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Environmental DNA (eDNA) Survey Results for Great Crested Newt (GCN)

September 2025

Project Reference: PR-25-0105

Former Methodist Church
Pont-y-blew
Chirk
Wrexham
LL14 5BH

National Grid Reference: SJ 31101 38362



Document Title	Environmental DNA (eDNA) Survey Results for Great Crested Newt (GCN)
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Prepared by	Tyrer Ecological Consultants Ltd

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Table of Contents

1.0 Background & Introduction

2.0 Great Crested Newt (GCN) – Legislation & Policy

3.0 eDNA Survey Results

4.0 Impact Assessment

5.0 Conclusions & Recommendations

6.0 Bibliography

Appendix I: *Former Methodist Church, Pont-y-blew – Preliminary Ecological Appraisal* (Tyrer Ecological Consultants, 2025)

Appendix II: *Environmental DNA (eDNA) raw data* (ADAS, Sample ID: ADAS-10350) (July 2025)

1.0 Background & Introduction

1.1 As part of an ongoing planning application at the Former Methodist Chapel, Pont-y-blew, Tyrer Ecological Consultants carried out a Preliminary Ecological Appraisal (PEA) in July 2025 (see **Appendices I – II**).

1.2 The PEA was commissioned by Blueprint Architectural Services; proposals are understood to involve the conversion of the existing chapel building into a single dwelling, and the formation of a hardstanding car parking space and a landscaped garden.

1.3 As part of the PEA, a single pond was identified within the redline boundary of the site (P1), and another single pond was identified within 250m, specifically, 25m to the west (P2). Both ponds were subject to a GCN habitat suitability assessment (HSI) during the PEA site visit. P1 was determined to have a HSI score of 'Average' and P2 was determined to score 'Good'. As such, it was recommended that an Environmental DNA (eDNA) survey should be undertaken at **both ponds** (subject to presence) to reasonably ascertain presence / absence of GCN within the waterbodies.

1.4 Following the recommendations within the PEA, Tyrer Ecological Consultants Ltd were commissioned by Blueprint Architectural Services to undertake the eDNA survey at **P1 & P2** on 26th June 2025, thus during an optimum time of year (eDNA surveys can be undertaken without temporal limitations at any point between April 15th – June 30th).

1.5 This report details the methodology used in accordance with best practice, will outline the survey results, and present conclusions derived from the survey efforts. This report will present any further recommendations, including any avoidance, mitigation or intervention measures required to protect the favourable conservation status of great crested newts, where applicable, and will include suitable information to inform a licence application to Natural Resources Wales, if necessary.

1.6 The eDNA survey aims to determine presence or reasonably conclude absence of great crested newts at the ponds.

1.7 If GCN were detected during the survey and / or may be affected by the development proposals, then a Mitigation Licence may be required to proceed with the development.

1.8 This report should be read, understood and presented to the local authority in conjunction with **Appendices I – II** (see contents page).

1.9 **Figure 1.1** overleaf shows ponds within 250m of the site boundary including the surveyed ponds.

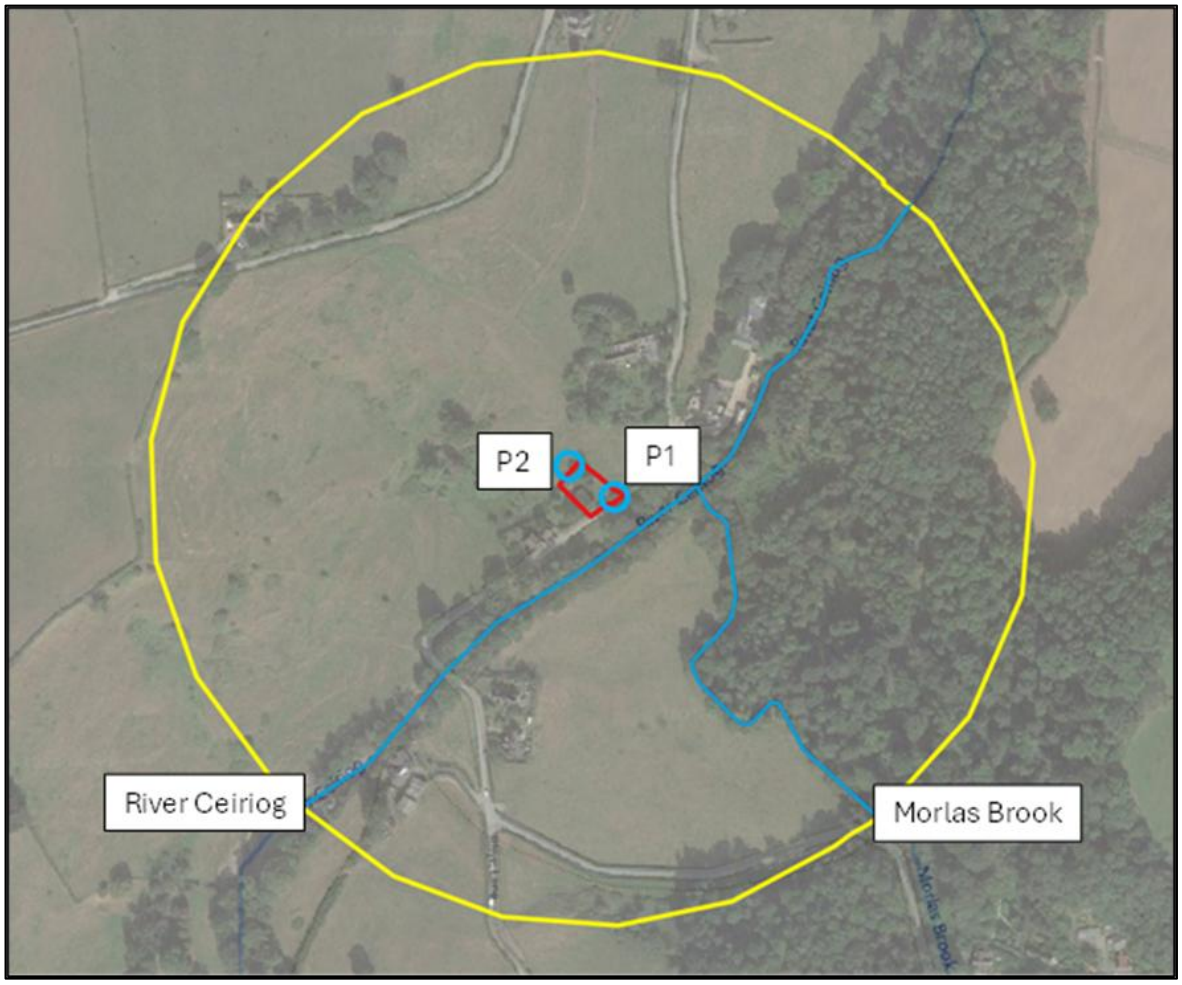


Figure 1.1 – *Location of ponds and watercourses within 250m of the site boundary (© Google Earth 2025)*

2.0 Great Crested Newt (GCN) – Legislation & Policy

2.1 GCN are fully protected in all life stages by Schedule 2 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), the Wildlife and Countryside Act (1981) (as amended) and Section 7 of the Environment (Wales) Act 2016. They are listed a priority species under section 41 (s.41) of the Natural Environment Rural Communities Act 2006 (NERC Act) and are also listed on the UK Biodiversity Action Plan (UKBAP). The legislation makes it a punishable offence to:

- Deliberately, intentionally or recklessly kill, injure or take a GCN,
- Deliberately, intentionally or recklessly take or destroy GCN eggs,
- Possess or control any live or dead specimen, or anything derived from a GCN,
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a GCN,
- Deliberately, intentionally or recklessly disturb a GCN while it is occupying a structure or place which it uses for that purpose.

2.2 In summary, GCN are protected from disturbance, killing, injuring or possession at any life stage, whilst confirmed breeding ponds and resting places are afforded the same protection once identified. Habitat for this species is protected when within certain range of a breeding pond. This places an obligation on local authorities to fully assess the impacts of development on this species prior to determining a planning application.

2.3 GCN populations have declined within the UK over recent years due to destruction and fragmentation of breeding ponds and terrestrial habitat. They spend a high percentage of their adult life in terrestrial habitat such as woodland, and shelter in environments with piles of rubble, log piles, tree roots, miscellaneous other for safety, refuge and hibernation. In Wrexham, GCN are widespread and can be found where favourable habitat coincides with connectivity to breeding pools.

NB: *Research provides evidence that GCN are most likely to use terrestrial habitat within 100 metres of their breeding ponds, whilst the Great Crested Newt Method Statement for EPSML (Natural England) describes terrestrial habitat zones - the 50 metres range of any GCN pond is the 'Core' habitat zone and the area most likely to support newts in a lifetime; the area between 51-250m is the 'Intermediate' zone and 250m+ is the 'Distant' zone; impacts to these zones, from individual ponds, are considered by the ecologist; both permanent and temporary impacts are taken into account.*

2.4 More common British amphibians, such as common frog (*Rana temporaria*), common toad (*Bufo bufo*), smooth newt (*Triturus vulgaris*) and palmate newt (*Triturus helveticus*) are protected only by Section 9(5) of the Wildlife and Countryside Act 1981 (as amended). This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.

2.5 The named species are also listed as UK Species of Conservation Concern. Due to general declines in most British amphibian species in recent years, many local authorities require amphibian surveys as a planning condition, or as part of environmental information submitted as part of a planning application, even where the presence of GCN is ruled out. Water bodies that support all five (more common) species of British amphibians in high numbers, may be afforded protection in local plans, as Sites of Importance for Nature Conservation (SINC), or a similar equivalent, for sites of local importance.

Policy

2.6 The Environment (Wales) Act 2016 ("the Act") – requires local planning authorities to have regard to area statements in the development of Local Development Plans. The Act introduced an enhanced biodiversity and resilience of ecosystems duty (Section 6 Duty). This duty applies to public authorities in the exercise of their functions in relation to Wales and will help maximise contributions to achieving the well-being goals. The Nature Recovery Action Plan supports this legislative requirement to reverse the decline in biodiversity, address the underlying causes of biodiversity loss by putting nature at the heart of decision-making and increasing the resilience of ecosystems by taking specific action focused around objectives for habitats and species.

2.7 Part 1 of the Act promotes sustainable management of natural resources, and in Part 1 section 6 states:

"A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions."

2.8 Section 7 of the Act places a duty on Welsh Ministers to publish, review and revise lists of types of habitats and species in Wales which they consider are of key significance to sustain and improve biodiversity. The Welsh Ministers must also take all reasonable steps to maintain and enhance the habitats published in these lists and encourage others to take such steps. Section 7 of 'The Act' alongside the UK Biodiversity Action Plan (UKBAP) provided a statutory basis for lists of habitats and species of national conservation importance - now transposed under section 41 (s.41) of the NERC Act.

2.9 Planning Policy Wales (PPW) 12th Edition (2024) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, MTANs and policy clarification letters comprise national planning policy.

2.10 PPW (2024) states:

"The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained. Planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site, and potentially the surrounding area, concerned. An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the development management process. It is considered best practice that screening to determine the presence of protected species should be carried out by a competent ecologist on the basis of data provided by the relevant Local Environmental Record Centre."

2.11 PPW and the National Development Framework (published as Future Wales – the National Plan 2040) set out how the planning system at a national, regional and local level can assist in delivering these requirements through Strategic Development Plans (SDPs) and Local Development Plans (LDPs).

2.12 A 'Dear Heads of Planning Letter' was issued 18 October 2023 by the Minister for Climate Change – updating parts of Chapter 6 of PPW. The main changes included strengthened wording and new measures to address policy on green infrastructure, net benefit for biodiversity using the stepwise approach / Decca framework, strengthened approach to the

protection of Welsh SSSIs and improved measures to improve the planting of trees and woodlands.

2.13 Planning authorities must therefore follow a stepwise approach (see **Figure 2.1** overleaf) to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, or minimized, or mitigated, and as a last resort compensated for; enhancement must be secured wherever possible.

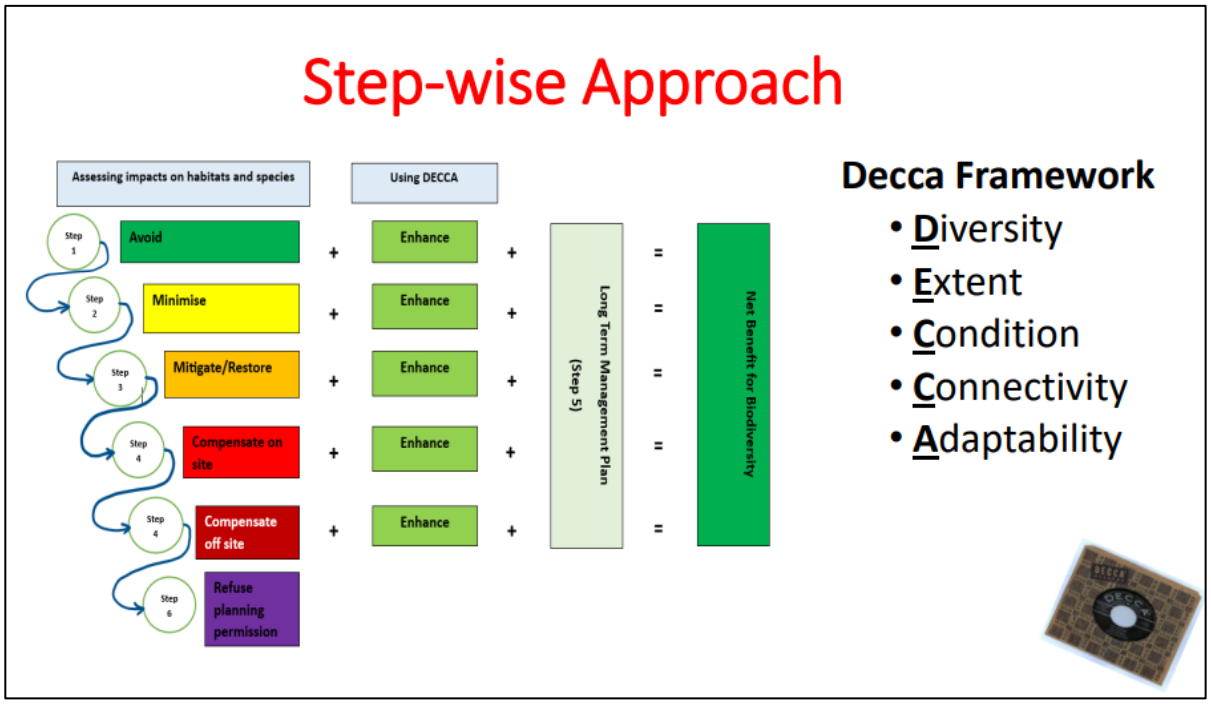


Figure 2.1 – *The step-wise approach / DECCA framework to be adopted by authorities in Wales*

2.14 PPW also requires developments to achieve a Net Benefit for Biodiversity (NBB):

"*Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a* ***net benefit for biodiversity****. In doing so planning authorities must also take account of and promote the resilience of ecosystems, in particular the follow aspects:*

- *diversity between and within ecosystems;*
- *the connections between and within ecosystems;*
- *the scale of ecosystems;*
- *the condition of ecosystems including their structure and functioning; and*
- *the adaptability of ecosystems.*"

2.15 There are several plans, strategies and national, sub-regional and local policy statements which provide a framework for development in the Plan area. The Planning and Compulsory Purchase Act (2004) makes it a requirement for local planning authorities in Wales to prepare a Local Development Plan (LDP) for their areas.

2.16 Wrexham County Borough Council prepared a Local Development Plan which was formally adopted in December 2023 and covers between 2013 and 2028 and supersedes any previous development plans for the area.

2.17 Policy SP14 of the Wrexham County Borough Council Adopted Local Development Plan 2013 – 2028, titled 'Natural Environment, states:

"Developers should consider the natural environment at the pre application stage and must seek to avoid impacting on wildlife features in line with the relevant statutory and non-statutory provisions, including maintaining or helping to achieve a protected species' favourable conservation status. Developments should also seek to provide biodiversity enhancement, whatever the current level."

3.0 Survey Results

Survey Methodology

3.1 An eDNA survey was undertaken on 26th June 2025 at P1 as per the recommendations of the Preliminary Ecological Appraisal (PEA), however P2 was found to be dry at the time of the visit and was therefore not subject to an eDNA survey at this time – see **Appendices I – II** for details.

3.2 To carry out the eDNA survey, a total of 20 water samples were taken from the pond to form the basis of a DNA sample. The samples were taken using a sterile ladle and emptied into a sterile self-supporting Whirl-Pak bag. All samples were taken from locations around the margins of each pond in areas which could be utilised by GCN for egg laying or displaying. Once all 20 samples were collected, the sterile self-supporting bag was shaken to mix any DNA across the whole pond sample. A sterile plastic pipette was used to transfer approximately 15.0 ml of the mixed pond sample water into a sterile conical tube. This was undertaken for each of the six sterile conical tubes in the kits. Each sterile conical tube(s) contained 35.0 ml of ethanol to preserve any DNA within the samples. The boxes of six sterile conical tubes were returned within 48 hours at ambient air temperature to the ADAS eDNA testing service for laboratory analysis. eDNA analysis by ADAS was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural Resource Wales.

Survey Results

3.3 See **Table 3.1** below for surveyor credentials, **Table 3.2** for climatic conditions on the date of survey, and **Tables 3.3 and 3.4** for survey results and any constraints encountered during the survey effort. **Figure 3.1** shows the eDNA results following assessment of **Pond 1**. The raw data returned by ADAS is also provided as **Appendix II**.

Table 3.1 – Surveyor names

Name	Description of most relevant credentials
Mr. J. Halpin ACIEEM (*Wildbanks Conservation)*	• Team Leader at Wildbanks Conservation with extensive experience working with amphibians within Wales. • BSc (Hons) Zoology. • Holder of NRW GCN survey license (S094114/1). • Meets the requirements of CIEEM's Competency Framework Section S (surveying) to Capable level.
Mr. T. Medcalf (*Wildbanks Conservation)*	• Conservation Ranger at Wildbanks Conservation. • National Diploma in Forestry and Arboriculture, Level 3 Diploma in Environmental Conservation. • Accredited agent on Mick Smith (Director – Wildbanks Conservation) NRW GCN survey license (S094688/1). • Meets the requirements of CIEEM's Competency Framework Section S (surveying) to Capable level.

Table 3.2 – Survey dates, times and weather conditions

Survey Number	Date	Weather Conditions
Survey 1 Pond 1	26/06/2025	**Survey time: 10:00:** Dry, Calm, 30% cloud cover, bright Start temp: 16.0 º C End temp: 16.0 º C

Table 3.3 – Summary data from the survey with constraints

Pond 1							
Results							
Great Crested Newt (GCN)	Smooth Newt (SN)	Palmate Newt (PN)	SN / PN Female / Juvenile	GCN Egg(s)	Common Toad (CT)	Common Frog (CF)	GCN Present / Absent
0	**0**	**0**	**0**	**0**	**0**	**0**	**Present**
Constraints / Incidental Observations							
The surveyors were able to access approximately 80% of the margin of the pond, and access was therefore not considered a limitation.							

Sample ID: ADAS-10350			
Client Identifier: P1		Grid references/coordinates: SJ3111738360	
Description: pond water samples in preservative		Condition on Receipt: Good	
Date of Receipt : 04/07/2025		Volume: Passed	
Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control†	2 of 2	Real Time PCR	09/07/2025
Degradation Control§	Within limits	Real Time PCR	09/07/2025
Great Crested Newt*	4 of 12 (positive)	Real Time PCR	09/07/2025
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)#	4 of 4	Real Time PCR	As above for GCN
Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	09/07/2025	Date of issue:	09/07/2025

Figure 3.1 – *Pond 1 eDNA results – 'positive'*

Table 3.4 – Summary data from the survey with constraints

Pond 2							
Results							
Great Crested Newt (GCN)	Smooth Newt (SN)	Palmate Newt (PN)	SN / PN Female / Juvenile	GCN Egg(s)	Common Toad (CT)	Common Frog (CF)	GCN Present / Absent
0	**0**	**0**	**0**	**0**	**0**	**0**	**Unknown**
Constraints / Incidental Observations							
Whilst the surveyors were able to identify where P2 had previously been, it was identified to be dry at the time of the survey, holding no water. Therefore, no eDNA samples were able to be taken during the site visit.							

4.0 Impact Assessment

Summary

4.1 The DNA analysis of **Pond 1** within the site boundary of The Former Methodist Chapel, Pont-Y-Blew found evidence of GCN, with a '**Positive**' result returned from the laboratory for the pond, thus indicating the presence of this species within P1.

4.2 P2 could not be subject to an eDNA survey, as it was dry at the time of the prescribed visit. However, given the positive DNA result at P1, along with the lack of further waterbodies within 250m, it is considered that GCN utilising P1 are highly likely to also utilise P2, and that both of these ponds are likely vital to maintaining the local GCN metapopulation. P2 is therefore considered within this report as See **Figure 4.1** below for the location of the 'GCN Present' pond (P1) along with P2, in relation to the red line boundary.



Figure 4.1 – *Location and indicative sizes of positive ponds in relation to the proposed works area.*

4.3 **Pond 1** is located within the redline boundary and is proposed to be lost by the works, whilst P2 is located directly adjacent to the north-western site boundary, outside of the site; as such, the site is considered to be located within the 'Core' habitat zone of the positive eDNA at P1 and for P2. This indicates that the site contains areas which are likely used by GCN in their aquatic phases and for terrestrial purposes.

NB: *Research provides evidence that GCN are most likely to use terrestrial habitat within 100 metres of their breeding ponds, whilst the Great Crested Newt Method Statement for EPSML (Natural England) describes terrestrial habitat zones - the 50 metres range of any GCN pond is the 'Core' habitat zone and the area most likely to support newts in a lifetime; the area between 51-250m is the 'Intermediate' zone and 250m+ is the 'Distant' zone; impacts to these zones, from individual ponds, are considered by the ecologist; both permanent and temporary impacts are taken into account.*

Impact Assessment

4.4 The proposed planning application involves the conversion of the existing building for residential use, and the construction of a frontal patio/parking area which will result in the loss of P1 and a portion of the identified modified grassland. From analysis of the proposals, the entirety of the site (approximately 0.11ha) falls within the 'Core' GCN zone for terrestrial GCN habitat. See **Figure 4.2** below for a visual aid indicating the red line boundary in relation to buffer zones from the pond confirmed to host GCN.

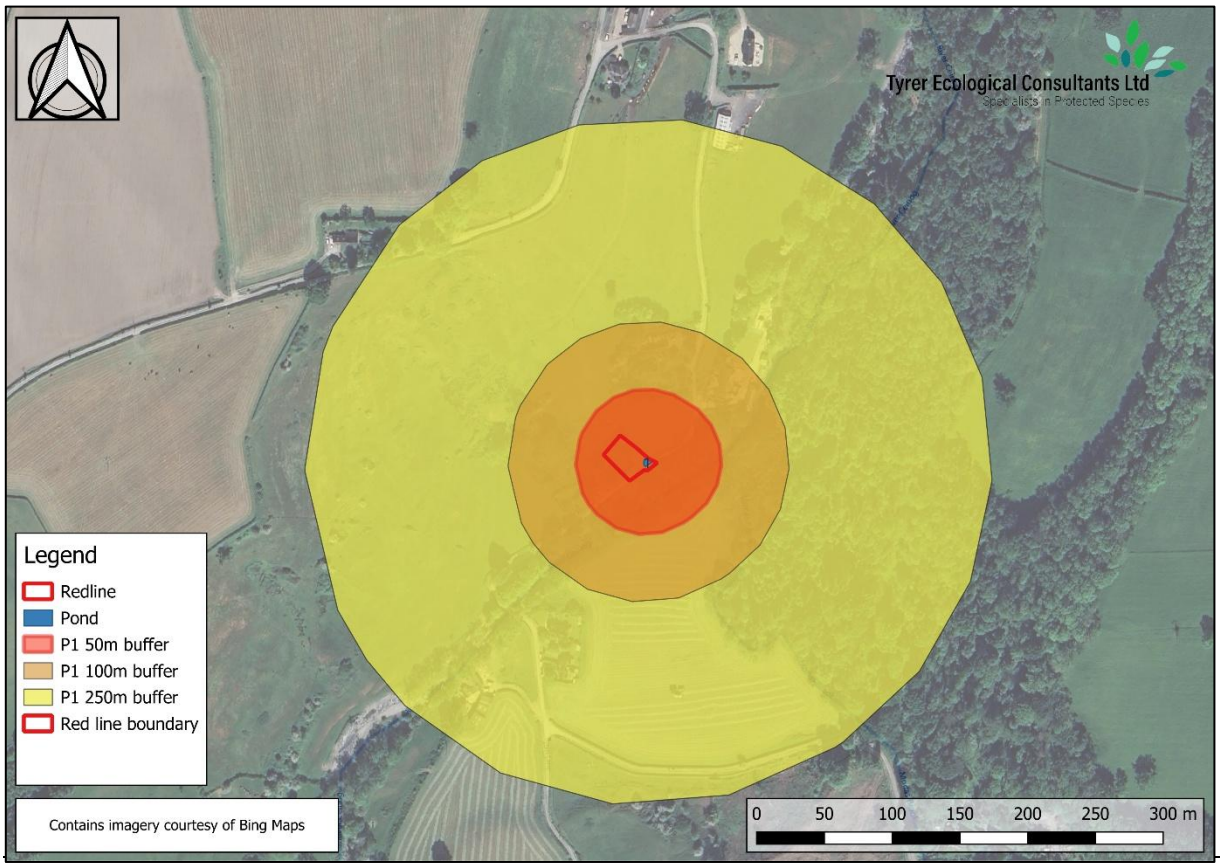


Figure 4.2 – *Visual aid indicating the red line boundary in relation to positive eDNA pond buffer zones*

4.5 Proposals will result in the total loss of Pond 1 in addition to a small area of modified grassland to form on-site parking for the newly converted residence. The terrestrial habitat falls within the 'Core' habitat zone of both P1 and P2.

4.6 A range of potential impacts to GCN, in the absence of any mitigation or avoidance measures, have been identified below; site specific factors are given in green font.

Pre-development impacts

- Kill risk, injury and disturbance risks through terrestrial and aquatic habitat clearance– The proposals involve the destruction of a pond confirmed to support GCN presence (P1) and terrestrial habitat loss within the 'Core' habitat zone of both P1 and P2. GCN are most likely to utilise terrestrial habitat for refuge/ hibernation within the 'Core' habitat zone, therefore, any impacts to these areas in an increased risk of killing, injuring or disturbing the species.

- Long-term habitat loss – A single pond confirmed to be utilised by GCN, in addition to surrounding terrestrial habitats, including modified grassland will be lost to the works, and replaced with hard-standing parking surface. As it stands, the impacts at a 'Site' level are negative without further mitigation.

- Creation of excavations that can trap newts and other small animals – The proposed development is likely to require excavation of terrestrial habitat and filling in of the existing on-site pond (P1) which can trap newts and other small animals. Mitigation measures can be applied through the required EPSL and will be specified within the method statement, however, the scale of these impacts is currently unknown and will need to be understood prior to a full impact assessment.

Mid-development impacts

- Construction work can kill newts; it can also create temporary habitats that might lure newts only to then cause death, injury – The proposed impact area is within the 'Core' habitat zone for GCN whereby remediation of terrestrial and aquatic habitat could impact upon GCN negatively. The works to the former chapel building will likely involve temporary storage of materials around the site, which could create refuge opportunities for GCN which could lead to injury/ death when moved.

Long-term impacts

- Loss of a breeding pond may lead to complete loss of the local metapopulation – It is unknown at this stage whether P1 is used for breeding purposes, but the positive eDNA and the presence of only a single other pond within 250m (P2) would indicate that breeding within P1 is highly likely. Equally, whilst P2 is clearly somewhat ephemeral and may be largely dry during drought years, it is generally suitable for the breeding purposes of GCN and is likely used as such during years where the pond is present between February and June. Given this, the loss of P1 would likely represent the loss of all potential breeding habitat in the local area during certain years, and the eventual loss of the metapopulation.

- Death of animals can lead to reduced breeding / recruitment, e.g. fewer young, maturing adults - The proposals present potential long-term risks to the local GCN population, should there be a breeding population within the ponds. The current assessment indicates the GCN are likely present within P1 and P2, and that breeding behaviour within these two waterbodies is highly likely, given the lack of other ponds within 250m and the barriers within the landscape which fragment the metapopulation from other further afield. It is likely that the population is small and is clearly heavily isolated, making the loss of individual newts have a proportionally large impact when compared to a larger population. However, an assessment of the landscape indicates that the pond network is limited, with barriers to dispersal present in the form of rivers, limiting the available connective habitat.

- Isolation/fragmentation – Impacts to the 'Core' habitat zone for GCN may result in partial fragmentation through the loss of suitable terrestrial habitat, which may limit connectivity between P1 and P2.

Rapid Risk Assessment

4.7 Considering the above, given the known presence of GCN within P1, likely presence within P2 and its isolation within the landscape, it can be considered highly likely that the identified GCN population utilises both ponds for breeding purposes. Therefore, further within this report, the risk is assessed, with both P1 and P2 assumed to constitute breeding ponds. In the absence of guidance from Natural Resources Wales, the Natural England Rapid Risk Assessment tool, as extracted from the Natural England Mitigation Licence Method Statement, has been applied against the proposals to help form a quantitative impact assessment. The risk assessment should be used as indicative only and not solely relied upon, as it considers worst case scenario outcomes, given the proposed loss of a pond supporting a breeding population of GCN, and, in considering a scenario in the absence of any ecological supervision or ecological clerk of works (ECoW) overseeing reasonable avoidance measures (RAMs).

4.8 See **Table 4.1** below, which has been filled in under the assumption that the ponds support a breeding population, and no ECoW supervision or RAMs take place during the proposals. Were this the case, in addition to the loss of a breeding pond and terrestrial habitat, risks to individual GCN could not be avoided, given the proposed loss of P1.

Table 4.1 – NE Rapid Risk Assessment tool (breeding population/no ecological measures)

Component	**Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)**	**Notional offence probability score**
Great crested newt breeding ponds	Damaged or destroyed	1
Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	Killing or injuring newts	0.8
	Maximum:	1
Rapid risk assessment result:	**RED: OFFENCE HIGHLY LIKELY**	

4.9 If the above is then compared to a risk assessment filled in under the assumption of the ponds supporting breeding populations, but with ecological measures enacted to reduce impacts to individual GCN, we see that an offence is still considered highly likely – see **Table 4.2** below.

Table 4.2 – NE Rapid Risk Assessment tool (breeding population/ecological measures enacted)

Component	**Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)**	**Notional offence probability score**
Great crested newt breeding ponds	Damaged or destroyed	1
Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0.0
	Maximum:	1
Rapid risk assessment result:	**RED: OFFENCE HIGHLY LIKELY**	

4.10 In considering all of the information provided by the rapid risk assessments, alongside the scope of works, which includes the destruction of a single pond known to support GCN and considered highly likely to be utilised for breeding purposes, alongside the loss of terrestrial habitat within the 'core' habitat zone of this pond and a further pond also considered likely utilised for breeding purposes, a full impact assessment of the proposed works cannot be made until a population class size assessment of the ponds is made; evidently, an EPSL will be required to perform the works, which will require population data which can only be acquired through a population size class assessment.

5.0 Conclusions & Recommendations

5.1 As the proposals include the loss of a waterbody known to be used by GCN, likely in a breeding capacity, along with an area of terrestrial GCN habitat within the 'core' areas of two ponds likely used in a breeding capacity, the direct and indirect risks to great crested newt, which are protected in all life stages from disturbance, injury or death, as well as the terrestrial habitats that support them will need to addressed through an application to Natural Resources Wales for a European Protected Species Licence. To inform the EPSL, a population size class assessment, covering both P1 and P2 will be required.

5.2 Traditionally, to inform a population size class assessment, in accordance with the industry standard guidance, six presence / absence surveys would need to take place between March 1st – June 30th; the timings of the surveys should be spaced at least a week apart to offer a fair mix of climatic conditions (and because GCN are a mobile species); at least two of the surveys should ideally take place during the peak activity period according to the geographic area (typically mid-April to mid-May). All surveys should only be undertaken when the predicted air temperature is to remain at/above 5ºC at night, when GCN are generally considered most active. The surveys should be planned and undertaken by a suitably licensed and experienced Ecologist.

5.3 The eDNA survey carried out already can be considered one of the six surveys now completed.

5.4 Field techniques for surveying great crested newt primarily involve using three from the following methods during any one survey (see **Table 5.1** below).

Table 5.1 – Survey methods for GCN

Survey Method	Optimal time period
Environmental DNA (eDNA)	Mid-April – June
Egg Search	April – June
Pitfall Traps	March, April, May and September
Refuge Search	April – September
Bottle or Funnel Traps	March – May
Netting	Mid-March – mid-June (August for larvae)
Torching	Mid-March – mid-June (August for larvae)

5.5 The results of the population size class assessment will then form the basis of the application for the European Protected Species License which will be required to legally continue with the works.

6.0 Bibliography

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Appendix I: *PR-25-0105 Former Methodist Church, Pont-y-blew – Preliminary Ecological Appraisal* (Tyrer Ecological Consultants Ltd, July 2025)

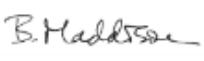
Appendix II: *Environmental DNA (eDNA) raw data* (ADAS, Sample ID: ADAS-10350) (July 2025)

Client:
Chick, Ruby Fawcett, Tyrer Ecological Consultants
1040079-1370, Chick, version 1

RSK ADAS Ltd
Spring Lodge
172 Chester Road
Helsby
WA6 0AR

Tel: 01159 229249
Email: Helen.Rees@adas.co.uk

www.adas.uk

Sample ID: ADAS-10350			
Client Identifier: P1		Grid references/coordinates: SJ3111738360	
Description: pond water samples in preservative		Condition on Receipt: Good	
Date of Receipt : 04/07/2025		Volume: Passed	
Determinant	**Result**	**Method**	**Date of Analysis**
Inhibition Control†	2 of 2	Real Time PCR	09/07/2025
Degradation Control§	Within limits	Real Time PCR	09/07/2025
Great Crested Newt*	4 of 12 (positive)	Real Time PCR	09/07/2025
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10^{-4} ng/µL)#	4 of 4	Real Time PCR	As above for GCN
Report Prepared by:	Dr Helen Rees	Report Issued by:	Dr Ben Maddison
Signed:		Signed:	
Position:	Director: Biotechnology	Position:	MD: Biotechnology
Date of preparation:	09/07/2025	Date of Issue:	09/07/2025

eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.

** If all PCR controls and extraction blanks give the expected results a sample is considered: negative for GCN if all of the replicates are negative; positive for GCN if one or more of the replicates are positive.*

† Recorded as the number of positive replicate reactions at expected C_t value. If the expected C_t value is not

§ No degradation is expected within time frame of kit preparation, sample collection and analysis.

 # Additional positive controls (10^{-1}, 10^{-2}, 10^{-3} ng/µL) are also routinely run, results not shown here.