



Our Ref: JBA 20/227 ECO02 SR

17<sup>th</sup> June 2021

George Wells,  
For and on behalf of Hartog Hutton Ltd.

Dear George,

**RE: Great Crested Newt eDNA Survey at land at Church Road, Westhorpe, Suffolk.**

### Introduction and Background

James Blake Associates Ltd. was commissioned by Hartog Hutton Ltd. to undertake an environmental DNA (eDNA) great crested newt (*Triturus cristatus*) (GCN) survey of a single partially wet ditch at the northern boundary of the site and a single pond adjacent to the eastern site boundary, which are within the impact risk zones of the proposed development (reference DC/19/05318, Mid Suffolk District Council). The aim of the survey is to determine the presence or likely absence of GCN.

The potential impacts to GCN arising from the proposed development were assessed in November 2020 (JBA, 2020) by undertaking a Habitat Suitability Index (HSI) survey on all waterbodies within 500m of the application site which could be seen from the application site or from public rights of way. Permission to take a sample for eDNA from ponds 5 and 11 has been deemed to be refused.

GCN are classed as a 'European Protected Species' (Conservation of Habitats and Species (Amendment) (EU Exit) Regulations, 2019), and also a priority species under Section 41 of The Natural Environment and Rural Communities (NERC) Act (2006) which is a consideration under the National Planning Policy Framework (NPPF) 2019, placing responsibility on Local Planning Authorities to aim to conserve and enhance biodiversity and to encourage biodiversity in and around developments. GCN are afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) (WCA). GCN are also listed under Schedule 5 of the Habitats Regulations.

### Results and Evaluation

A GCN eDNA survey was conducted on the 5<sup>th</sup> May 2021 by Sam Rigg BSc (Hons) ACIEEM, (Natural England great crested newt class licence WML-CL08), Sean Minns BA (Hons) and Bethan Feeney-Howells BSc (Hons). The eDNA samples were taken under suitable

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34-52 Out Westgate, Bury St. Edmunds, Suffolk IP33 3PA  
tel: 01284 335797 email: [jamesblake@jba-landmarc.com](mailto:jamesblake@jba-landmarc.com)

Chairman: James Blake BA (Hons) Dip LA (Hons) CMLI

Company Secretary: Louise Blake BSc PGCE

Directors: Elzbieta Zebrowska MSc Eng LArch MScEnvSc CMLI

Associate Directors: Vivienne Jackson : Marie Lowe CIMA Cert BA

Associate Director - Strategic Landscape Division: Abby Stallwood BSc (Hons) PG Dip LM CMLI

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conditions with no constraints being present. Survey methodology adhered to standard techniques and designs recommended by Natural England (see Appendix A for eDNA testing methodology). The samples were received by ADAS on the 7<sup>th</sup> May 2021 and tested on the 19<sup>th</sup> May 2021.

A Habitat Suitability Index (HSI) value was calculated for the waterbodies. See Table 1 below for HSI value and waterbody description. Waterbody locations and HSI data are shown in Appendix B and C respectively.

**Table 1: HSI Value and Description**

Waterbody Reference	Distance From Site Boundary (m)	Size (m <sup>2</sup> )	Description	Surrounding Habitat	HSI Value
6	At the northern site boundary	50-100	A partial wet ditch with some aquatic vegetation such as reeds. The banks of the ditch are dominated by nettle and bramble.	Semi-improved grassland to the south with hardstanding and buildings to the north.	0.464 ('Poor')
7	Adjacent to the eastern site boundary	200	Small scale pond which sometimes dries with high shade and low macrophyte cover.	Mainly surrounded by hardstanding and buildings, with some scrub vegetation to the west.	0.707 ('Good')

No evidence of GCN eDNA was found within any of the samples; see Table 2 for summary of eDNA analysis. Therefore, it is considered unlikely that GCN are currently using the waterbodies on or within 500m of the site boundary.

**Table 2: Summary of eDNA Analysis**

Waterbody Reference	GCN Detection	Degradation
1	Negative	No
2	Negative	No

## Recommendations

Although GCN are not considered to be currently using the ponds and are likely to be absent from the site, some ponds within 250m of the site boundary could not be surveyed due to access refusal; therefore, presence/absence of the species cannot be fully determined. The site and development is considered suitable for Natural England's Great Crested Newt District Level Licensing (DLL) scheme which has now been launched for Suffolk. For further information, see [here](#). An enquiry costs £684 (£570 + VAT) and this will provide a cost for the calculated conservation payment and licence. The enquiry form can be submitted with or without survey data (HSI results are not counted as survey data). The planning application could then be submitted with a countersigned Impact Assessment and Conservation Payment Certificate from Natural England and would mean that no further considerations towards GCNs would be required by the development.

It is recommended that the site could be enhanced post-development for amphibians by improving terrestrial and aquatic habitats. This could include enhancement of the northern ditch by including submerged and floating native plant species and including wildflower

grassland mixes to adjacent habitats. The incorporation of a hibernaculum in a suitable location would also be of benefit.

## **Conclusion**

GCN eDNA testing was carried out on the ditch at the northern boundary and pond adjacent to the eastern boundary of the site on the 5<sup>th</sup> May 2021. The results were negative for the presence of GCN, however presence/absence of GCN cannot fully be determined due to access refusal to other ponds within 250m of the site boundary. It is suggested the development joins the DLL scheme for Suffolk.

Enhancement recommendations have been given within this report.

Yours sincerely,

**Sam Rigg**

Ecology

James Blake Associates Ltd

## **References**

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.

English Nature (2001) Great Crested Newt Mitigation Guidelines. English Nature, Peterborough.

James Blake Associates (JBA) *Land south of Church Road, Westhorpe, Suffolk: Assessment of Potential Impact to Great Crested Newts (GCNs)*. On behalf of Hartog Hutton Ltd. December 2020.

National Planning Policy Framework (2019) ISBN: 9781409834137.

**Appendix A - eDNA Testing Methodology.**

The following survey techniques are recommended by Natural England:

- Wearing gloves, twenty 30ml water samples were collected at even intervals (no closer than 2m apart) around the perimeter of each pond and combined in a container. Care was taken not to enter the water at any point to avoid cross-contamination of DNA between ponds.
- Six 15ml samples were then preserved in alcohol and sent to ADAS for analysis, following Natural England guidelines.

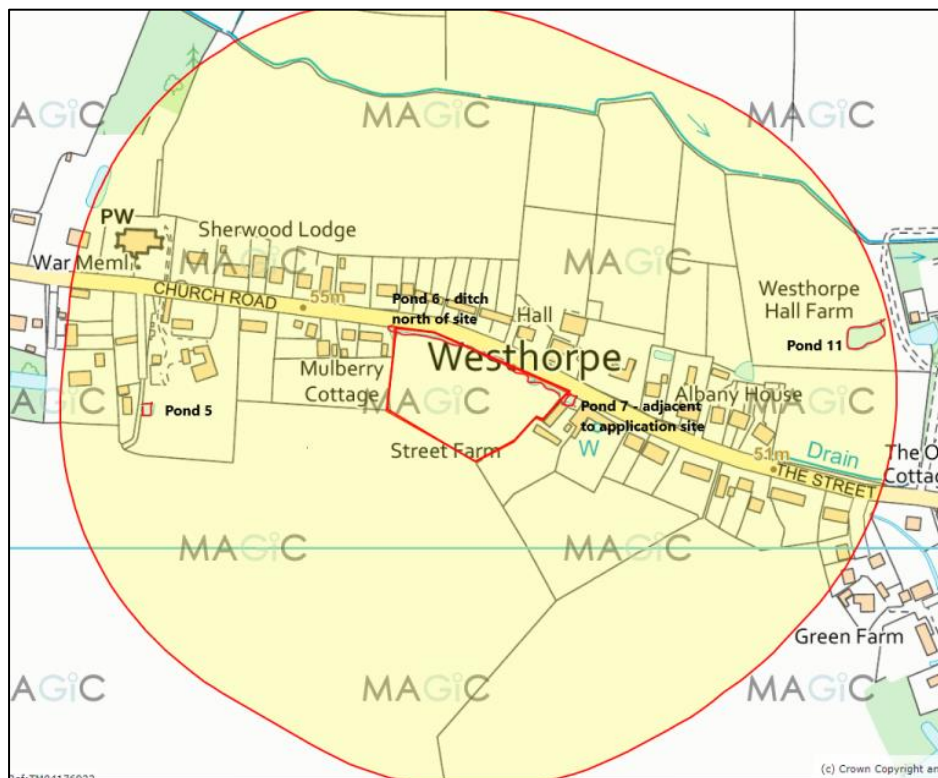
The following analysis techniques outlined by Biggs *et al.* (2014) were followed by ADAS and are approved by Natural England:

- The method detects pond occupancy from GCN using traces of DNA shed into the pond environment (eDNA). The detection of GCN eDNA is carried out using real time Polymerase chain reaction (PCR) to amplify part of the cytochrome 1 gene found in mitochondrial DNA. The method followed is detailed in Biggs J., *et al*, (2014).

The results are defined as follows:

- **Positive:** DNA from the species was detected.
- **eDNA Score:** Number of positive replicates from a series of twelve.
- **Negative:** DNA from the species was not detected; in the case of negative samples the DNA extract is further tested for PCR inhibitors and degradation of the sample.
- **Inconclusive:** Controls indicate degradation or inhibition of the sample, therefore the lack of detection of GCN DNA is not conclusive evidence for determining the absence of the species in the sample.

**Appendix B – Location of Waterbodies**



**Appendix C – HSI Data**

	Pond 6 (Ditch)		Pond 2	
Factor	Field Score	SI Value	Field Score	SI Value
Location	Zone A	1	Zone A	1
Area (m <sup>2</sup> )	50-100m <sup>2</sup>	0.1	200m <sup>2</sup>	0.4
Permanence	Dries annually	0.1	Sometimes dries	0.5
Water quality	Poor	0.33	Moderate	0.67
Shade (%)	80%	0.6	40%	1
Fowl	Absent	1	Absent	1
Fish	Absent	1	Absent	1
Pond density (within 1km)	<12	1	<12	1
Terrestrial Habitat	Moderate	0.67	Moderate	0.67
Macrophyte cover (%)	1-5%	0.35	1-5%	0.35
<b>HSI value</b>	<b>0.464</b>		<b>0.707</b>	
<b>Pond Suitability</b>	<b>Poor</b>		<b>Good</b>	