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Great crested newt surveys at Friern Barnet

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Contents

1 Introduction

1.1 Background

Jacobs Engineering UK Ltd (Jacobs) carried out an Extended Phase I Habitat survey of the former Friern Barnet Sewage Works on 18th January 2008 and identified the presence of a standing water body within Hollickwood Park, adjacent to the proposed development site. The potential for further water bodies within Muswell Hill Golf Course was also identified. Standing water bodies have the potential to provide suitable habitat for amphibians, which may include the European protected great crested newt (*Triturus cristatus*) (Jacobs, 2008).

The report also noted that during the desk study, records received highlighted the presence of common toad (*Bufo bufo*) and common frog (*Rana temporaria*) within 2km of the site boundary. Smooth newts (*Lissotriton vulgaris*) have been recorded in Coppett's Wood and Scrublands Local Nature Reserve and great crested newts (GCNs) were also once recorded at Scout Park Site of Borough Importance for Nature Conservation (Grade I), although there have been no further records since 1990.

Further visual assessment of the pond in Hollickwood Park and any standing water bodies on Muswell Hill Golf Course within 500m of the site boundary (dependent on consultation response) was recommended at a more appropriate time of year (i.e. spring/early summer) using appropriate methodology such as the "Habitat Suitability Index" (HSI). The HSI assessment is based on methodology outlined in *Evaluating the suitability of habitat for the great crested newt (Triturus cristatus)* (Oldham *et al.* 2000), which results in a numerical score (or HSI) for each water body.

The methodology states that the lowest HSI score obtained at a site known to support breeding crested newts was 0.43. Thus if a pond scores 0.43 or above it should be considered to have a reasonable chance of supporting a breeding population of GCNs; a score that falls below this can be considered less likely to support GCNs. Jacobs carried out an HIS assessment on Thursday 2nd April 2009 which gave a score of 0.58, therefore indicating that there was a reasonable chance of GCN being present. Further discussions with the client and the possibility of works taking place in 2009 resulted in a full great crested newt survey being commissioned.

1.2 Legislation

GCNs are protected under Section 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended by the Countryside and Rights of Way Act and the Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007). The WCA states that "*a person is guilty of an offence if intentionally or recklessly he disturbs* [a GCN] *while it is occupying a structure or place which it uses for shelter or protection; or he obstructs access to any structure or place which* [a GCN] *uses for shelter or protection*". Other amphibian species (palmate newt *Lissotriton helveticus*, smooth newt *Lissotriton vulgaris*, common frog *Rana temporaria* and common toad *Bufo*

bufo) are also protected under Section 9 of the Wildlife and Countryside Act but only in respect of part 9(5) which relates to sale.

GCN are also protected under Regulation 39 of the Conservation (and Natural Habitats &c.) 1994 (Habitats Regulations), as amended by the Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 and the Conservation (Natural Habitats, &c.) (Amendment) Regulations 2009. GCN is listed as a European Protected Species (EPS) in Schedule 2 of the Habitats Regulations, to which Regulation 39 applies:

"*(1) a person commits an offence if he –*

(a) deliberately captures, injures or kills any wild animal of a European protected species;
(b) deliberately disturbs wild animals of any such species;
(c) deliberately takes or destroys the eggs of such an animal; or
(d) damages or destroys a breeding site or resting place of such an animal.

(1A) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely –

(a) to impair their ability –

(i) to survive, breed or reproduce, or to rear or nurture their young; or
(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

(b) to affect significantly the local distribution or abundance of the species to which they belong."

2 Methodology

2.1 General

The following paragraphs outline the methodology used to carry out the GCN surveys in accordance with current best practise and based on the most up-to-date guidance available.

2.2 Survey method

The survey visits were carried out in accordance with the accepted standard methodology (GCN Mitigation Guidelines, English Nature 2001). Survey visits were carried out on 22nd/23rd April, 30th April/1st May, 13th/14th May and 20th/21st May by licensed ecologists (license numbers 20091855, 20090894 and 20090593) and their assistants.

Standard amphibian surveys require the use of three types of survey methodology for each survey visit. The methods available are described below and those used during a survey will depend on the pond dimensions (depth, size) and habitats present.

Bottle trapping

Bottle traps of a standard design shown in the GCN Mitigation Guidelines are set at intervals of approximately 2m around the margins of waterbodies where access allows. Ideally traps should be placed close to emergent vegetation however this is not always possible depending on the nature of the water-body. Traps are set during the evening a few hours before sunset and left *in situ* until the following morning. The traps are then emptied early the following morning before becoming too hot and any newts captured are identified to species, aged and sexed.

Torchlight survey

This method involves searching for amphibians after dark by shining a high-powered torch (1,000,000 candlepower) into the water around the margins of the ditch in a slow and methodical fashion. Any amphibians observed are identified to species, aged and sexed where possible.

Egg search

Emergent vegetation within the waterbodies is inspected by hand for eggs, which are typically laid within leaf folds. If GCN eggs are noted the search is discontinued since unfolding leaves protecting eggs reduces their survival rate.

Netting

Long-handled dip-nets (mesh size generally 0.5mm) are used to sweep through the water, close to areas of vegetation at the edges of the water body and close to the

bottom if possible. Any amphibians observed are identified to species, aged and sexed.

In accordance with the methodology, following the completion of four survey visits, each of which usually comprises an evening and morning check, presence or likely absence of GCNs can be determined. If GCNs are not found within four visits, they are considered likely to be absent and no further survey work is required. Should GCNs be discovered during these four visits, a further two visits are required in order to make a population size class estimate. This is a requirement for license applications made in connection with any development.

The surveys at Friern Barnet used a combination of bottle trapping, egg searching and torchlight surveys as the preferred three methods. Opportunities for netting were limited due to the presence of debris within the water-body and the depth of the pond. A total of twenty bottle traps were set during each visit and were counted in again the following morning.

3 Results

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

Table 1: Results of great crested newt survey work

Date of visit	Temperature and weather conditions	Trapping	Torching	Egg search
22nd/23rd April	12 – 14°C, warm and dry with high cloud	3 SNF 6 SNM	5 SNF 7 SNM 2 SNU	SN eggs on water mint (*Mentha aquatica*)
30th April/1st May	12-16°C, 80% cloud cover, light breeze	3 SNF 1 SNM	1 SNF	Nothing found
13th/14th May	13°C, 80% cloud cover, light breeze	2 SNF 13 SNM	17 SNF 11 SNM	SN eggs present
20th/21st May	14-18°C, 40-50% cloud cover, light breeze	2 SNF 7 SNM	3 SNF 11 SNM	SN eggs present

Key:

SN = Smooth newt
F = Female
M = Male
U = Unknown gender

The surveys indicate that a population of smooth newts is currently resident in the pond. The presence of tadpoles, probably frog (as these were recorded under the reptile tiles onsite), was also highlighted. No GCNs were found during the course of the survey work.

4 Discussion and recommendations

The survey work carried out on the site followed accepted Natural England guidance to confirm presence/ likely absence of GCN. Since no individuals of this species were observed during any of the site visits, it is concluded that GCNs are extremely unlikely to be present. This species therefore poses no further constraint to the proposed development at this time.

In accordance with accepted good practise, it is recommended that if approximately two years elapses before works commence then a repeat amphibian survey using appropriate methodology, as outlined above, should be carried out to re-assess presence/absence of great crested newts. Any such work should be carried out by a suitably experienced ecologist who is familiar with the results of this survey. Should GCN be discovered, further recommendations should be made in the light of the updated survey data.

5 References

English Nature, 2001	Great Crested Newt Mitigation Guidelines
Jacobs, 2008	Extended Phase I Habitat Survey and Desk Study. Jacobs, Reading.
Jacobs, 2009	Habitat Suitability Index (HSI) assessment at Friern Barnet. Jacobs, Reading
WS Atkins, 1998	Outline Ecological Assessment Report: Former Friern Barnet Sewage Treatment Works.