduced area were recorded during the 2018 surveys compared to 2014/ 15 surveys. It is thought that this may be because of the abnormally hot summer; the relatively larger survey effort in 2014-15 (a minimum of 20 survey visits); and also due to increased intensity of grazing across the Site.

Reptile surveys carried out in 2020 concluded that grass and common lizard are present on Site in small numbers. Both records were located in areas C and D which were within close proximity to each other. No slow worms were recorded during the 2020 surveys which were the most frequently found reptile species from the 2018 surveys. However, the previous slow worm records were found in areas that were not re-surveyed in 2020 (areas J and R see Figure 5). It is assumed a low population of slow worms are still present within the site in the previously recorded locations.

The habitat suitability for reptiles across the Horton Heath Site remains similar to that of the 2018 surveys and the historic surveys undertaken by Ecologica in 2014 and 2015. On a precautionary basis, it should therefore be assumed that low numbers of reptiles (common lizard, grass snake and slow-worm) remain present in areas of suitable habitat where recorded during historic surveys.

6 BIBLIOGRAPHY

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