Site:	Distington Walled Garden
Client:	Cumberland Council
Job Number:	784-B069016
Survey Type(s):	Great Crested Newt eDNA water sampling
Date of Survey(s):	24th June 2026
File Location:	\\tt.local\emea\P_Projects\784\P1\784-B069016_Distington_Walled_Garden\60_Output\63_Published\

INTRODUCTION

Tetra Tech was commissioned by Cumberland Council on the 22nd June 2026 to undertake a great crested newt (GCN) *Triturus cristatus* survey of Distington Walled Garden, hereafter referred to as "the site". GCN are a European Protected Species (EPS), full details of that protection, including types of offences and policy position are provided below.

This report has been prepared by Assistant Ecologist Seren Cunnah BSc (Hons) and the conditions pertinent to it are provided in Appendix A.

The site is located in Distington, Cumbria approximately 6.5 km South of Workington and is centred at Ordnance Survey National Grid Reference NY 01507 23824 (see Figure 1). The site comprises of hardstanding, woodland, long grasses and dense scrub. Seven waterbodies were identified on aerial photo and OS mapping as being located within 500 m of the site boundary. Out of these seven, five were scoped out due to low risk of GCN presence (lack of GCN records) (see Figure 2).

The remaining two waterbodies present on site are noted as WB1 and WB2 (see Figure 2). WB1 is a large pond that can be found within the wet woodland on the southeastern side of the boundary. WB2 is further north within the boundary and is a ditch surrounded by other neutral grassland.

This purpose of this report will be to inform the planning application for the site, detail methodologies and results from the eDNA sampling.

Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

LEGISLATION

The GCN is afforded protection under the Conservation of Habitats & Species Regulations 2017 (as amended), which applies to all of its life stages.

The GCN is also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or take a GCN;
- Deliberately, intentionally or recklessly take or destroy GCN eggs;
- Poses 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; and
- Deliberately, intentionally or recklessly disturb a GCN while it is occupying a structure or place which it uses for that purpose.

This species is also protected by the Protection of Animals Act 1911, which prohibits any acts of cruelty or mistreatment.

Where development will result in damage to suitable habitat where the species is known to be present or risk harming or significantly disturbing GCN, a European Protected Species Mitigation licence (EPSML) is likely to be required from Natural England (NE) to allow the development to proceed.

GCN are also afforded more general protection in England (and Wales) within the Natural Environment and Rural Communities Act (NERC) 2006. This imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, “to have due regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity” [Section 40 (1)]. Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 habitats of principal importance and 1,150 species of principal importance – including GCN.

METHODOLOGY

Our survey methodology has been based on published guidelines produced by Natural England 'Appendix 5. Technical advice note for field and laboratory sampling for great crested newt (*Triturus cristatus*) environmental DNA' (Biggs *et al*, 2014).[1]

The eDNA sampling was carried out in accordance with the stringent survey methodologies defined within Natural England's accepted protocol (Biggs et al, 2014 - *WC1067 Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA*).

The survey will include the two waterbodies that are located within the blue line boundary: WB1 and WB2. A map of waterbodies with potential to support GCN is provided in Figure 2. eDNA survey involves taking water samples from each waterbody and sending the samples away for laboratory analysis.

Surveyors attended site on 24th June 2026 to undertake eDNA sampling of ponds WB1 and WB2 (see Figure 2 for locations). Collection of the eDNA samples was undertaken by Tetra Tech Senior Ecologist Elizebeth Ferrier BSc (Hons) MSc ACIEEM and Assistant Ecologist Seren Cunnah. Elizebeth Ferrier holds a Natural England Class 1 GCN Licence.

The sampling was carried out using a certified Surescreen Scientifics eDNA testing kit, with the samples collected and handled in accordance with their approved methodology – see here for full details: Great-Crested-Newt-min.pdf (surescreenscientifics.com).

Samples were sent to Surescreen Scientifics on the 25th June 2026. The eDNA testing was carried out by Surescreen Scientifics, following their approved analysis methodology. Refer to Appendix B for details.

LIMITATIONS

The WB2 was dry and therefore no samples could be taken. The survey was completed within the appropriate season and due to the pond being dry, it is unlikely to be used as a breeding pond for GCN and is therefore not considered a limitation.

WB1 was returned as a negative result. A negative test result does not rule out the potential for GCN to be present below the limit of detection. The threshold detection level is $3^* 10^{-3}$ ng/L but the minimum number of newts that can be detected is unknown (Biggs *et al.* 2014[4]). This however does not diminish the reliability of the test, therefore is not considered a limitation.

The limitations stated above, the survey effort applied is considered sufficient to meet the aims of the survey and this report, in accordance with the aforementioned guidelines.

VALIDITY

This report will be considered valid for 18 months, until 17/01/2028, in accordance with (CIEEM, 2019). After this time, it may be appropriate to consult an ecologist to confirm if an update assessment is required. The recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the habitats present, red line boundary or development proposals upon which this report was based.

[1] Biggs et al, 2014 - *WC1067 Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA*

RESULTS

The results for WB1 came back with a negative result. GCN eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of GCN absence. Due to this, GCN are considered likely absent from the site and are unlikely to be impacted by the development works. No further surveys for GCN are recommended.

As WB2 is dry, it is not considered suitable for GCN to breed in.

DISCUSSION

The field survey and test results have confirmed that GCN are likely absent from site.

A negative GCN result indicates that GCN eDNA was not detected within the sample or was below the threshold detection level (Appendix B). A negative test result does not rule out the potential for GCN to be present below the limit of detection. The threshold detection level is $3^* 10^{-3}$ ng/L but the minimum number of newts that can be detected is unknown (Biggs *et al.* 2014[4]). In this case, it is considered that GCN are likely to be absent from the site due to the dry waterbody (WB2), the negative eDNA (WB1) results and the lack of local records.

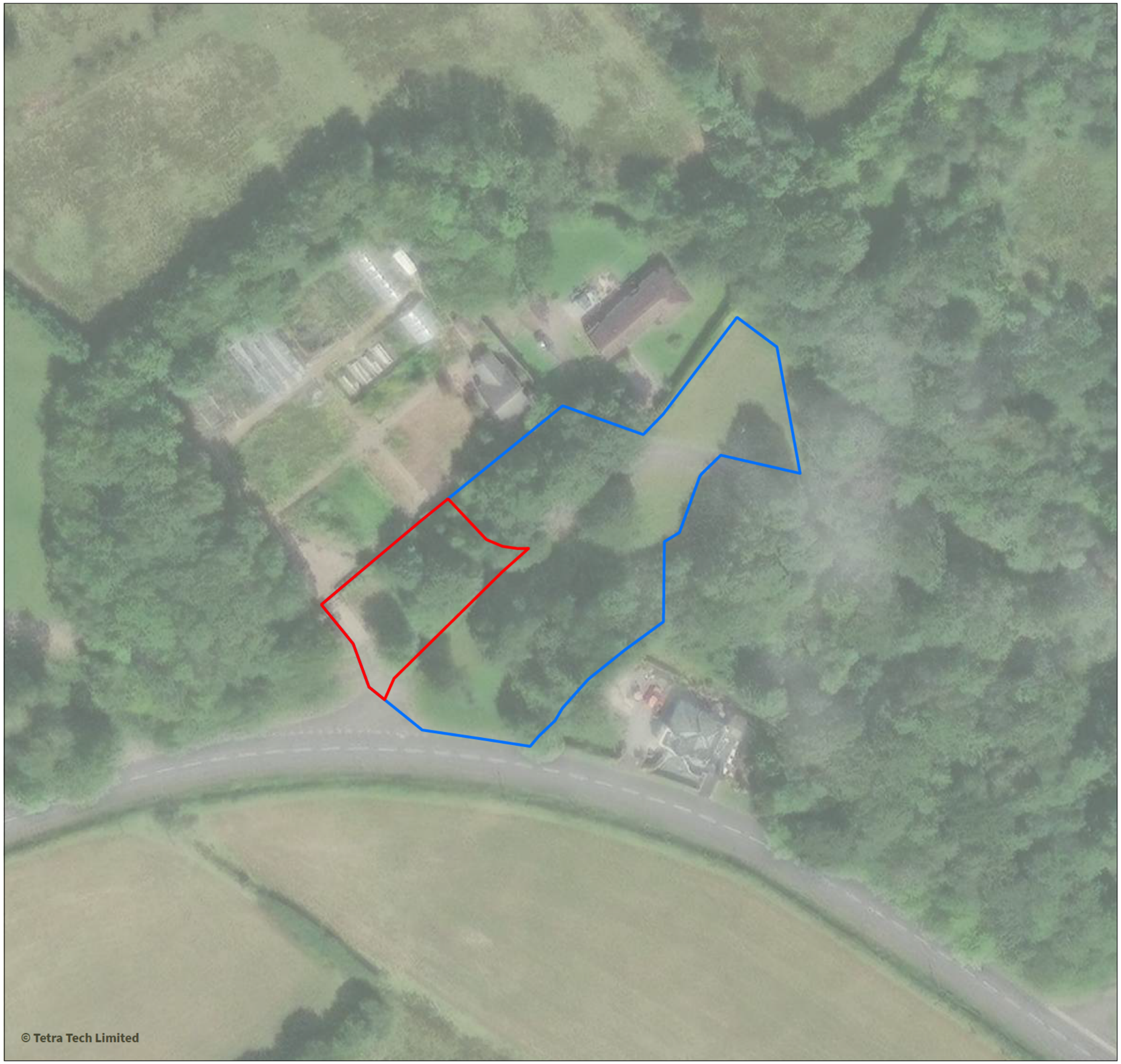
Development works can commence if all other appropriate permissions are in place

SUMMARY

- Five waterbodies were identified on aerial photo and OS mapping as being located within 500 m of the site boundary. Out of these five, three were scoped out due to low risk of GCN presence (lack of GCN records).
- WB2 was dry, so no sampling could take place, however the dry environment during breeding season suggests that GCN are likely absent from this waterbody.
- WB1 was sampled and the eDNA sample came back negative.
- Due to a negative GCN eDNA result, GCN are considered likely absent from the site, and no further surveys are required. Development works can commence if all other appropriate permissions are in place.

Document Control			
Revision:	1	**Status:**	Final
Date:	17/07/2026		
Prepared by: Seren Cunnah BSc (Hons) **Assistant Ecologist** [redacted]	**Checked by** Elizebeth Ferrier ACIEEM BSc (Hons) MSc **Senior Ecologist** [redacted]	**Approved By:** Candice Howe CEcol MCIEEM **Associate Director** [redacted]	

FIGURES



Site Location Plan

Distington Walled Garden

Cumberland Council

Legend

- Development boundary
- Wider site boundary

Notes:

Drawn by: maya.exelby

Checked by: Seren Cunnah

Figure No. 1

Revision No. A

16 July 2026

0 10 20 30 40 Meters

Scale 1:800 @A3

British National Grid

NGR: 301549E 523841N

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Waterbody Location Plan

Distington Walled Garden

Cumberland Council

Legend

- Development boundary
- Wider site boundary
- Site boundary buffer (500 m)
- Waterbodies
- Descoped waterbodies

WB2

WB1

Notes:

Drawn by: maya.exelby

Checked by: Seren Cunnah

Figure No. 2

Revision No. A

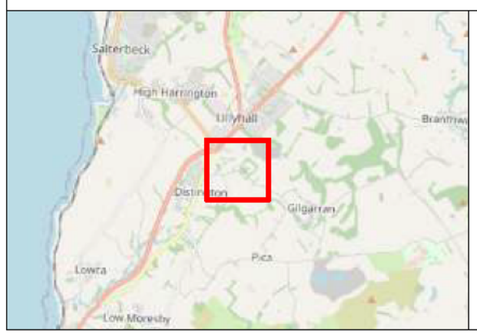
16 July 2026

0 50 100 150 200 Meters

Scale 1:4,250 @A3

British National Grid

NGR: 301549E 523841N



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APPENDIX A – REPORT CONDITIONS

This Report has been prepared using reasonable skill and care for the sole benefit of the Cumberland Council ("the Client") for the proposed uses stated in the report by [Tetra Tech Environment Planning Transport Limited] ("Tetra Tech"). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder's permission.

No liability is accepted or warranty given for; unconfirmed data, third party documents and information supplied to Tetra Tech or for the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report. Tetra Tech does not purport to provide specialist legal, tax or accounting advice.

The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B – EDNA SURVEY RESULTS

Folio No:	3095-2026
Purchase Order:	PO: 7025003
Contact:	Tetra Tech Environment Planning Transport Limited
Issue Date:	09.07.2026
Received Date:	25.06.2026

GCN Report

Technical Report

SureScreen Scientifics

Folio No: 3095-2026
Purchase Order: PO: 7025003
Contact: Tetra Tech Environment Planning Transport Limited
ssue Date: 09.07.2026
Received Date: 25.06.2026

SureScreen Scientifics

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 10318	DISTINGTON WALLED GARDEN -B069016 - WB1	NY 01548 23820	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: Ruby Fielding

Approved by: Alice Cunnington

SureScreen Scientifics

Methodology

The samples detailed above have been analyzed for the presence of GCN eDNA following the protocol stated in DEFRA WC1067 'Analytical and methodological development for improved surveillance of the Great Crested Newt, Appendix 5.' (Biggs et al. 2014). Each of the 6 sub-sample tubes are first centrifuged and pooled together into a single sample tube which then undergoes DNA extraction. The extracted sample is then analyzed using real-time PCR (qPCR), which uses species-specific molecular markers to amplify GCN DNA within a sample. These markers are unique to GCN DNA, meaning that there should be no detection of closely related species.

If GCN DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If GCN DNA is not present then amplification does not occur, and a negative result is recorded. Analysis of eDNA requires attention to detail to prevent the risk of contamination. True positive controls, negative controls, and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared and reported. Stages of the DNA analysis are also conducted in different buildings at our premises for added analytical security.

SureScreen Scientifics Ltd is ISO9001 accredited and participates in Natural England's proficiency testing scheme for GCN eDNA testing.

Interpretation of Results

Sample Integrity Check: When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results. Any samples which fail this test are rejected and eliminated before analysis.

Degradation Check: **Pass/Fail**. Analysis of the spiked DNA marker to see if there has been degradation of the kit or sample between the date it was made to the date of analysis. Degradation of the spiked DNA marker may lead indicate a risk of false negative results.

Inhibition Check: **Pass/Fail.** The presence of inhibitors within a sample is assessed using a DNA marker. If inhibition is detected, samples are purified and re-analyzed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.

Result: **Presence of GCN eDNA (Positive/Negative/Inconclusive)**
Positive: GCN DNA was identified within the sample, indicative of GCN presence within the sampling location at the time the sample was taken or within the recent past at the sampling location.
Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for GCN presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. In accordance with the WC1067 Natural England protocol, even a score of 1/12 is declared positive. 0/12 indicates negative GCN presence.
Negative: GCN eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of GCN absence, however, does not exclude the potential for GCN presence below the limit of detection.
Inconclusive: Controls indicate inhibition or degradation of the sample, resulting in the inability to provide conclusive evidence for GCN presence or absence.