

Land south of Water Lane/east of
Weavers Hill, Angmering

Reptile Presence / Absence Survey

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species maybe recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

Background

- 1.1 In March 2016 The Ecology Partnership was commissioned to undertake a reptile survey on land to the south of Water Lane and to the east of Weavers Hill resulting from the recommendations of the preliminary ecological assessment of the site.
- 1.2 Previous reptile surveys were undertaken to the east of the current survey area in 2015. This area was surveyed between the dates of 10th and 30th September 2015 inclusive. Prior to the commencement of the survey, the site was set up with artificial refugia (roofing-felt mats) for reptiles on 7th August 2015. No reptiles were identified during the survey period.
- 1.3 However, due to the habitats present within the extended site identified as the red line boundary in figure 1, it was considered pertinent to undertake further surveys to ensure that if reptiles were found to be present a suitable mitigation strategy could be developed.
- 1.4 Section 2 of this report sets out the methodology of The Ecology Partnerships reptile survey and the results of this survey are found in section 3. Conclusions are provided for in chapter 5 of this report.

Site Context and Status

- 1.5 The site is located to the south Water Lane on the eastern edge of the town of Angmering in West Sussex. The immediate surroundings include the village to the west which consists of low-medium density housing; water lane to the north followed by nurseries and agricultural fields; further nurseries and pasture fields to the south; and finally the A280 to the east. Grazed grassland fields dominate the eastern fields.

- 1.6 The larger survey area is shown in figure 1 below. Field systems A and B were surveyed in 2015, with no reptiles being identified across the fields. Field C was not considered to support any suitable reptile habitat, due to being well grazed by horses. Only field D support habitat which was considered suitable to support common reptile species. The field has was considered to support semi improved neutral grassland which was tussocky in nature. The field was not being grazed during the survey period.
- 1.7 The approximate survey boundary of the larger site is shown in figure 1 below by the redline boundary. The green line represents the initial surveyed area. Most of field C is now excluded from the development area.

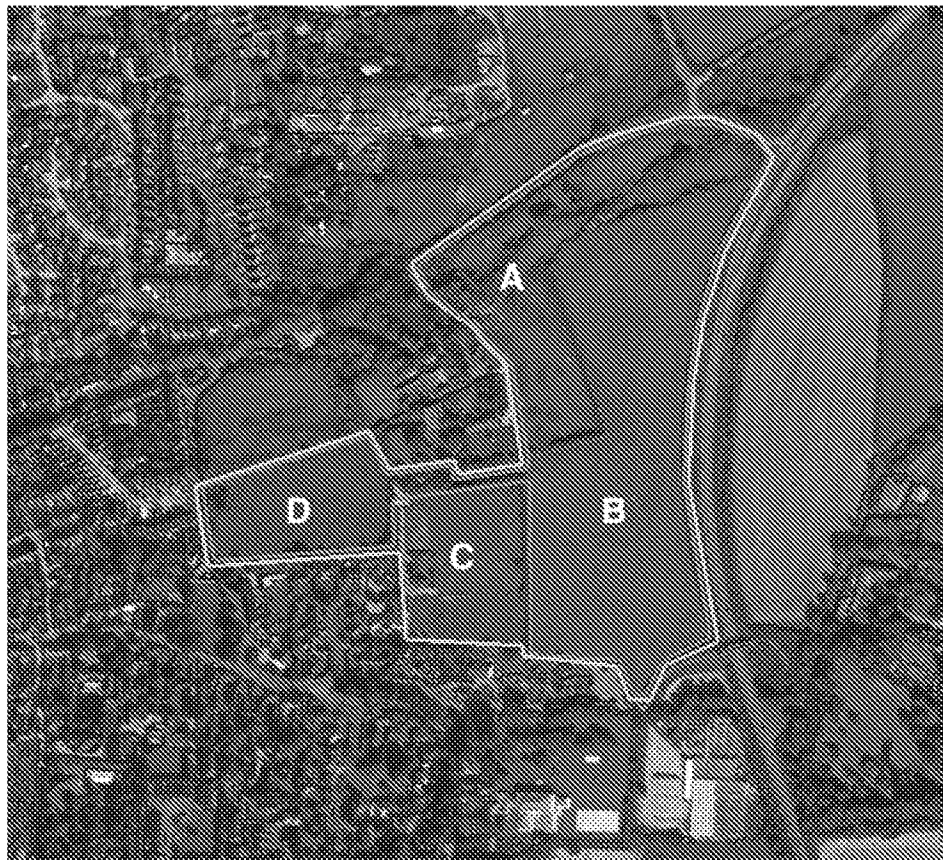


Figure 1: Identifying the survey area. Fields A and B were previously surveyed. Field systems C were considered unsuitable for reptiles. Field D is the subject of this reptile survey and report. The redline denotes the application boundary, whilst the green line indicates the entire survey boundary.

2.0 Reptile Survey Methodology

- 2.1 A terrestrial survey of the site for reptiles (presence or absence) was carried out at the site between the dates of 6th and 31st of May 2016. Prior to the commencement of the survey, the site was set up with artificial refugia (roofing-felt mats) for reptiles on 25th April 2016.
- 2.2 40 refugia were placed around the edges of the site and across the middle of the field, and were left undisturbed for a 7-day period of bedding in prior to the commencement of the reptile survey (as recommended in the advice from Natural England). Note that the guidelines produced by Froglife (1999) and Gent and Gibson (1998) recommend a density of artificial refugia of at least 25 per Ha of *suitable reptile habitat*. Hence the number of refugia used considerably exceeds the recommended minimum.
- 2.3 The timing and number of survey visits completed were based on the same guidelines referred to above. A total of seven survey visits were made to the site to check the refugia for the presence of reptiles. Visits were only carried out if the weather conditions were suitable for locating reptiles and took place at a variety of times of day (some in the morning and some in the afternoon/evening so that different mats would be exposed to the sun), in order to maximise the probability of finding reptiles if they were present. On each visit to the site, a minimum of one circuit to check all refugia was carried out.
- 2.4 Note that whilst checking the artificial refugia a visual check was also carried out of natural basking sites and refugia on suitable areas of the site. Any natural refugia were lifted and hand searched for evidence of reptiles, again in accordance with Natural England guidelines.

3.0 Results

3.1 The table below documents the timing and weather conditions of the reptile survey visits.

Visit	Date	Time	Conditions	Finds
1	04/05/2016	10:00	Sunny, mild, calm, 40% cloud 13°	None
2	06/05/2016	16:50	Sunny, warm, 50% cloud 22°	None
3	09/05/2016	11:30	Overcast, cool breeze, 98% cloud 21°	None
4	19/05/2016	11:00	Mixed sun & cloud, 70% cloud, 17°	None
5	21/05/2016	10:30	Sunny, clear, slight breeze, 1% cloud 16°	None
6	27/05/2016	13:30	Sunny, warm, 40% cloud, thundery 22°	None
7	31/05/2016	13:45	Overcast, blustery, 90% cloud 15°	None

3.2 It will be seen from the above table that no finds of reptiles were made during any of the visits, even though conditions for all the visits were suitable for reptiles to be found, had they been present on the site.

4.0 Discussion and Recommendations

4.1 Reptiles were not found during visits to the site, either under the artificial refugia, basking on the refugia, or in connection with any natural refugia or basking sites observed whilst moving through the site.

4.2 It can be concluded that reptiles are likely to be absent from the site, however, it must be recognised that whilst survey effort are in line with best practise there is always some potential that individuals can remain undetected.

- 4.3 However, as reptiles are considered to likely be absent from the site a mitigation strategy is not considered to be required. However, it is always recommended that where possible suitable and appropriate biodiversity enhancements are included as part of the master plan for the site. These are discussed below.

Enhancement Strategy

- 4.4 Although reptiles are likely to be absent at the present time, the site can nevertheless be enhanced for wildlife as part of the site design, and include features which are favoured by reptile species as well as common amphibians and invertebrates. There are several ways in which the site can be enhanced.

- 4.5 Retaining and enhancing rough grassland along the edges of the site. These marginal strips should be cut on a two-yearly cycle, in late summer, and the arisings raked up and piled under hedgerows as compost heaps. The grassland composition should be enriched by scarification and over- sowing with a damp-meadow grassland mix. This mix should include as many as possible of the following adapted species:

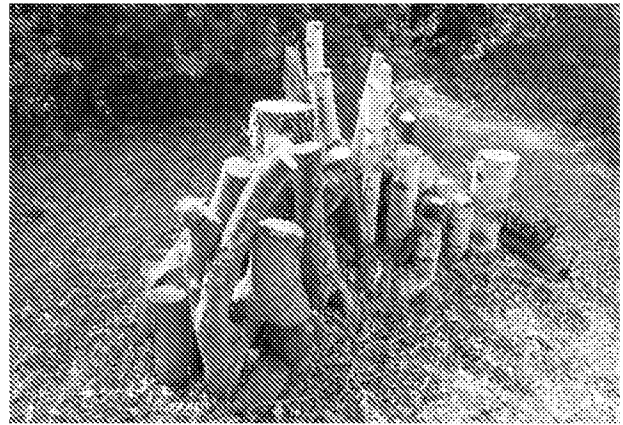
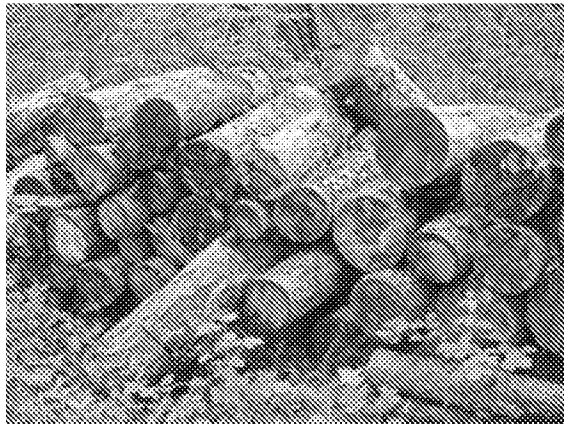
- Bugle – (*Ajuga reptans*)
- Common knapweed – (*Centaurea nigra*)
- Wild carrot – (*Daucus carota*)
- Hemp agrimony – (*Eupatorium cannabinum*)
- Meadowsweet – (*Filipendula ulmaria*)
- Birdsfoot trefoil – (*Lotus corniculatus*)
- Greater Birdsfoot trefoil (*Lotus pedunculatus*)
- Ragged Robin (*Lychnis flos-cuculi*)
- Cowslip – (*Primula veris*)
- Selfheal – (*Prunella vulgaris*)
- Meadow buttercup – (*Ranunculus acris*)
- Wild mignonette – (*Reseda lutea*)
- Pepper saxifrage (*Silene silaus*)

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- Bladder campion – (*Silene vulgaris*)
 - Wild red clover – (*Trifolium pratense*)
 - Tufted vetch – (*Vicia cracca*)
 - Creeping Bent – (*Agrostis stolonifera*)
 - Marsh Foxtail – (*Alopecurus geniculatus*)
 - Sweet vernal grass – (*Anthoxanthum odoratum*)
 - Crested dogstail – (*Cynosurus cristatus*)
 - Smaller cats tail – (*Phleum bertolonii*)

4.6 Maintaining hedgerows, trees and scrub patches already present, wherever possible, and enhancing them with planting of additional species (where these are not already present) such as:

- Hazel - (*Corylus avellana*)
- Hawthorn - (*Crataegusmonogyna*)
- Blackthorn - (*Prunusspinosa*)
- Dog rose – (*Rosa canina*)
- Elder – (*Sambucus nigra*)
- Wayfaring tree – (*Viburnum lantana*)
- Spindle – (*Euonymus europaeus*)
- Travellers joy – (*Clematis vitalba*)
- Honeysuckle – (*Lonicera periclymenum*)

4.7 Creation of log piles and brash piles under hedgerows and scrub areas for use as refugia by reptiles, amphibians and invertebrates should be undertaken. Log piles should be located in a variety of locations, such as damp places, with some situated in more sunny locations. These should be stacked, and perhaps some amounts of leaf litter added. Planting around log piles with such species as honeysuckle or clematis can also add value. Such refugia can attract reptiles, small mammals, and invertebrates.



Pictures above showing how log piles can be created within the edges of the site or in the retained habitats on site. It is recommended that a total of 4 large piles, 2 of each type, are created as part of the scheme. These piles can be used by a variety of wildlife, reptiles being one group that happily use such features.

- 4.8 It is considered that the enhancements of the site will provide optimal opportunity in the future for vertebrate and invertebrate fauna from the local landscape to be able to colonise and co-exist with any future building development on the site. These proposals will provide new opportunities for fauna species in the local area.

5.0 Conclusion

- 5.1 Reptiles are likely to be absent from the site at the present time, although there is a small probability that they are present but went undetected during the survey.
- 5.2 No mitigation for reptiles would be required should the site be developed, although the enhancement strategy proposed will ensure that future colonisation of gardens and retained natural margins of scrub and grassland on the site by fauna from the local area will be encouraged.

The Ecology Partnership

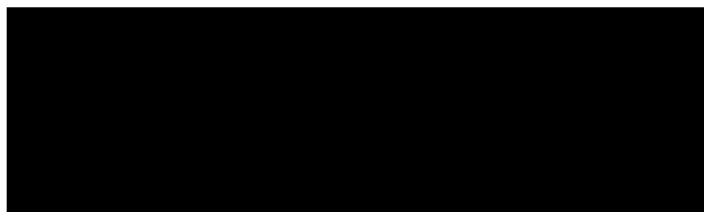
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