



Appendix 13.3

Great Crested Newt Survey Report

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APPENDIX 13.3: Great Crested Newt Survey Report

Client

Bloor Homes & Pigeon

Project

**North Hemel Hempstead,
Hertfordshire**

Date

November 2025

CONTENTS

1.0	NON-TECHNICAL SUMMARY	1
2.0	INTRODUCTION	2
3.0	LEGISLATION AND POLICY	3
4.0	METHODOLOGY	4
5.0	RESULTS	7
6.0	DISCUSSION	8

FIGURES

Figure 1: Waterbody Locations & Survey Plan

Rev	Issue Status	Prepared/Date	Approved/Date
-	Final	LW / 31.01.24	OGJ / 12.10.25

1.0 NON-TECHNICAL SUMMARY

Report Scope and Methodology
FPCR were commissioned by Bloor Homes & Pigeon to undertake surveys for great crested newts (GCN) at Land North of Hemel Hempstead, to provide an ecological baseline for the application site and determine presence of GCN. The Site forms part of the proposed Hemel Garden Communities, a development scheme that will create sustainable new neighbourhoods and communities to the north and east of Hemel Hempstead. The Site itself is proposed for 1,500 new homes with associated access and infrastructure. eDNA surveys were undertaken in accordance with good practice guidelines on two waterbodies, on the 18th of April 2023. Two additional waterbodies were recorded along the western Site boundary during subsequent surveys, eDNA sampling of these ponds was undertaken on the 2nd of May 2024.
Results
The survey area is dominated by arable fields, with some pockets of scrub, species-poor grassland and hedgerows. No records of GCN from within the last 20 years were found during the desk study. Negative eDNA results were returned from P1 onsite, P2 offsite was dry and P3 is to the south of the B487 which acts as a barrier to dispersal. GCN are therefore considered likely absent from the Site.
Conclusion
GCN are not considered to pose a constraint to the proposals, based on the likely absence of this species on the Site. The proposals include species-rich grassland and scrub planting within the SANG which will provide some suitable habitat for GCN, should this species colonise the Site in the future.

2.0 INTRODUCTION

- 2.1 The following Great Crested Newt (GCN) Survey Report has been prepared by FPCR Environment and Design Ltd. on behalf of Bloor Homes & Pigeon, for the Site at North Hemel Hempstead (central OS Grid Reference TL 08444 11097), hereafter referred to as the 'Site'.
- 2.2 A suite of ecological surveys has been undertaken on the Site to inform the Biodiversity Chapter of an Environmental Statement (ES) which has been prepared to support the application. This reptile report has been prepared to support this ES, and it should therefore be read in conjunction with the Biodiversity Chapter (*Chapter 13*).
- 2.3 When planning the survey program surveying the Site, it was split into two separate parcels, divided by Little Revel End Lane. As a result, surveys on these two areas sometimes occurred at different times and different dates. Where relevant, these two areas of land will be referred to as the "southern parcel" and "northern parcel".

Site Location & Context

- 2.4 The Site is located to the north and east of Hemel Hempstead. It comprises a series of agricultural field compartments that are generally large and open. Where they are present, field boundaries comprise hedgerows or woodland. Other habitats onsite comprise species-poor grassland in the south-east of the Site, a pond and small areas of scrub.
- 2.5 The surrounding landscape to the north, east and west is composed largely of agricultural and pastoral land with small pockets of woodland interspersed throughout. The M1 motorway lies approximately 0.5km east of the Site, with the village of Redbourn beyond. To the south and west of the Site, the landscape comprises the urban environs of Woodhall farm in the north-east of Hemel Hempstead.

Report Aims and Objectives

- 2.6 The report has been prepared to achieve the following objectives:
- Summarise the survey and assessment methodologies employed in order to assess the importance of the Site for great crested newt *Triturus cristatus* (GCN);
 - Provide the desk study records of GCN within a 1km radius of the Site;
 - Provide the results of GCN surveys undertaken;
 - Assess the likelihood of GCN being present onsite;
 - Provide recommendations for avoidance, mitigation, compensation and/or enhancement to mitigate impacts of the proposals on GCN where relevant.

3.0 LEGISLATION AND POLICY

- 3.1 Great crested newts and the places they use for refuge and breeding are protected under Schedule 2 of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats & Species Regulations 2017 (as amended).
- 3.2 They are also a European Protected Species (EPS) and protected under Annexes II and IV of the EU Habitats and Species Directive and Appendix II of the Bern Convention.
- 3.3 In summary, it is an offence to:
- deliberately or recklessly take, injure or kill a great crested newt.
 - intentionally or recklessly damage, destroy or obstruct access to any structure or place used for breeding, shelter or protection by the species.
 - intentionally or recklessly disturb while it is occupying a structure or place which it uses for such purpose.
 - intentionally take or destroy the eggs of a great crested newt.
- 3.4 This legislation equally protects all life stages, including eggs, efts and adults.
- 3.5 Proposals which could lead to any of the above would require a derogation licence from Natural England alongside appropriate avoidance, mitigation and compensation measures, or application to a District Level Licensing Scheme (DLL).

4.0 METHODOLOGY

Desktop Study

- 4.1 To compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:
- Hertfordshire Environmental Records Centre: and
 - Multi Agency Geographic Information for the Countryside (MAGIC)¹ website (www.magic.defra.gov.uk)
- 4.2 When handling data, species records were filtered to those within the last 20 years and from within 2km of the Site, unless considered relevant to the site assessment.
- 4.3 Further inspection of colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

Habitat Suitability Index (HSI) Survey

- 4.4 The habitats within the survey area were assessed for their potential to support GCNs during both their breeding and terrestrial phases, including an assessment of waterbodies.
- 4.5 All accessible waterbodies were assessed using a Habitat Suitability Index (HSI)². The HSI incorporates ten suitability indices, all of which are factors known to affect this species:
- Geographic location
 - Pond area
 - Pond drying
 - Water quality
 - Shade
 - Presence of waterfowl
 - Presence of fish
 - Number of linked ponds
 - Terrestrial habitat
 - Macrophytic coverage

¹ MAGIC - <https://magic.defra.gov.uk/>

² Oldham, R.S., Keeble, K., Swan, M.J.S. & Jeffcote, M. (2000) Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal*, 10(4), 143-155.

- 4.6 A score is assigned for each attribute, and a total score is calculated between 0 and 1. Pond suitability is then determined according to the scale in Table 1.

Table 1: HSI Score

HSI Score	Pond Suitability
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

eDNA Survey

- 4.7 eDNA sampling was undertaken, in accordance with the recommended protocol³, on P1, on 18th of April 2023. Two additional offsite ponds did not have eDNA samples taken due to P2 being dry and P3 not allowing access. The locations of these ponds are shown in Figure 1.
- 4.8 This methodology has been approved by Natural England for the determination of GCN presence/absence. Sampling was undertaken during the recommended survey season (15th April – 30th June inclusive) by appropriately licenced ecologists who collected a sample of water from the pond. Sampling was undertaken using kits obtained from ADAS Biotechnology. This comprised taking samples of agitated water from 20 locations around the pond and mixing thoroughly. Fifteen millilitres of this water was then placed into each of the 6 sterile sample tubes containing preservative, precipitates and a DNA sequence that was used for degradation control. All samples were stored in accordance with the protocols provided by the laboratory.
- 4.9 Sampling was undertaken by suitably trained ecologists and sent to the ADAS laboratory in Beeston, Nottingham for analysis. The possible results are summarised in Table 2.

Table 2: Possible result of eDNA analysis

Result	Description
Positive	A positive result means GCN eDNA was detected and they have been present within the water in the 20 days preceding sampling. A score is provided indicating the number of positive replicates from a series of twelve.
Negative	GCN eDNA was not detected. Where samples are negative, further testing for PCR inhibitors and degradation of the sample is undertaken.
Indeterminate	Controls indicate degradation or inhibition of the sample. Therefore, the lack of detection of GCN eDNA is not conclusive evidence for determining the absence of this species using the sample provided.

Limitations

³ Biggs, J. et al. (2014) Analytical and Methodological Development for Improved Surveillance of the Great Crested Newt. Appendix 5: Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Freshwater Habitats Trust, Oxford.

5.0 RESULTS

- 5.1 No records of GCN were returned by HERC from within the search area within the last 20 years. The most recent records of GCN returned were from 1998 and 1999, both with only low resolution, 4-figure grid references. These records are very old and, due to the low-resolution grid reference, may, or may not, be within 2km of the Site.
- 5.2 There are no EPS mitigation licences relating to GCN within 500m of the site, with the closest lying 8.5km west and dating from 2014.

Habitat Suitability

- 5.3 The Site is comprised of large arable field compartments bound by hedgerows. Well defined field margins comprised of long, unmanaged swards with ruderals. A small area of species-poor grassland in the south of the Site and the hedgerow bases provide some suitable terrestrial habitats for GCN.
- 5.4 One pond P1 is present within the Site, near to the northern boundary, and is located within a field of temporary grassland and is surrounded by scrub. This pond had a HSI score of 0.37, meaning it provides poor habitat for GCN and has a predicted GCN presence of 0.03.
- 5.5 Two ponds (P2 and P3) were present within 250m of the Site. P2 was dry at the time of survey and so no HSI index or eDNA survey was undertaken and access was not granted access to P3, so again, surveys could not be undertaken. *Figure 1* shows the locations of the ponds.

eDNA Survey

- 5.6 The eDNA survey result from P1 was returned as negative, implying that GCN are likely absent from the pond. As surveys could not be undertaken on the two offsite ponds, GCN presence is unknown.

6.0 DISCUSSION

- 6.1 Surveys have demonstrated that GCN are likely absent from the Site and therefore are not considered to pose a constraint to the development.
- 6.2 GCN presence within offsite ponds are unknown. GCN can disperse over land to forage and breed, with distances travelled varying according to habitat quality and availability, with adult GCN typically staying within 250m of the breeding. P2 was dry at the time of survey in April and does not regularly hold water and so is unsuitable for GCN. If GCN are present in P3 it is highly unlikely they will disperse northwards, onto the Site due to the B487 acting as a barrier. It can therefore be assumed that GCN are likely absent from the Site.
- 6.3 Proposed pond creation and areas of species-rich grassland and scrub planting within the SANG will provide additional habitats for GCN should they colonise the Site in the future.

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Legend

-  Redline Boundary
-  250m Buffer
-  Waterbodies

North Hemel Hempstead / Figure 1 - Waterbody Locations Plan



Date: November 2025 Created by: FPCR
Environment and Design Ltd.

Scale: 1:10,000 @ A4

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