

Great Crested Newt eDNA Sampling

Survey site:

'The Slips', West End Lane, Henfield, West Sussex BN5 9RG

Client:

Ben Kirk

Survey date:

17th April 2025

Project:

This report is prepared to inform a planning application Horsham District Council. The proposal is described as:

The construction of five individual plots, each containing a static caravan and dayroom, with associated landscaping and hardstanding.

Survey methodology and legislation can be found in Appendix 6.

The site survey was undertaken by Rachel Wick MSci, Graduate Ecologist.					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
17/04/2025	18	34	90	6	None

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, location plan in Appendix 2, proposal plans in Appendix 3, pond map in Appendix 4, eDNA results in Appendix 5, survey methodology in Appendix 6).	
<i>Scope of report</i>	<p>This report describes the suitability of the habitats on the site and any surveyed ponds for Great Crested Newts (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 comply with wildlife legislation.</p> <p>To achieve this, the following steps have been taken:</p> <ul style="list-style-type: none"> • 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. <p>Opportunities for the enhancement of the site for GCN have been set out.</p>
<i>Site location and context</i>	<p>The survey site is centred on National Grid Reference TQ 20116 15970 and has an area of approximately 0.6 ha.</p> <p>The site consists of a long, narrow field of grassland, historically used for camping and caravan parking. It is bordered by hedgerows, two ditches, and several lines of trees, and features multiple mature oak trees. Located on the outskirts of Henfield village, the site sits amidst agricultural fields and large residential gardens. The wider landscape is characterised by agricultural fields, small woodland pockets, and an extensive network of bordering hedgerows, providing valuable habitat connectivity.</p>
<i>Field survey results</i>	Pond descriptions

<p>A review of OS and aerial imagery identified 3 ponds within 250m of the site (see Appendix 4). P1 was inaccessible, however; P2 and P3 were subject to survey.</p> <p>Full pond descriptions are provided in Table 1 below.</p> <p><i>Table 1: Surveyed Ponds</i></p>		
Pond Ref	Description	Photograph
1	<p>Pond P1 is found approximately 130m west of the site, within a private residential garden. Access was not provided by the landowner.</p>	<p>N/A</p>
2	<p>Pond P2 is located approximately 160m west, within a small section of woodland adjacent to a joinery yard and agricultural fields.</p>	

3

Pond P3 is located approximately 230m west of the site, at the edge of a relatively new housing development. It is surrounded by young willow trees and mown grassland.



Habitat Suitability Index (HSI) Assessment

Ponds were assessed for their suitability to support GCN using the Habitat Suitability Index (HSI) Assessment Methodology (Oldham et al, 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	P2	P3
Geographic location	1	1
Pond Area	0.4	0.2
Pond permanence	0.5	0.5
Water quality	0.33	0.67
Shade	0.2	1
Waterfowl effect	1	1
Fish presence	1	1
Pond Density	1	1
Terrestrial habitat	0.33	0.33
Macrophyte cover	0.30	0.30
HSI score	0.606	0.700
HSI category	Average	Good

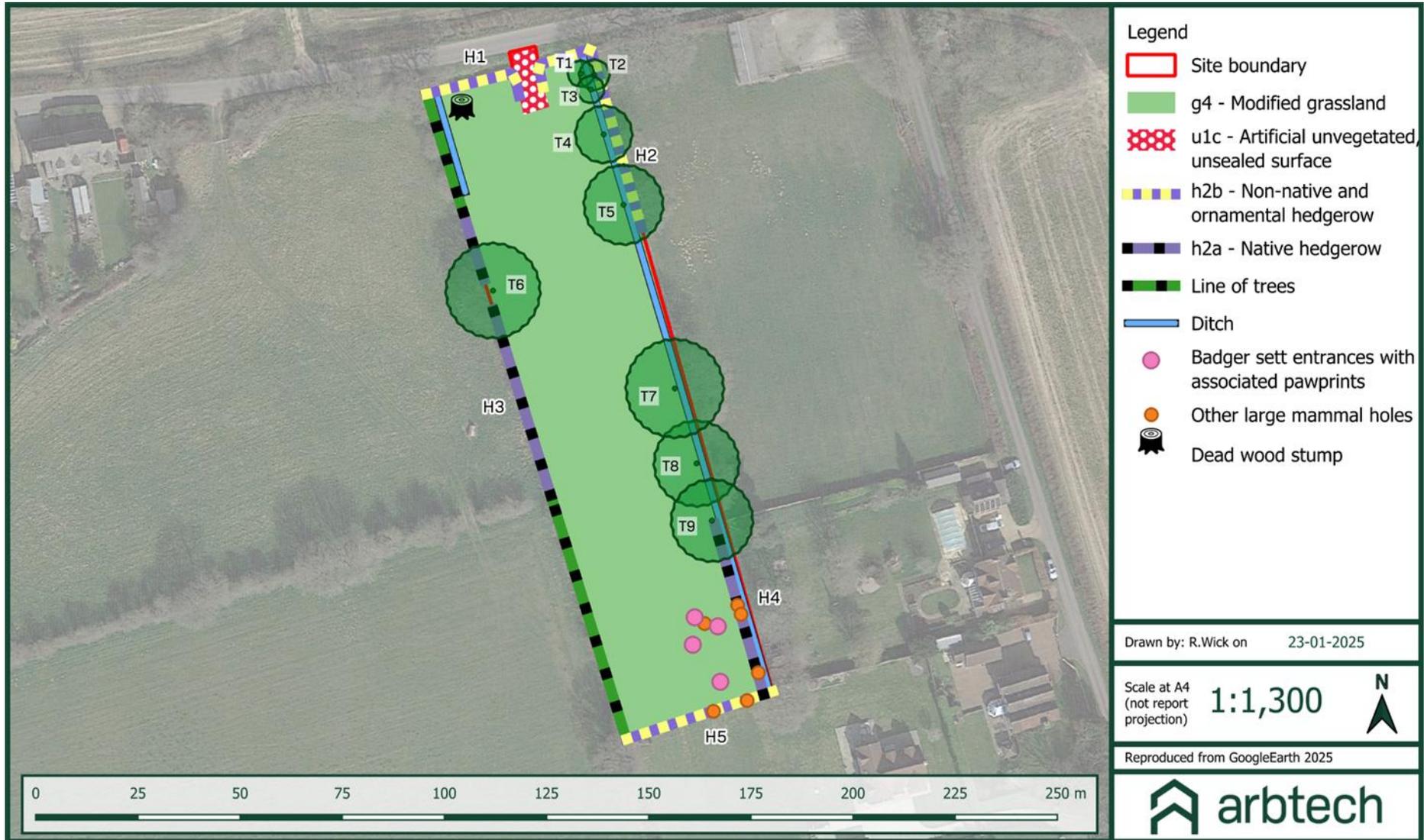
eDNA Sampling

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 et al 2014). In summary, the sampling protocol is as follows:

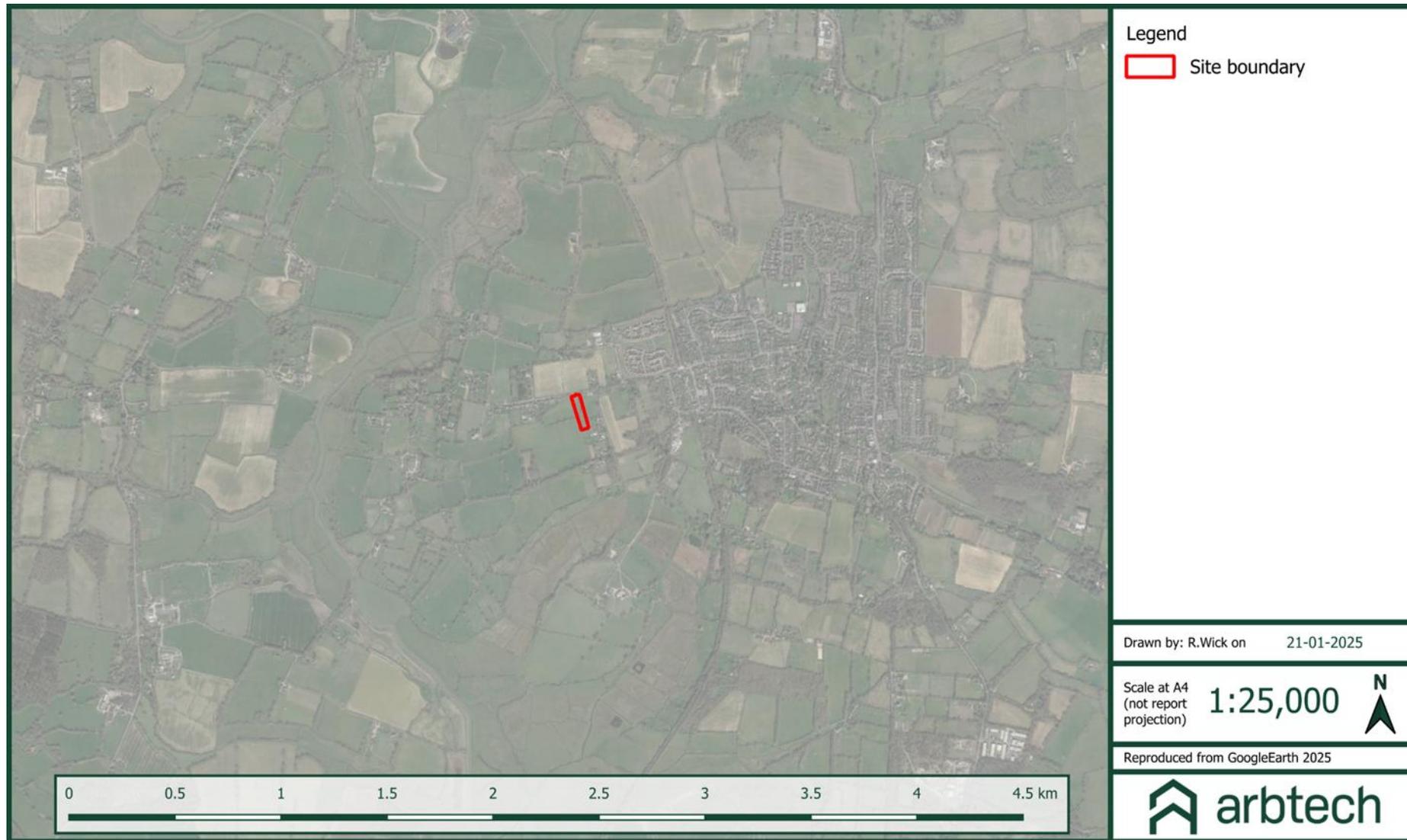
- 20 samples were taken from around the entire perimeter of the water body.
- The surveyor stayed out of the water while taking the samples (extension poles were used in situations where open/sufficiently deep water was at a distance from the dry banks.
- Survey locations were distributed around the 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.

	<p>Samples were sent to SureScreen for analysis.</p> <p>Full eDNA results are provided in Table 4. The SureScreen lab results are included in Appendix 5.</p> <p><i>Table 4: eDNA Survey Results</i></p> <table border="1" data-bbox="465 359 1731 480"> <thead> <tr> <th data-bbox="465 359 638 395">Pond Ref</th> <th data-bbox="638 359 1731 395">eDNA Result</th> </tr> </thead> <tbody> <tr> <td data-bbox="465 395 638 435">2</td> <td data-bbox="638 395 1731 435">Negative (0/12)</td> </tr> <tr> <td data-bbox="465 435 638 480">3</td> <td data-bbox="638 435 1731 480">Negative (0/12)</td> </tr> </tbody> </table>	Pond Ref	eDNA Result	2	Negative (0/12)	3	Negative (0/12)
Pond Ref	eDNA Result						
2	Negative (0/12)						
3	Negative (0/12)						
<i>Foreseen Impacts</i>	<p>When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss of scrub and modified grassland. As per Table 4 above, Great Crested newts are not present within the two ponds, P2 (160m west) and P3 (230m west). However, due to inaccessibility, Pond P1 could not be surveyed. As this pond has direct connectivity to the site, the presence of common amphibians cannot be ruled out. Therefore, potential terrestrial impacts should be mitigated accordingly.</p>						
<i>Recommendations</i>	<p>Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, including the following measures:</p> <ul style="list-style-type: none"> • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any amphibians to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter amphibians from the working area. • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent amphibians from utilising these areas. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians could use. • 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 unlikely event that a great crested newt is identified, works must cease immediately, and advice must be sought from a suitably qualified ecologist. 						

Appendix 1: Survey map



Appendix 2: Location map



Appendix 3: Proposed plan

Preliminary Ecological Appraisal



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Plot 114
20 The Haven
The Haven
Rye, Sussex
BN9 7 1XK

tel: 01323 84 100
email: enquiries@prometheanplanning.co.uk
web: www.prometheanplanning.co.uk

Address
The Slips, West End Lane,
Hove, BN5 9RG

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Drawn By: SJD

Checked By: BK

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Status: Proposed

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Submission: Concept

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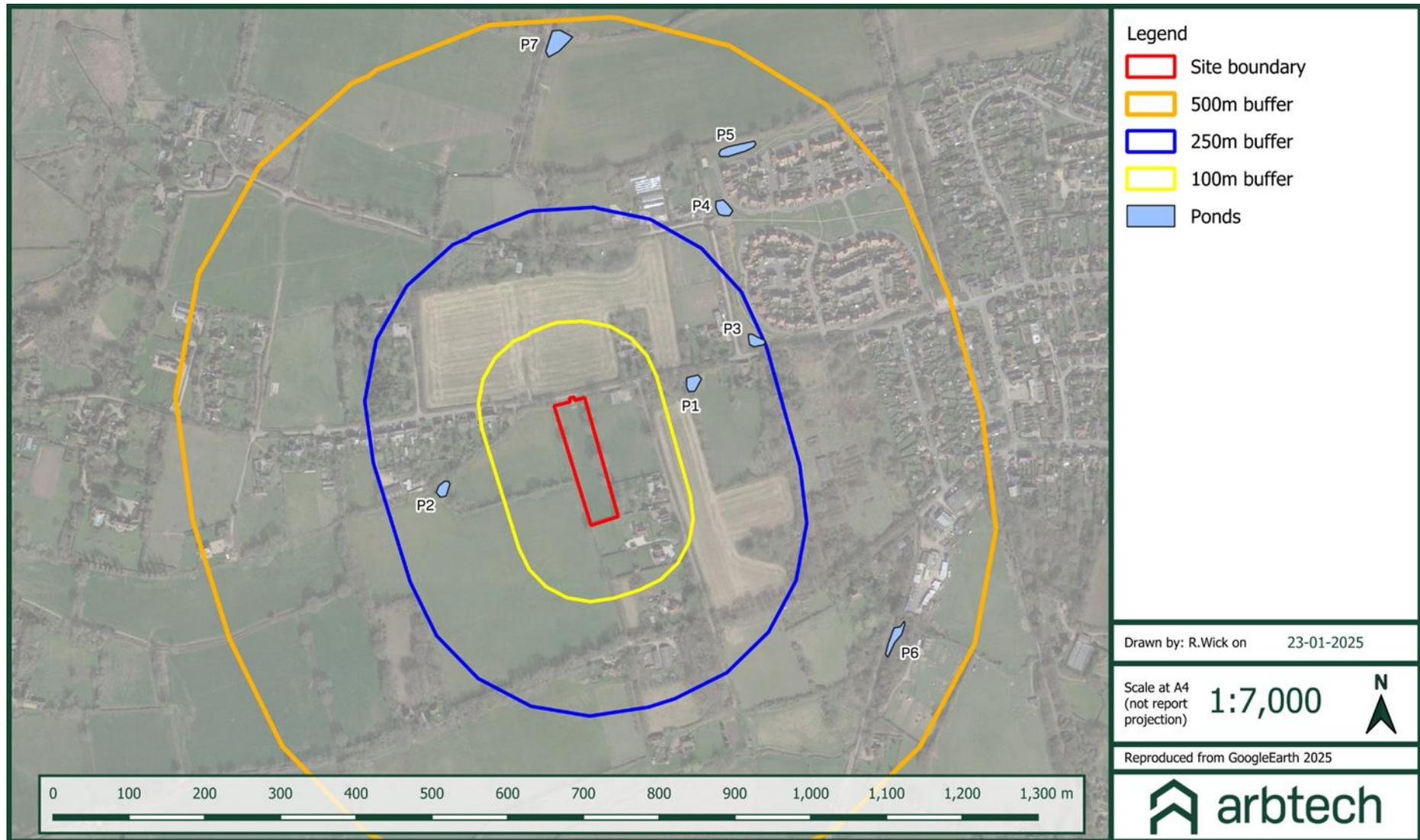
Indication: 100'



Block Plan
1:500 (PROPOSED)

Appendix 4: Pond map

Preliminary Ecological Appraisal



Appendix 5: eDNA results

Preliminary Ecological Appraisal

Folio No: 493-2025
 Purchase Order: BN5 9RG
 Contact: Arbtech
 Issue Date: 25.04.2025
 Received Date: 23.04.2025



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
GCN25 3144	The Slips - Pond 3	TQ 20339 16135	Pass	Pass	Negative	0/12
GCN25 3142	The Slips - Pond 2	TQ 19923 15941	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: Amy Bermudez

Approved by: Jennifer Higginbottom

Appendix 6: Legislation and planning policy

Preliminary Ecological Appraisal

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.

Limitations and Copyright

Pond P1 was inaccessible at the time of the survey. The landowner was contacted by the surveyor on the day of the survey and access was requested but denied. This is not considered to be a significant limitation given the connectivity between P1 and the two tested ponds; P2 and P3. As great crested newts are highly mobile, it is very likely that if present within P1 they would also be utilising multiple ponds in the vicinity such as P2 and P3. Therefore, it is reasonable to assume the likely absence of great crested newts within P1. Taking into consideration the likely absence of great crested newts and the aforementioned precautionary working methods, the risk to great crested newts is acceptably low.

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Final	1.0	Rachel Wick MSci, Graduate Ecologist	06/06/2025