



Friern Barnet Former Sewage Works Reptile Survey

June 2009

Document control sheet **BPP 04 F8**

Client: London Borough of Barnet
 Project: Friern Site Assessment Job No: B0878400
 Document Title: Reptile survey

	Originator	Checked by	Reviewed by	Approved by
ORIGINAL	NAME Jo Ferguson	NAME Diana Clark	NAME Richard Law	NAME Peter Allan
DATE 8th June 2009	SIGNATURE 	SIGNATURE 	SIGNATURE 	SIGNATURE 
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1 Introduction

1.1 Background

Jacobs Engineering UK Ltd carried out an Extended Phase I Habitat survey of the former Friern Barnet Sewage Works on 18th January 2008; it revealed the site contained excellent foraging and refuge habitat for reptiles since basking, foraging and hibernation opportunities are all present. These include open areas of rough grassland, ruderal vegetation, scattered and dense areas of scrub together with piles of concrete, rubble and scrap metal. The site is adjacent to a railway line, which although at the time of the survey appeared of low quality in terms of vegetation cover, may provide links into other areas of habitat. The desk study records highlighted the presence of slow-worm (*Anguis fragilis*) and common lizards (*Lacerta vivipara*) within 2km of the site boundary.

1.2 Legislation and survey requirements

The UK's six native reptile species are protected by UK Law under the Wildlife and Countryside Act 1981 (as amended). All species are listed in Schedule 5 of the Act, and are protected under some or all parts of Section 9, making it an offence to intentionally kill, injure, take or sell each species. Some of the rarer species are also protected against disturbance.

Two reptile species were recorded within 2km of the site boundary and due to the presence of suitable reptile habitat onsite, and the presence of an adjacent railway line, it was recommended that reptile surveys be carried out. The surveys followed standard presence/absence methodology as set out in current guidance, for example "*Reptile Survey: Advice Sheet 10*" (Froglife, 1999). This required seven site visits checking reptile "tins", ideally during April, May or September in suitable weather conditions. If reptiles are found during this time then a further eight surveys would be required to obtain a population estimate of the reptile species onsite.

2.1 General

Methodology used for carrying out the reptile surveys follows standard presence/absence guidance set out in “*Reptile Survey: Advice Sheet 10*” (Froglife, 1999) which is reflected in the more recent publication “*Handbook of Biodiversity Methods*” (Hill *et al*, 2005).

The Froglife guidance states that “*reptiles are generally active from March to September, but the most profitable months for surveying tend to be April, May or September. The exact timing however will depend on temperature, rainfall and other climatic patterns*”. Thus care must be taken to carry out the survey visits during suitable weather conditions. As a general rule, an air temperature of between 9 and 18°C is productive, plus the absence of heavy rain and strong wind. Survey visits may also be carried out when the tiles start to warm up after a period of cooler weather, when reptiles will be gathering heat from the surrounding environment to enable them to forage. The tiles therefore provide a refuge for reptiles in the locality and also basking opportunities.

2.2 Presence/likely absence surveys

Two experienced Jacobs’ ecologists placed one hundred and four 0.5m x 0.5m roofing felt tiles in suitable areas of the site that provide potential reptile habitat on 22nd April 2009.

The tiles were allowed to settle for over a week, following which they were checked seven times in suitable weather conditions to assess whether reptiles are present or likely to be absent from the site. Any reptiles observed were recorded together with details such as species, age (adult or juvenile) and the tile under which they were found.

2.3 Population size class estimate

If reptiles were found, a further eight surveys would have been required in order to calculate a population estimate for the species found onsite.

3.1 Presence/likely absence surveys

The results of the surveys are summarised in Table 1 below.

Table 1: Results of presence/absence reptile surveys

Date of visit	Temperature and weather conditions	Slow worm	Grass snake	Common lizard	Adder	Other notes
30/04/09	17°C, hazy cloud	-	-	-	-	-
01/05/09	11 – 14°C, clear sky, sun overhead	-	-	-	-	-
14/05/09	17°C, hazy cloud	-	-	-	-	Young frog under tile 4
19/05/09	17°C, hazy cloud, sunny	-	-	-	-	4 frogs under tiles 1, 5 (x 2) & 19
20/05/09	14-18°C, 40-50% cloud cover, light breeze	-	-	-	-	-
21/05/09	15-18°C, 70% cloud cover, light breeze	-	-	-	-	-
11/06/09	18°C, high cloud, sunny intervals	-	-	-	-	-

No reptiles of any species were found on the site during the survey, however a number of frogs were found under tiles placed in the south western corner of the site.

3.2 Population size class estimate

As no reptiles were recorded onsite, the further eight surveys for a population estimate were not required.

4.1 Likely absence of reptiles

The results of the survey indicate that reptiles are likely to be absent on the site and therefore do not need to be considered further in relation to site development at this time.

The lack of reptiles is likely to be due to the relative isolation of the site and the fact that it originated from an area that was heavily industrialised, i.e. was previously used as sewage works. The vegetation present on the site represents good quality habitat for reptiles, in particular the areas of ruderal vegetation and rough grassland/scattered scrub. The presence of high numbers and diversity of invertebrates also indicate that food for reptiles is in good supply therefore it is possible that reptiles may move onto the site in the future. If two years lapse between the surveys dates and development on the site then it is recommended that the reptile survey is repeated in order to ensure that no reptiles have moved onto the site during this time. If reptiles are discovered in any subsequent survey suitable mitigation should be put into place.

4.2 Enhancement

The presence of frogs on the site is not considered a constraint to the development, although it should be noted that all specimens were found within approximately 50m of the pond in Hollickwood, just off-site to the south west.

Incorporation of suitable habitat for frogs and other amphibians on the site as part of the development design would therefore be considered to be best practise. This could include the creation of a new pond, incorporation of existing good quality habitat for reptiles, creation of new areas of reptile habitat and construction of reptile/amphibian refugia.

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