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Great Crested Newt eDNA Sampling

Survey site:

Wychwood barn, Wychwood Lane, Brighton Road, Shermanbury, Horsham, West Sussex RH13 8HE

Client:

John Hilden

Survey date:

4th June 2026

Project:

This report is prepared to inform a planning application with Horsham District Council. Erection of two dwellings in the alternative to permission granted under DC/25/0219 for Change of Use of Agricultural Building to residential (Use Class C3) to form 2no dwellinghouses.

Survey methodology and legislation can be found in Appendix 6

The site survey was undertaken by Rachel Cole BSc (Hons) Graduate Ecologist					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
04/06/2026	13.7	82	65	12	Light rain

Ecological Survey Factor	Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.
Conclusion, Impact or Recommendations	
See habitat map in appendix 1, pond location map in appendix 2, site location plan in appendix 3, proposal plans in appendix 4, and eDNA results in appendix 5).	
<i>Scope of report</i>	This report describes the suitability of the habitats on the site and any surveyed ponds for GCN and identifies the presence or absence of GCN in these ponds. It identifies possible constraints in relation to GCN as a result of the proposed development and summarises the requirements for further surveys and mitigation measures to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation. To achieve this, the following steps have been taken: • A field survey has been undertaken, including an assessment of the suitability of the site and any ponds within influencing distance of the site for GCN. • An outline of potential impacts on GCN has been provided, based on the proposed development. • Recommendations for further surveys and mitigation have been made, along with advice on the requirements for a European Protected Species Licence (EPSL) for GCN if appropriate. Opportunities for the enhancement of the site for amphibians have also been set out.

Site location and context	The site is centred at National Grid reference TQ 20776 18420 and has an area of approximately 0.69ha. The site comprises two agricultural buildings (B1 & B2), sparsely vegetated land, modified grassland, artificial unvegetated, unsealed surface and scattered trees, alongside a dried-out ditch. The site is located within a predominantly rural landscape characterised by agricultural fields, scattered farmsteads, hedgerows and pockets of woodland. The surrounding landscape provides good ecological connectivity through linear vegetated features, including hedgerows, tree lines and field margins. The site is well-connected to nearby habitats via field margins, hedgerows and tree lines. A total of 11 ponds are located within 500m of the site. While the site is not considered hydrologically active, dry ditches are present along the site boundaries, which may provide some limited ecological connectivity. Additionally, the River Adur is situated approximately 225m south of the site. There are six priority habitats within 2km of the site. These comprise deciduous woodland, coastal and floodplain grazing marsh, traditional orchard, wood pasture and parkland, ancient & semi -natural woodland and coastal saltmarsh. The closest priority habitat comprises deciduous woodland, located 35m S from the site. These nearby deciduous woodlands are listed as Habitats of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). No protected or notable plant species were recorded within the site during the survey.					
Field survey results	Pond descriptions A review of OS and aerial imagery identified 11 ponds within 500m of the site. Two of these ponds, P1 and P2, were subject to survey. Full pond descriptions are provided in table 1 below. <i>Table 1: Surveyed Ponds</i> <table><tr><th>Pond Ref</th><th>Description</th><th>Photograph</th></tr></table>			Pond Ref	Description	Photograph
Pond Ref	Description	Photograph				

	1	Offsite pond, located within grassland and shaded by trees. This pond is located adjacent to the southwest of the site and is bordered to the southwest by a residential garden	
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	2	Offsite pond located within a grassed garden, shaded by trees. This pond is located northeast of the site and is bordered by a residential garden	
Habitat Suitability Index (HSI) Assessment Ponds were assessed for their suitability to support GCN using the Habitat Suitability Index (HSI) Assessment Methodology (Oldham <i>et al.</i>, 2000). HSI is a standard measure of calculating the suitability of a pond to support breeding great crested newts, based on an assessment of 10 characteristics (indices), including size, shading, depth and vegetation profile. The assessment generates a number between 0 and 1 for each of the indices which are combined to provide an overall assessment of a pond's suitability to			

support GCN on a categorical scale (Table 2). The assessment has not been designed for or tested on other waterbodies such as ditches. HSI assessment results are provided in Table 3 below.

Table 2: HSI Suitability Scores

HSI Score	Suitability	Predicted GCN Occupancy of Ponds in each Category
<0.5	Poor	3%
0.5 to 0.59	Below Average	20%
0.6 to 0.69	Average	55%
0.7 to 0.79	Good	79%
>0.8	Excellent	93%

Table 3: HSI Assessment Results

SI Description	P1	P2
Geographic location	1	1
Pond Area	0.1	0.55
Pond permanence	0.9	0.9
Water quality	0.33	0.67
Shade	0.4	1
Waterfowl effect	1	1
Fish presence	1	1
Pond Density	1	1
Terrestrial habitat	1	1
Macrophyte cover	0.6	0.9

	HSI score	0.61	0.89
	HSI category	Average	Excellent
eDNA Sampling Sample kits and analysis was provided by SureScreen. Sampling followed the relevant sections of the method set out in the DEFRA funded study endorsed by Natural England (Biggs <i>et al.</i>, 2014). In summary the sampling protocol is as follows: • 20 samples were taken from around the entire perimeter of the waterbody. • The surveyor stayed out of the water while taking the samples. • Survey locations were distributed around the pond perimeter but micro-siting was used to select locations most likely to be used by GCN. • At each sample location the water column was stirred prior to taking the sample but care was taken to avoid disturbing the sediment on the base of the pond. • Once all 20 samples were taken, 15ml of the total sample were pipetted into each of the 6 sampling tubes, whilst ensuring that the water in the sample bag was mixed before taking each 15ml sample and that only one sample tube was opened at any one time. • At all times the surveyor ensured that the risk of contaminating the sampling equipment was minimised by avoiding the placement of the ladle or pipette on the ground or on any otherwise potentially contaminated surfaces and by changing gloves between the initial sampling stage and the pipetting stages of the method. • Samples were sent to SureScreen for analysis. Full eDNA results are provided in Table 4. The SureScreen lab results are included in Appendix 5.			

	<i>Table 4: eDNA Survey Results</i> <table border="1"> <thead> <tr> <th>Pond Ref</th><th>eDNA Result</th></tr> </thead> <tbody> <tr> <td>1</td><td>Negative (0/12)</td></tr> <tr> <td>2</td><td>Positive (7/12)</td></tr> </tbody> </table>	Pond Ref	eDNA Result	1	Negative (0/12)	2	Positive (7/12)
Pond Ref	eDNA Result						
1	Negative (0/12)						
2	Positive (7/12)						
<i>Foreseen Impacts</i>	The eDNA survey results returned a positive result for GCN presence and as such, a likely presence of this species within P2 is concluded. The proposed development footprint is located approximately 140m from Pond P2, although the site boundary extends to within 85m of the pond. No direct impacts to the breeding pond will occur as a result of the proposed development. Furthermore, habitat retention and enhancement is proposed across the wider site through the associated Biodiversity Net Gain proposals. Perceived impacts to habitats are illustrated on the plan at Appendix 1 and are quantified below: ▪ 0.41ha sparsely vegetated land ▪ 0.1ha modified grassland ▪ Buildings/hardstanding When entering the anticipated habitat loss into Natural England's GCN Rapid Risk Assessment highlights an offence is AMBER: OFFENCE LIKELY. Although, it is important to note that the majority of losses are associated with suboptimal value for GCN and impacts to optimal habitat is restricted to 0.1ha modified grassland.						
<i>Recommendations</i>	Given that the majority of impacts anticipated are to suboptimal habitats (sparsely vegetated land) and habitats of negligible suitability (buildings/hardstanding), it is considered that the low risk of impacting GCN during their terrestrial phase can be mitigated through a non-licensed mitigation plan, which can be secured by the LPA by way of an appropriately worded planning condition.						

	The non-licensed mitigation plan will include the following measures: • All removal of grassland, shrubs, trees and hedgerows to be undertaken between March and June, when risks to GCN in their terrestrial phase are at their lowest (i.e. when they are at the aquatic stage of their breeding cycle and least likely to be present within the terrestrial habitats). • Grassland will continue to be managed through a regular mowing regime to a short sward, to prevent this establishing into optimal habitat. • All vegetation removal to be overseen by a suitably qualified ecologist. • Any excavations during the construction period will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby habitats. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any common amphibians are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. • In the event that a GCN is identified during any clearance works, all works must cease and advice must be sought from a suitably qualified ecologist. As an enhancement, it is recommended that new hibernacula are created in the north of the site, closest to the offsite pond, to provide enhanced hibernation opportunities for GCN and other common amphibians post-development.
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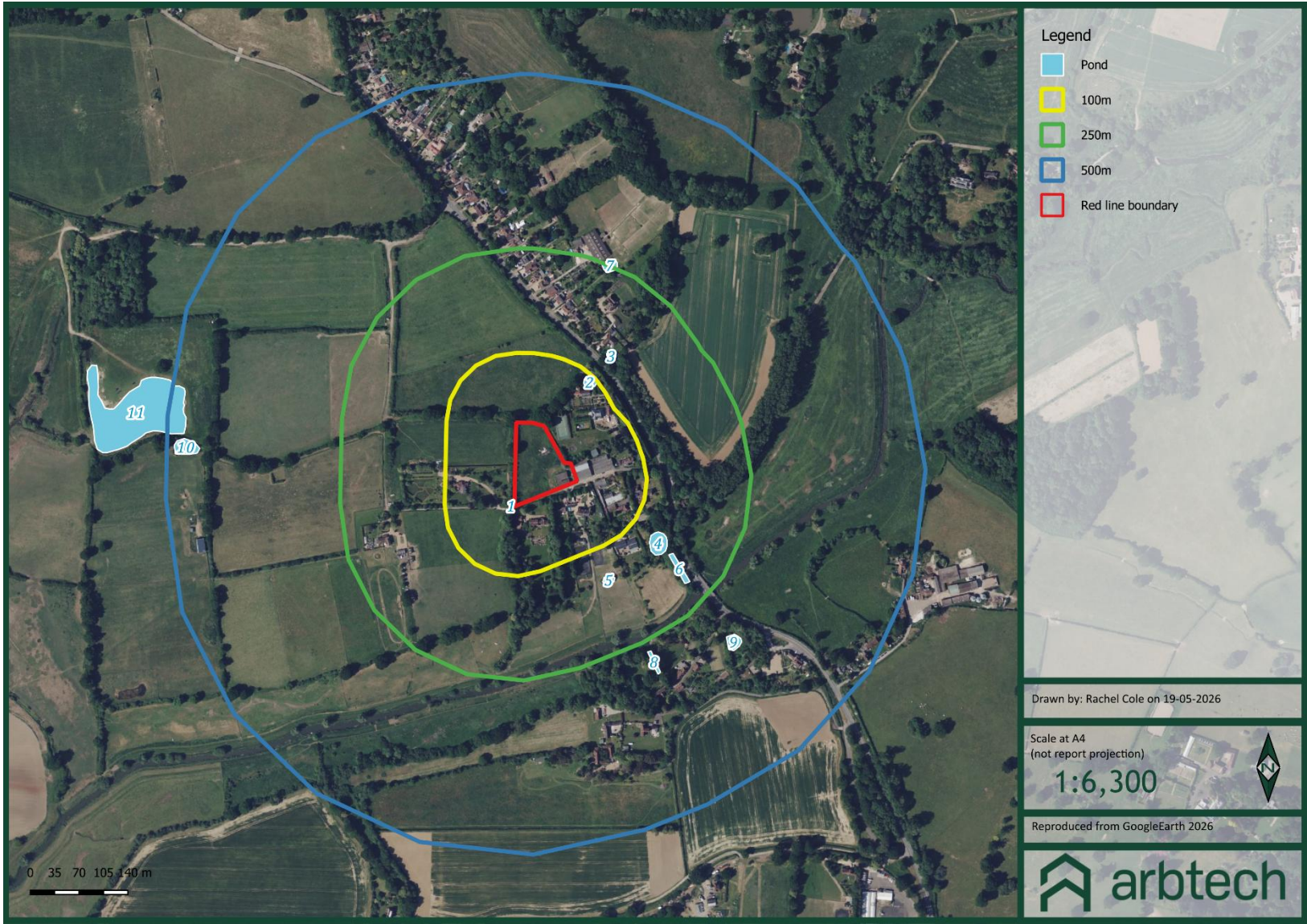
Appendix 1a: Survey map



Appendix 1b: Post-development survey map



Appendix 2: Pond location map



Appendix 3: Site location map



Appendix 4: Proposed plan



John Hilden

Wychwood barn, Horsham, West Sussex RH13 8HE

Appendix 5: eDNA results

Folio No: 2256-2026
Purchase Order: RH13 8HE
Contact: Arbtach
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GCN eDNA Analysis

Summary

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analyzing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

Results

Lab ID	Site Name	OS Reference	Degradation Check	Inhibition Check	Result	Positive Replicates
GCN26 06340	P2	TQ 20855 18543	Pass	Pass	Positive	7/12
GCN26 08017	P1	TQ 20732 18366	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: Vanessa Hind

Approved by: Vanessa Hind

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Appendix 6: Legislation and planning policy

LEGAL PROTECTION

The great crested newt receives full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

This species are also listed on Schedule 5 of the Wildlife and Countryside Act and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

NATIONAL PLANNING POLICY

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works likely to affect the breeding sites or resting places of great crested newts protected. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

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