

**SUMMARY OF HAVANT THICKET WINTER STORAGE
RESERVOIR REPTILE SURVEY AUTUMN 2007**

Final Summary Report

March 2008

Invertebrate, Bird, Mammal, Reptile, Amphibian and Botanical Surveys
Management Plans • Habitat Appraisal • Marine • NVC • EclA

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1.0 Introduction

Ecological Survey & Assessment Limited (ECOSA) have been contracted by Arup on behalf of Portsmouth Water PLC to carry out a reptile survey at the site of the proposed Havant Thicket Winter Storage Reservoir.

This short report provides an initial summary of the findings of the survey work carried out between August and October 2007, inclusive. A full report is to be prepared in due course.

2.0 Methods

A total of 1600 reptile refugia were distributed across the site between 15th and 21st August 2007. These reptile refugia consisted of 50cm² sheets of roofing felt. This included a total of 30 sheets of corrugated tin used during previous surveys at the site. These refugia were repositioned across the site for use during the current survey. The refugia were placed around field boundaries, ditch lines, hedgerows and woodland edge. In addition, lines of 10-20 refugia were placed across the centres of the fields in order to sample reptiles from these areas.

All reptile refugia were then inspected on 10 dates between 21st August and 13th October 2007, each inspection taking two ecologists two days to complete.

All inspections were carried out in warm and sunny conditions with some light cloud cover.

3.0 Results

In total four species of reptile were recorded during the survey, these were adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Lacerta vivipara* and slow-worm *Anguis fragilis*. A summary of the distribution of each species is provided below, Maps 1-4 indicate the location of each reptile recorded.

Common Lizard

This was the commonest and most widespread species recorded during the surveys. Map 1 shows that the species was generally distributed across the entire site with the exception of the central areas of the fields to the east and in the field to the south-west known as Gammon's Hill. The species was particularly abundant in fields to the west of The Avenue, along the northern site boundary and around the wet ditch to the west of Gipsies Plain in the

east of the site. In total 300 individuals were recorded, this should be considered as the minimum number of animals on the site.

Slow-worm

This was an abundant species on the site although the survey suggested that numbers were considerably lower than for common lizard. Map 2 shows a distinct eastern bias to the records of the species with the northern site boundary, fields to the west of The Avenue, and the wet ditch to the west of Gipsies Plain in the east of the site supporting good numbers of the species. This core area of distribution being remarkably similar to that shown by common lizard. In total 191 individuals were recorded, this should be considered as the minimum number of animals on the site.

Grass Snake

This was the scarcest species at the site, however, records were well distributed (Map 3) reflecting the pattern shown by both common lizard and slow-worm. Numbers of the species were considerably lower than recorded during the 2005 ecology surveys when the population was estimated to be in excess of 30 animals. The reason for this is unknown but may be related to the difference in the timing of the survey. In total 13 individuals were recorded, this should be considered as the minimum number of animals on the site.

Adder

Adder distribution at the site followed that of the other three species recorded with a notable concentration of records along the north-east boundary of the site. Juveniles of the year were recorded along the western boundary of the Avenue indicating breeding on the site. In total 40 individuals were recorded, this should be considered as the minimum number of animals on the site.

3.0 Discussion

Guidelines¹ (Table 1) suggest that sites that support three or more species of reptile or an exceptional population of a single species should be considered as a Key Reptile Site. Based on these criteria the site supports exceptional populations of all species of common reptile found in the UK. This would indicate that the site is of at least high local value or possibly of county value for the reptile populations it supports.

¹ Hill, D., Fasham, M., Tucker, G., Shewry, M., & Shaw, P. (2005) *Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring*, Cambridge

Table 1 Evaluation Criteria Developed for Assessing Reptile Populations

	Low Population	Good Population	Exceptional Population
Grass snake	<5	5-10	>10
Common lizard	<5	5-10	>20
Slow worm	<5	5-20	>20
Adder	<5	5-10	>10

Due to the estimated size and the diversity of the reptile community present it will be essential to develop a robust mitigation strategy aimed at removing animals from the development area to areas of the site that are not to be disturbed, suitable habitat bounding the site or two sites located elsewhere in the local area. In order for this mitigation strategy to be successful in terms of maintaining the size of local reptile populations it will be essential to establish the size and extent of reptile populations at the receptor site. This will enable the potential number of animals that the receptor site could receive to be assessed and the extent of habitat management required in order to provide sufficient additional habitat.

Maps 1-4 Distribution of Reptile Records

HAVANT THICKET WINTER WATER STORAGE RESERVOIR

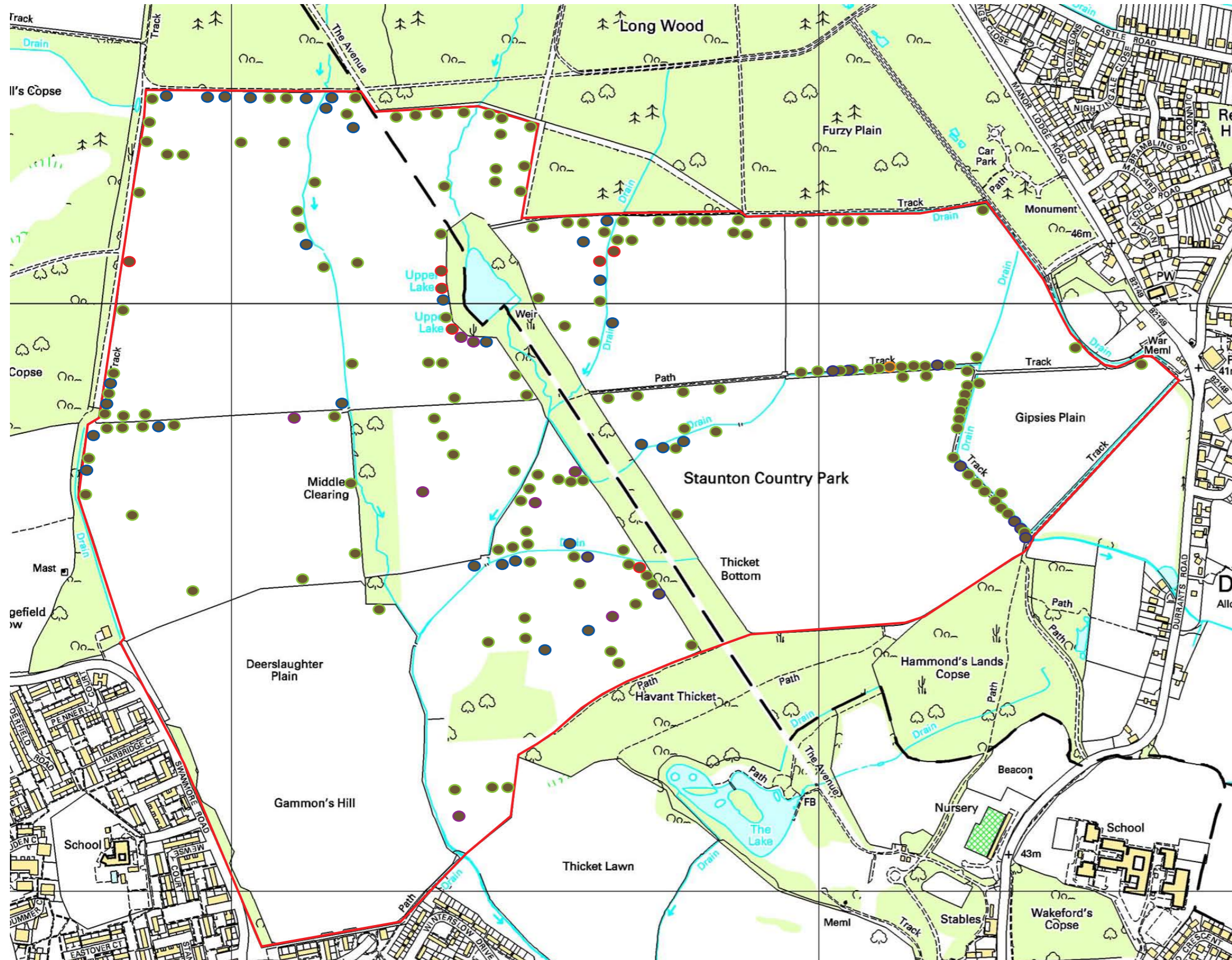
REPTILE SURVEY 2007

Map 1 Common Lizard Records

Client: Arup, on behalf of Portsmouth Water Plc

Date: March 2008




Status: Final Summary Report



KEY

— Site Boundary

Number of Recorded Common Lizard:

-  One Individual
-  Two Individuals
-  Three Individuals
-  Four Individuals
-  Five Individuals



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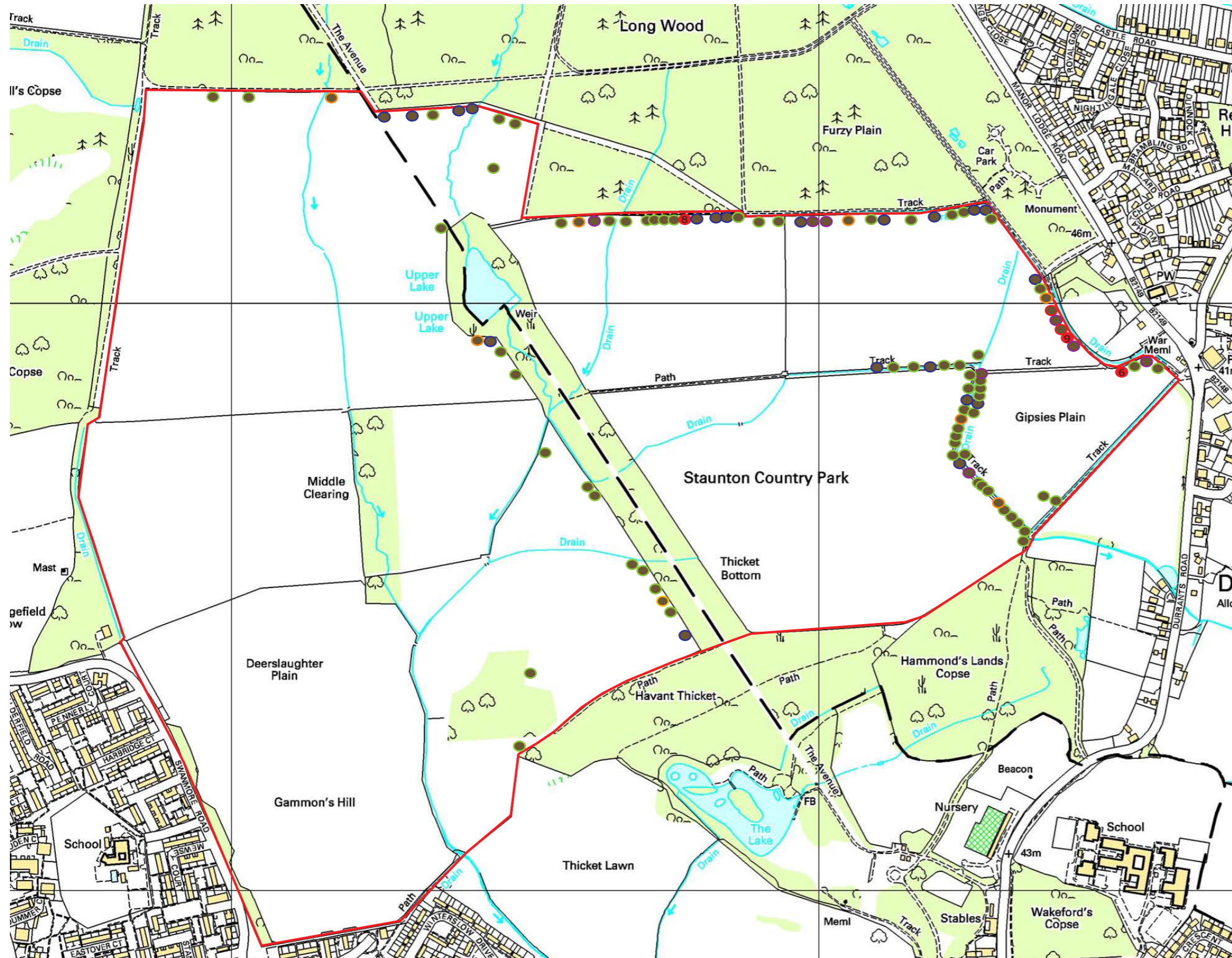
REPTILE SURVEY 2007

Map 2 Slow-Worm Records

Client: Arup, on behalf of Portsmouth Water Plc

Date: March 2008


Status: Final Summary Report



KEY

 Site Boundary

Number of Recorded Slow-Worm:


 One Individual

 Two Individuals

 Three Individuals

 Four Individuals

 Five Individuals

 More Than Five Individuals,
(Number of Individuals Specified)



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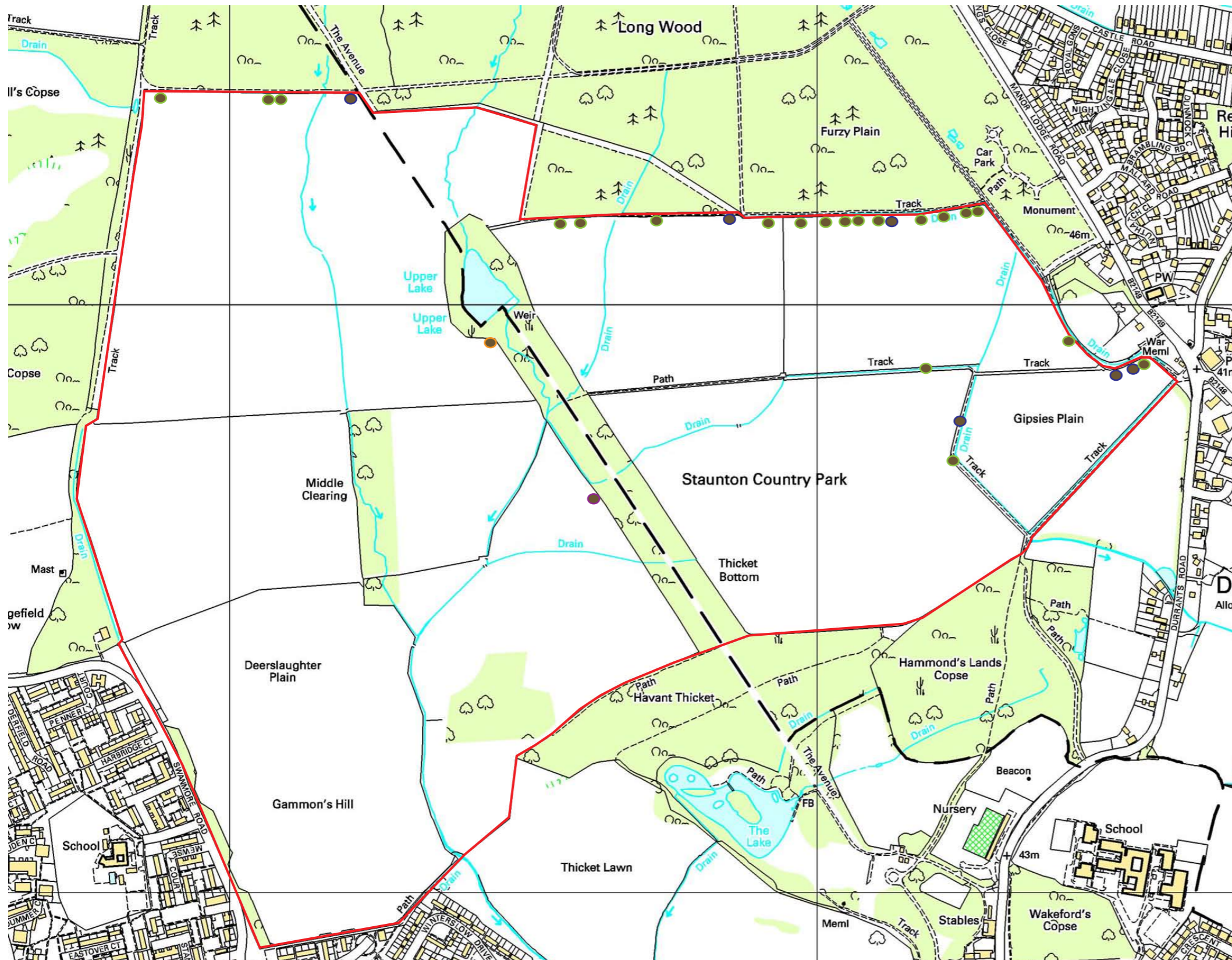
REPTILE SURVEY 2007

Map 3 Adder Records

Client: Arup, on behalf of Portsmouth Water Plc

Date: March 2008

Status: Final Summary Report



KEY

— Site Boundary

Number of Recorded Adder:

● One Individual

● Two Individuals

● Three Individuals

● Four Individuals



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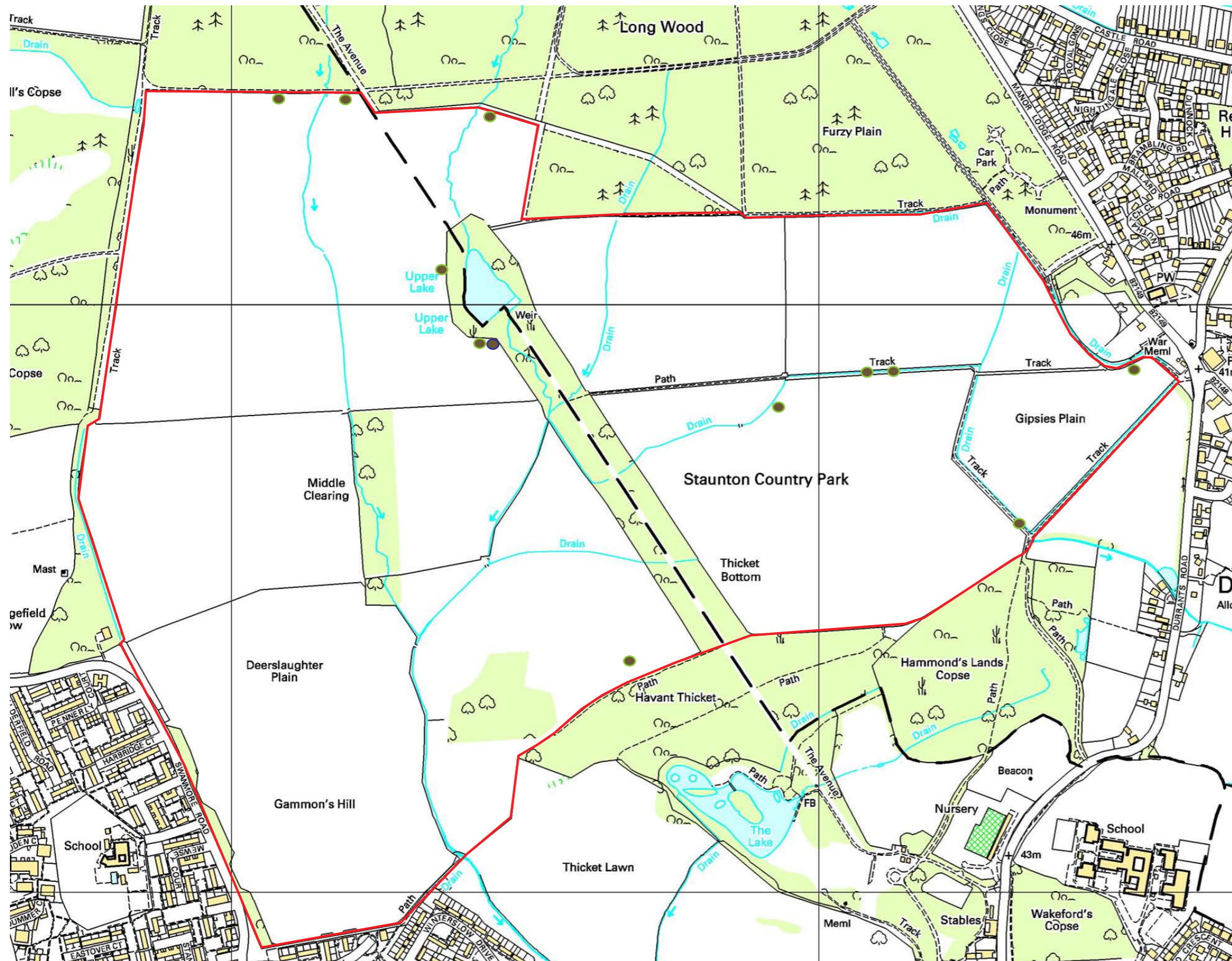
REPTILE SURVEY 2007

Map 4 Grass Snake Records

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KEY

— Site Boundary

Number of Recorded Grass Snake:

● One Individual

● Two Individuals



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