Light Valley Solar

Environmental Statement Volume 3

Appendix 6.6: GCN Report

Document Reference: EN0110012/APP/LVS/06.03.06.06

September 2026
Version 2

Planning Inspectorate Reference: EN0110012
APFP Regulation 5(2)(a)

Light Valley Solar

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning
(Applications: Prescribed Forms and Procedure) Regulations 2009

Light Valley Solar

DCO Submission

Appendix 6.6: GCN Report

Regulation Reference	APFP Regulation 5(2)(a)
Planning Inspectorate Case Reference	EN0110012
Application Document Reference	EN0110012/APP/06.03.06.06
Author	Tyler Grange

Version	Date	Status of Version
1.0	February 2026	DCO Submission
2.0	September 2026	Deadline 2

Contents

List of tables

List of Plates

1 Introduction

1.1 Overview and purpose of the document

1.1.1 This great crested newt *Triturus cristatus* (GCN) survey report has been produced by Tyler Grange Limited on behalf of Light Valley Solar Limited ('The Applicant') and relates to the Proposed Development of a solar photovoltaic (PV) modules, Battery Energy Storage System (BESS) and associated infrastructure.

1.1.2 The Proposed Development's boundary, herein referred to as the 'Order Limits', is made up of four broad areas, the Solar Development Sites (900 (hectares) ha), Cable Route Corridor (328.5 ha), Highways Improvements Areas (17.1 ha), and Solar Development Site 8 Access (24.1 ha). Underground electric cables laid within the Cable Route Corridor will connect the Solar Development Sites and the existing Monk Fryston Substation, where the Proposed Development will connect to the National Grid. The Highways Improvement Areas are sections of the highway network that will contain localised improvements to allow movement of construction vehicles on narrower sections of the local highway network, such as improvements to the road edge, traffic management, and provision of temporary passing places or visibility splays. The Solar Development Site 8 Access area will provide optionality to access Solar Development Site 8 from the north. The entirety of the Order Limits is within the administrative area of North Yorkshire Council and falls within what was Selby district.

1.1.3 The Solar Development Sites are split across a total of seven separate land parcels (Solar Development Sites 1-4 and 6-8) as presented in Figure 2.1: Illustrative Site Layout Plans (ES Volume 2) [**EN0110012/APP/LVS/06.02.02.01]** and in Outline Environmental Masterplan [**EN110012/APP/LVS/02.12]**. The Solar Development Sites largely comprise agricultural fields bound by hedgerows, ditches and mature trees, with smaller areas of woodland, grassland and scrub. The Cable Route Corridor is similarly comprised of agricultural fields and associated boundary features and passes through the River Ouse and Selby Dam. The Highways Improvements Areas, and Solar Development Site 8 Access largely comprise hardstanding roads and adjacent habitats, with Solar Development Site 8 Access also passing through Selby Dam.

1.1.4 Within the report, the Cable Route Corridor, Highways Improvements Areas, and Solar Development Site 8 Access are collectively referred to as "Order Limits Outside of the Solar Development Sites".

1.1.5 The only Solar Development Site with ponds present is Solar Development Site 1, with five ponds recorded, comprising Pond 1.1 (P1.1), Pond 1.2 (P1.2), Pond 1.3 (P1.3), Pond 1.5 (P1.5), and Pond 1.12 (P1.12). There are also 41 ponds within 250 metres (m) of the Solar Development Sites (ponds beyond major dispersal barriers have not been counted). All ponds within the Order Limits will be retained and protected throughout the construction, operation and decommissioning of the Proposed Development.

1.1.6 No ponds are located within the Order Limits Outside of the Solar Development Sites. There are however 29 ponds present within 250 m of the Order Limits Outside of the Solar Development Sites (all 29 ponds are outside of the Order Limits).

1.1.7 GCN eDNA surveys of ponds within the Solar Development Sites, and within 250 m of the Solar Development Sites were undertaken (where access was possible) to determine the presence/likely absence of GCN within these ponds, as 250 m is generally taken as the average commuting distance for GCN from breeding ponds (Ref 2).

1.1.8 As the works to the Order Limits Outside of the Solar Development Sites will largely be temporary, small scale, extend over sub-optimal GCN habitat (cropland and hardstanding), and avoid all ponds and their 250 m buffers where possible, no eDNA surveys were deemed proportionate for ponds within 250 m of the Order Limits Outside of the Solar Development Sites. Instead, the limited impacts to GCN that may be experienced during the works with the Order Limits Outside of the Solar Development Sites will be suitably mitigated through the implementation of Precautionary Working Methods (PWM) for the species as detailed within Outline Construction and Environmental Management Plan (oCEMP) [**EN0110012/APP/LVS/07.02**]. This approach was agreed with North Yorkshire Council (see Table 6-8 within Chapter 6: Biodiversity (ES Volume I) [**EN0110012/APP/LVS/06.01.06]**). Data search records for the Order Limits Outside of the Solar Development Sites are however presented in this report.

1.2 Quality control

1.2.1 All ecologists at Tyler Grange Group Limited are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) or are working towards membership, and act under the direction of members and abide by the Institute's Code of Professional Conduct (Ref 1).

1.3 Legislation and conservation status

1.3.1 As a European Protected Species (EPS), GCN receive legal protection in England under the Conservation of Habitats and Species Regulations 2017 (as amended) (Ref 7) and the Wildlife and Countryside Act 1981 (as amended) (Ref 8).

1.3.2 Under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (Ref 7) GCN are listed as a EPS. Regulation 41(1) makes it an offence to:

1) Deliberately capture, or injure an EPS;
2) Deliberately disturb an EPS;
3) Deliberately take or destroy the eggs of an EPS; or
4) Damage or destroy a breeding site or resting place of an EPS.

1.3.3 Although GCN still maintain a widespread distribution in England, they are in decline, notably through loss of breeding ponds. A greater decline has been noted

across the European range of the GCN, and now the UK holds a large proportion of the world population of the species. GCN is listed on the UK and Selby District Biodiversity Action Plan (BAP) (Ref 9) and is a Species of Principal Importance (SoPI) under the Natural Environment and Rural Communities Act 2006 (Ref 10).

2 Methodology

2.1 Desk study

2.1.1 The local records centre, North and East Yorkshire Ecological Data Centre (NEYEDC) was consulted for protected and priority species records within 2 kilometres (km) of the Order Limits within the past 10 years.

2.1.2 Additionally, the Multi-Agency Geographic Information for the countryside (MAGIC) website was checked for GCN survey licence returns within 2 km of the Order Limits within the past 10 years.

2.2 Field survey

Survey area

2.2.1 GCN eDNA surveys of ponds within the Solar Development Sites, and within 250 m of the Solar Development Sites were undertaken (where access was possible) to determine the presence/likely absence of GCN within these ponds, as shown on Figure 6.10: GCN eDNA Results V2 (ES Volume 2) [**EN0110012/APP/LVS/06.02.06.10]).** GCN can move up to 500 m between breeding ponds although, as a general guide, only habitats within 250 m of breeding ponds are most frequently used (Ref 2).

2.2.2 The presence of ponds within 250 m of the Solar Development Sites was established with the use of ordnance survey maps, aerial photographs and data search results.

Habitat Suitability Index (HSI) assessment

2.2.3 A Habitat Suitability Index (HSI) assessment (Ref 3 and Ref 4) was undertaken of all ponds within 250 m of the Solar Development Sites, where access allowed (as discussed below in the limitations) and shown on Figure 6.10: GCN eDNA Results V2 (ES Volume 2) [**EN0110012/APP/LVS/06.02.06.10**]), on 3rd, 17th and 25th June 2025, and in 2026 on the 23rd April, 19th May and 2nd June. The HSI uses a number of factors including pond location, water quality, macrophyte cover and shading. A score is given to each pond between 0 and 1, with scores closer to 0 having lower probability of GCN occurrence.

2.2.4 The HSI scores are provided below:

1) <0.5 Poor;
2) 0.5 – 0.59 Below average;
3) 0.6 – 0.69 Average;
4) 0.7 – 0.79 Good; and
5) >0.8 Excellent.

2.2.5 Although the HSI score cannot confirm the presence or likely absence of GCN, it can be used as a guide to assess the habitat in terms of its potential to support GCN.

2.2.6 A HSI assessment was not completed for dry ponds. Ponds found to be dry at the time of survey are shown on Figure 6.10: GCN eDNA Results V2 (ES Volume 2) [**EN0110012/APP/LVS/06.02.06.10**].

eDNA survey

2.2.7 In order to confirm the presence or likely absence of GCN, the ponds within the Solar Development Sites (five ponds), and within 250 m of the Solar Development Sites (41 ponds), were subjected to environmental DNA (eDNA) analysis (where access was possible) which provides a positive or negative result for GCN DNA. Ponds surveyed are shown on Figure 6.10: GCN eDNA Results V2 (ES Volume 2) [**EN0110012/APP/LVS/06.02.06.10**].

2.2.8 Water samples were taken from the ponds on the same dates as the HSIs detailed above. Field surveyors acted under an appropriate Natural England GCN licence. This approach followed standard methods (Ref 5), which are approved by Natural England and provides a rapid means of establishing the presence / likely absence of GCN.

2.2.9 Survey methodology, as provided by SureScreen Scientifics (Ref 6) and approved by Natural England, are:

1) Identify 20 sites around the perimeter of the pond where you plan to collect your subsamples from. To ensure the sampling effort is representative of the site, space these as evenly as possible and include vegetative areas and areas likely to contain GCN.
2) Gloves should be worn at all times during sample collection to avoid contamination of samples.
3) Using the ladle, collect a subsample from at least 5-10 cm deep from each of the sites previously identified in step 1 (total 20 samples). Transfer each ladle full of water to the bag provided.
4) Once all sites have been sampled, tightly scrunch the bag and shake vigorously for 10 seconds (to mix any DNA within the sample equally).
5) Using the pipette, transfer water from the bag to each of the preservative filled tubes. Repeat this step multiple times until 15 ml is transferred (tube is filled to the 50 ml mark).
6) Close the tubes and ensure the lids are tight and not cross threaded. Shake each vigorously for 3 seconds.

2.3 Limitations

2.3.1 Of the 46 ponds to be surveyed, access to 10 ponds was denied, and therefore it was not possible to complete the eDNA survey of these 10 ponds. The location of these ponds is shown on Figure 6.10: GCN eDNA Results V2 (ES Volume 2)

[**EN0110012/APP/LVS/06.02.06.10**]. As a precautionary approach, these ponds are assumed to be positive for GCN in the assessment.

2.3.2 It is noted that 2026 was a drought year and as such, some ponds may have been recorded as dry when usually they would be holding water. However, this is not thought to pose a major constraint to assessment as only 13 of the 46 ponds requiring survey were recorded as dry. In addition, the GCN eDNA surveys will be repeated in the appropriate season prior to the start of works, to accurately identify the spread of the species at that time.

3 Results

3.1 Desk study results

3.1.1 A total of 28 records of GCN have been returned with 2 km of the Order Limits within the last 10 years.

3.1.2 The closest GCN record to the Order Limits was located within Scarrow Green Pond Site of Importance for Nature Conservation (SINC) where juveniles were observed in the pond in 2020. The Highways Improvements Areas overlaps approximately 3.5 m of Scarrow Green Pond, Little Skipwith SINC adjacent to Glade Road, with this 3.5 m comprising a hardstanding road. The GCN record is associated with the pond immediately west of this road.

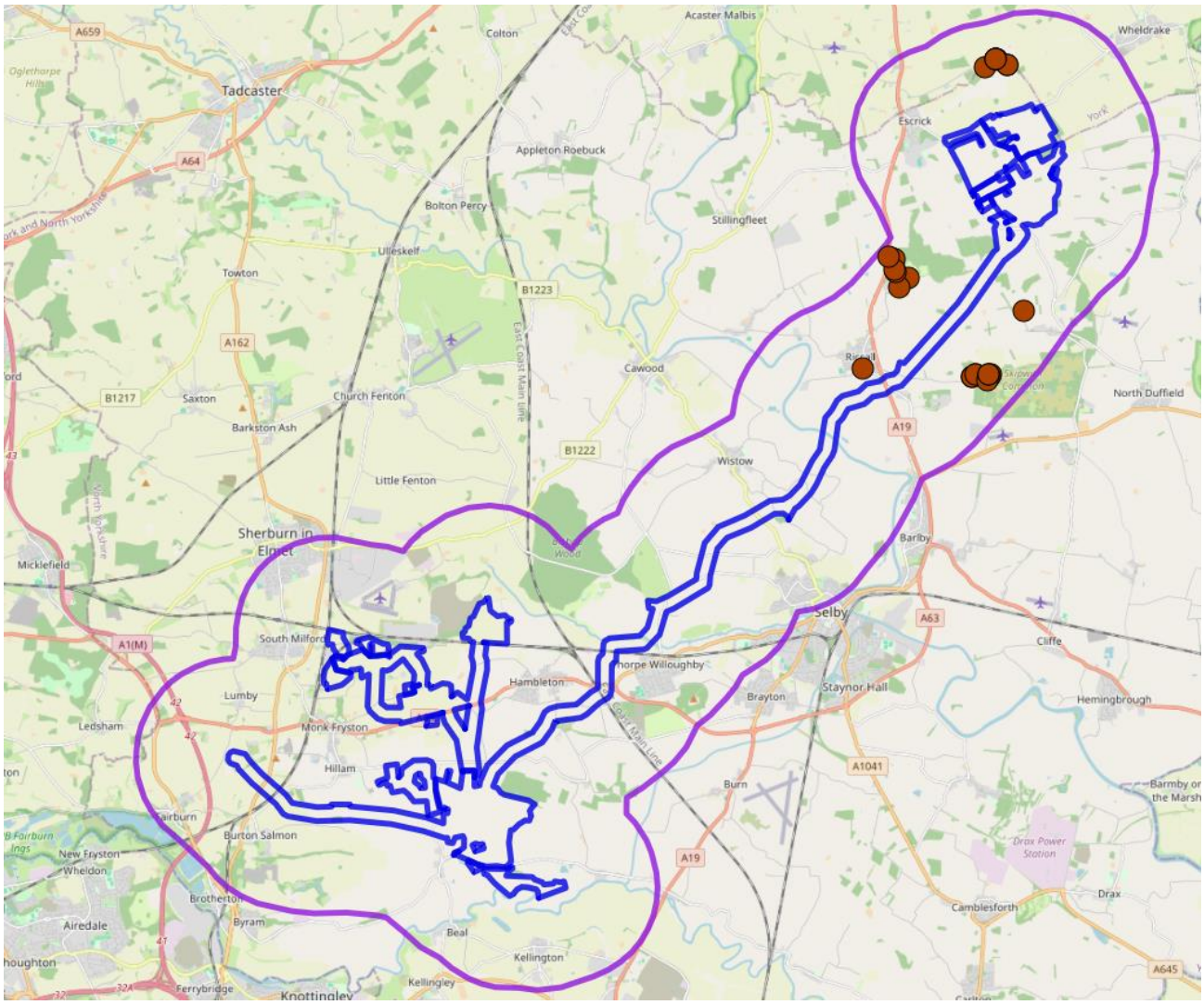
3.1.3 The road adjacent to the pond will be utilised for construction traffic for part of the Cable Route Corridor, and as such will only be used for a limited time during the construction phase in this area.

3.1.4 With regards to the remainder of the Order Limits Outside of the Solar Development Sites, the only other GCN records in 2 km were located within Skipwith Common Special Area of Conservation (SAC) (closest record located approximately 1.1 km east of the Cable Route Corridor), within Hollinscarrs Wood SINC (closest record located approximately 1.1 km north-west of the Cable Route Corridor), and within a pond in Riccall located approximately 310 m west of the Highways Improvements Areas, which is beyond the accepted dispersal limit for GCN. All these records are associated with northern extent of the Cable Route Corridor referenced as CRC 1-4, as shown in Plate 1 below.

3.1.5 With regards to the Solar Development Sites, the only Solar Development Site with GCN records within 2 km is Solar Development Site 1. These records are all associated with North Selby Mine SINC and adjacent disused mining works, with the closest GCN record located approximately 1 km north of Solar Development Site 1.

3.1.6 All other Solar Development Sites do not have any GCN records within 2 km, as shown in Plate 1 below.

Plate 1 GCN Data Search Results*



*GCN records shown in red, Order Limits shown in blue, 2 km buffer shown in purple

3.1.7 Additionally, following consultation with MAGIC, there are three granted European Protected Species Licences (EPSL) permitting the damage and destruction of a GCN resting place approximately 1.1 km north of Solar Development Site 1 associated with the North Selby Mine disused works from 2021-2023 (2014-5853-EPS-MIT, 2014-5853-EPS-MIT-1 and 2014-5853-EPS-MIT-2). There are also seven positive GCN class licence returns in this location.

3.1.8 There are no other GCN ESPLs or class licences with 2 km of all other Solar Development Sites, or within 250 m of the Order Limits Outside of the Solar Development Sites.

3.2 Field survey

3.2.1 A total of five ponds are located within Solar Development Site 1 (P1.1, P1.2, P1.3, P1.5 and P1.12). There are no ponds within any of the other six Solar Development Sites. An additional 41 ponds are located within 250 m of the Solar

Development Sites. These ponds are shown on Figure 6.10: GCN eDNA Results V2 (ES Volume 2) [**EN0110012/APP/LVS/06.02.06.10**]**.**

3.2.2 Of the 46 ponds to be surveyed, 10 ponds could not be accessed to complete the eDNA surveys in 2025 or 2026. As a precautionary approach, these ponds are therefore assumed to be positive for GCN.

3.2.3 Of the 36 ponds successfully surveyed, 13 were dry or not present and therefore unsuitable for breeding GCN. In addition, 22 ponds received negative GCN eDNA survey results and it can therefore be concluded that GCN are likely absent from these 22 ponds.

3.2.4 One pond, Pond 1.14, located approximately 50 m west of Site 1 was the only pond to return a positive eDNA result for GCN. The pond is located within an off-site woodland copse, separated from Site 1 by Skipwith Road. There are no other records of GCN located within 2 km of this pond. The area of Site 1 present within the 250 m buffer zone of Pond 1.14 comprises approximately 4.23 ha of arable field, 0.153 ha of arable field margin, and 105 m of ditch.

3.2.5 Detailed results including pond location, description, HSI assessment and eDNA survey results (where applicable) are available in Table 3-1 below and Figure 6.10: GCN eDNA Results V2 (ES Volume 2) [**EN0110012/APP/LVS/06.02.06.10**]**.** The detailed HSI calculations are available in Annex A. The results of the eDNA surveys, as provided by SureScreen Scientifics, are appended to this report (Annex B).

Table 3-1 HSI and eDNA Survey Results

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P1.1	Dry	Within Solar Development Site 1	P1.1 comprised a small pond in the corner of the field which at the time of survey was completely dry. Soft rush *Juncus effusus* and bulrush *Typha latifoli* indicate there was water inundation for at least part of the year. No shade was present, and fish and waterfowl are unlikely. There was some willow *Salix sp.* scrub present.	N/A	N/A	
P1.2	Dry	Within Solar Development Site 1	At the time of survey, no pond was present in this location. During the habitat survey in April 2024, P1.2 was recorded as inundated corner of an arable field, and therefore is assumed to be ephemeral.	N/A	N/A	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P1.3	eDNA sample taken	Within Solar Development Site 1	P1.3 had slightly turbid water, but the bottom of the pond was still visible. The pond was almost completely shaded, with no/ minor presence of waterfowl, and it was unlikely to contain fish. The pond was surrounded by dense vegetation, with willow species trees and reeds present.	Below average	Negative	
P1.5	eDNA sample taken	Within Solar Development Site 1	P1.5 had muddy edges which suggested the pond had partially dried, and there were signs of cattle poaching. Few macrophytes were present and the pond was 70% shaded by alder trees on banks. Ducks were likely to be present, and some algae was recorded.	Poor	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P1.12	eDNA sample taken	Within Solar Development Site 1	P1.12 was surrounded by ruderal vegetation, including nettles and willowherbs with occasional willow trees. No macrophytes were present, ducks were recorded, and the pond was 10% shaded by willows. The water was turbid, and fish presence was unknown but unlikely.	Poor	Negative	
P1.4	Dry	Within 250 m of Solar Development Site 1	P1.4 was completely dry and shaded by trees within small copse. No macrophytes, fish, or waterfowl impacts were likely.	N/A	N/A	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P1.6	Dry	Within 250 m of Solar Development Site 1	P1.6 was completely dry and completely shaded by woodland plantation. Only terrestrial vegetation was present.	N/A	N/A	
P1.7	eDNA sample taken	Within 250 m of Solar Development Site 1	P1.7 was a muddy pond, with high turbidity and poor water quality. There was a flock of mallard, shading from trees, and no aquatic plants present.	Below average	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P1.8	eDNA sample taken	Within 250 m of Solar Development Site 1	P1.8 was turbid with signs of some drying. No macrophytes were present, and there were overhanging willow trees. The pond was used by geese and ducks.	Poor	Negative	
P1.9	Dry	Within 250 m of Solar Development Site 1	P1.9 was dry at the time of survey. Soft rush tussocks with willow species were growing in middle, with no macrophytes present. There was poor terrestrial habitat around the pond, such as short grass and bare ground.	N/A	N/A	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P1.10	Dry	Within 250 m of Solar Development Site 1	P1.10 was dry at the time of survey and formed a shallow depression in a horse grazing paddock. No macrophytes were present, and vegetation mainly comprised grass.	N/A	N/A	
P1.11	eDNA sample taken	Within 250 m of Solar Development Site 1	P1.11 was a large pond with mown amenity grassland present on the bank top, no shading, and mallard were likely to be present. Fish were present. Macrophytes along margin comprised flag iris, hard rush, great willowherb, reeds, and willow scrub.	Excellent	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P1.13	Dry	Within 250 m of Solar Development Site 1	P1.13 was a dry pond in the woodland edge, it was completely shaded with no aquatic plants.	N/A	N/A	
P1.14	eDNA sample taken	Within 250 m of Solar Development Site 1 (approximately 50 m west)	P1.14 was located in an off-site woodland copse, and was partly shaded by surrounding trees, with some marginal vegetation present. The pond was separated from Site 1 by Skipwith Road, and there are no other records of GCN located within 2 km of this pond. The area of Site 1 present within the 250 m buffer zone of Pond 1.14 comprises approximately 4.23 ha of arable field,	Good	**Positive**	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
			0.153 ha of arable field margin, and 105 m of ditch.			
P1.23	eDNA sample taken	Within 250 m of Solar Development Site 1	P1.23 was an ornamental garden pond surrounded by trees and amenity grassland. The pond had a water fountain and wooden boards forming the pond edge in places. Some emergent vegetation including bullrush and yellow flag iris was present and tadpoles were noted in the pond.	Below average	Negative	
P2.1	eDNA sample taken	Within 250 m of Solar Development Site 2	P2.1 was a historic manmade pond with the pond lining visible where the water level had reduced significantly. There was lots of leaf litter and large branches within the pond from fallen trees, and the water quality was poor.	Poor	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P2.2	eDNA sample taken	Within 250 m of Solar Development Site 2	P 2.2 was located in the margin of an arable field. The pond was connected to the adjacent wet ditch, and filamentous algae was present within the pond. The pond edge was surrounded by bullrush, and water mint was also present.	Average	Negative	
P2.3	Not present	Within 250 m of Solar Development Site 2	At the time of survey, no pond was present in this location. The landowner confirmed the pond was removed a number of years ago.	N/A	N/A	No picture

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P2.4	eDNA sample taken	Within 250 m of Solar Development Site 2	P2.4 was located within, and partially shaded by, an area of trees. The pond was located next to a ditch, but the two were not connected. Common reed and bullrush were present within the pond.	Below Average	Negative	
P4.3	Dry	Within 250 m of Solar Development Site 4	P4.3 was dry at the time of survey.	N/A	N/A	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P4.4	Not present	Within 250 m of Solar Development Site 4	P4.4 was completely dry and shaded by a woodland strip. Only terrestrial vegetation was present.	N/A	N/A	
P4.5	Not present	Within 250 m of Solar Development Site 4	At the time of survey, no pond was present in this location, instead the aquatic feature identified on OS mapping was confirmed to be a large ditch.	N/A	N/A	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P4.6	Dry	Within 250 m of Solar Development Site 4	P4.6 was dry at the time of survey and comprised a large area of rush.	N/A	N/A	
P4.7	eDNA sample taken	Within 250 m of Solar Development Site 4	Pond 4.7 comprised a very large fishing pond surrounded by mown amenity grassland. There was a large island in the centre of the pond, and some emergent vegetation including yellow flag iris and waterlily was present.	Poor	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P4.8	eDNA sample taken	Within 250 m of Solar Development Site 4	Pond 4.8 comprised a large fishing pond surrounded by mown amenity grassland. There was a small island in the centre of the pond, and some emergent vegetation including yellow flag iris and waterlily was present.	Poor	Negative	
P6.1	eDNA sample taken	Within 250 m of Solar Development Site 6	Pond 6.1 was a large ornamental pond within a residential garden with some emergent vegetation including waterlily present.	Below average	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P6.2	eDNA sample taken	Within 250 m of Solar Development Site 6	Pond 6.2 comprised a fishing pond surrounded by woodland and scrub. Small areas of yellow flag iris, common reed and willow saplings formed emergent vegetation within the pond.	Poor	Negative	
P6.3	eDNA sample taken	Within 250 m of Solar Development Site 6	Pond 6.3 comprised a large fishing pond immediately surrounded by mown amenity grassland and woodland. An area of emergent common reed was present in the west of the pond.	Below Average	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P6.4	eDNA sample taken	Within 250 m of Solar Development Site 6	Pond 6.4 comprised a large fishing pond immediately surrounded by mown amenity grassland with woodland beyond this. Small areas of bullrush were present but no other emergent vegetation was noted.	Poor	Negative	
P6.5	eDNA sample taken	Within 250 m of Solar Development Site 6	P6.5 was completed surrounded and overshadowed by woodland. Some yellow flag iris was present, and willow trees overhung the surface of the water.	Below Average	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P6.6	Not present	Within 250 m of Solar Development Site 6	At the time of survey, no pond was present in this location. The area was completely shaded by woodland. Only terrestrial vegetation was present.	N/A	N/A	
P6.7	eDNA sample taken	Within 250 m of Solar Development Site 6	P6.7 was a manmade ornamental duck pond. The pond was lined and had chemicals added to stop algae growth. The pond was surrounded by grazed grassland and ornamental plants to the east, and a scrubby railway embankment to the west.	Poor	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P6.8	eDNA sample taken	Within 250 m of Solar Development Site 6	P6.8 was located in a cluster of three ponds with P6.9 and P6.11. It was large and had some yellow flag iris, water lily and bullrush present.	Poor	Negative	
P6.9	eDNA sample taken	Within 250 m of Solar Development Site 6	P6.9 was located in a cluster of three ponds with P6.8 and P6.11. It was very large and had some yellow flag iris, water lily and bullrush present.	Poor	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P6.10	eDNA sample taken	Within 250 m of Solar Development Site 6	P6.10 was a very small ornamental pond in a residential garden. The pond was constructed of brick with a wire mesh cage over the surface. Some emergent vegetation was present including water lily.	Average	Negative	

Pond Number	Survey Detail	Location	Description	Pond Suitability (HSI)	eDNA Result	Photo
P6.11	eDNA sample taken	Within 250 m of Solar Development Site 6	P6.11 was located in a cluster of three ponds with P6.8 and P6.9. It was a large, rectangular and had a small amount of yellow flag iris, water lily and bullrush present.	Poor	Negative	

4 Conclusions

4.1.1 Of the 46 ponds to be surveyed, 10 ponds could not be accessed to complete the eDNA surveys in 2025 or 2026. As a precautionary approach, these ponds are therefore assumed to be positive for GCN.

4.1.2 Of the 36 ponds successfully surveyed, 13 were dry or not present and therefore unsuitable for breeding GCN. In addition, 22 ponds received negative GCN eDNA survey results and it can therefore be concluded that GCN are likely absent from these 22 ponds.

4.1.3 One pond, Pond 1.14, located approximately 50 m west of Site 1 was the only pond to return a positive eDNA result for GCN. The pond is located within an off-site woodland copse, separated from Site 1 by Skipwith Road. There are no other records of GCN located within 2 km of this pond. The area of Site 1 present within the 250 m buffer zone of Pond 1.14 comprises approximately 4.23 ha of arable field, 0.153 ha of arable field margin, and 105 m of ditch.

Annex A HSI Survey Results

Table A-1 HSI Survey Results

Pond number	Geographic location	Pond area (suitability index score)	Pond permanence	Water quality	Shade	Waterfowl effect	Fish presence	Pond density	Terrestrial habitat	Macropyhyte cover	HSI score	Pond suitability
P1.3	1	0.8	1	0.33	0.2	0.67	0.67	0.78	0.67	0.3	0.57	Below average
P1.5	1	0.8	0.5	0.33	1	0.01	0.67	0.78	0.67	0.3	0.41	Poor
P1.7	1	0.6	0.9	0.01	1	0.01	0.67	0.78	1	0.3	0.58	Below average
P1.8	1	0.6	1	0.01	1	0.01	0.67	0.78	0.33	0.3	0.28	Poor
P1.11	1	0.95	9	0.33	1	0.67	0.33	0.85	0.33	0.9	0.83	Excellent
P1.12	1	0.92	1	0.33	1	0.01	0.67	0.78	1	0.3	0.47	Poor
P1.14	1	0.8	0.9	0.67	0.9	0.67	0.7	0.45	0.67	0.85	0.74	Good
P1.23	1	1	0.9	0.67	1	0.67	0.33	0.10	0.67	0.35	0.56	Below average
P2.1	1	0.1	0.1	0.01	0.2	1	1	0.44	1	0.3	0.28	Poor
P2.2	1	0.3	0.9	0.67	1	1	1	0.44	0.67	0.4	0.68	Average
P2.4	1	0.1	0.9	0.67	0.2	1	1	0.44	1	0.8	0.58	Below Average
P4.7	1	NA >2000m	0.9	0.67	1	0.67	0.01	0.28	0.33	0.3	0.40	Poor
P4.8	1	0.95	0.9	0.67	1	0.67	0.01	0.28	0.33	0.3	0.40	Poor

Pond number	Geographic location	Pond area (suitability index score)	Pond permanence	Water quality	Shade	Waterfowl effect	Fish presence	Pond density	Terrestrial habitat	Macropyhyte cover	HSI score	Pond suitability
P6.1	1	0.9	0.9	0.67	1	1	0.01	0.67	0.33	0.9	0.51	Below average
P6.2	1	0.2	0.9	0.67	0.4	0.67	0.01	0.71	1	0.6	0.41	Poor
P6.3	1	0.9	0.9	1.0	1	0.67	0.01	0.71	0.67	0.35	0.50	Below Average
P6.4	1	Na >2000m	0.9	0.67	1	0.67	0.01	0.71	0.67	0.3	0.44	Poor
P6.5	1	0.2	0.9	0.67	0.4	0.67	0.33	0.71	1	0.55	0.58	Below Average
P6.7	1	0.2	0.9	0.67	1	0.01	0.33	0.44	0.67	0.30	0.36	Poor
P6.8	1	0.3	0.9	0.67	1	1	0.01	0.60	0.67	0.35	0.44	Poor
P6.9	1	NA >2000m	0.9	0.67	1	1	0.01	0.60	0.67	0.35	0.46	Poor
P6.10	1	0.1	1.0	0.67	1	1	01	0.44	0.67	0.8	0.66	Average
P6.11	1	0.8	0.9	0.67	1	1	0.01	0.60	0.67	0.3	0.47	Poor

Annex B eDNA Survey Results

Folio No:	970-2026
Purchase Order:	PT-086014
Contact:	Tyler Grange
Issue Date:	13.05.2026
Received Date:	28.04.2026

GCN Report

Technical Report

SureScreen Scientifics

Folio No: 970-2026
Purchase Order: PT-086014
Contact: Tyler Grange
ssue Date: 13.05.2026
Received Date: 28.04.2026

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
R26 00551	Monk Fryston - P6.4	SE 51133 31715	Pass	Pass	Negative	0/12
R26 00555	Monk Fryston - P6.3	SE 51027 31683	Pass	Pass	Negative	0/12
R26 00557	Monk Fryston - P6.2	SE 51028 31610	Pass	Pass	Negative	0/12
R26 00558	Monk Fryston - P1.3	SE 64826 42638	Pass	Pass	Negative	0/12
R26 00560	Monk Fryston - P6.5	SE 51309 31709	Pass	Pass	Negative	0/12
R26 00562	Monk Fryston - P1.14	SE 64128 41733	Pass	Pass	Positive	1/12
R26 00564	Monk Fryston - P1.12	SE 65546 41624	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: [redacted] Approved by: [redacted]

Folio No:	970-2026
Purchase Order:	PT-086014
Contact:	Tyler Grange
ssue Date:	13.05.2026
Received Date:	28.04.2026

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.

Folio No:	3540-2025
Purchase Order:	16807 - PT086014
Contact:	Tyler Grange
Issue Date:	17.07.2025
Received Date:	03.07.2025

GCN Report

Technical Report

SureScreen Scientifics

Folio No: 3540-2025
Purchase Order: 16807 - PT086014
Contact: [redacted]
ssue Date: 17.07.2025
Received Date: 03.07.2025

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
GCN25 6672	Monk Fryston - P6.1	SE 51172 30796	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: [redacted] Approved by: [redacted]

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.

Folio No:	2852-2025
Purchase Order:	16807 PT-086014
Contact:	Tyler Grange
Issue Date:	08.07.2025
Received Date:	24.06.2025

GCN Report

Technical Report

SureScreen Scientifics

Folio No: 2852-2025
Purchase Order: 16807 PT-086014
Contact: Tyler Grange
ssue Date: 08.07.2025
Received Date: 24.06.2025

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
GCN25 6668	Monk Fryston - P1	SE 63563 42823	Pass	Pass	Negative	0/12
GCN25 6675	Monk Fryston - P1.16	SE 63607 42615	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: [redacted]

Approved by: [redacted]

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.

Folio No:	2247-2026
Purchase Order:	PT-086014
Contact:	Tyler Grange
Issue Date:	18.06.2026
Received Date:	04.06.2026

GCN Report

Technical Report

SureScreen Scientifics

Folio No: 2247-2026
Purchase Order: PT-086014
Contact: Tyler Grange
ssue Date: 18.06.2026
Received Date: 04.06.2026

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 06434	Monk Frystan - P1.23	SE 65745 43374	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: [redacted]

Approved by: [redacted]

SureScreen Scientifics Ltd, Morley Retreat, Church Lane, Morley, Derbyshire, DE7 6DE, UK
+44 (0)1332 292003 scientifics@surescreen.com surescreenscientifics.com

Folio No:	2247-2026
Purchase Order:	PT-086014
Contact:	Tyler Grange
ssue Date:	18.06.2026
Received Date:	04.06.2026

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.

Folio No:	2205-2025
Purchase Order:	16807 / PT-086014
Contact:	Tyler Grange
Issue Date:	20.06.2025
Received Date:	06.06.2025

GCN Report

Technical Report

SureScreen Scientifics

Folio No: 2205-2025
Purchase Order: 16807 / PT-086014
Contact: Tyler Grange
ssue Date: 20.06.2025
Received Date: 06.06.2025

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
GCN25 6670	Monk Fryston - P11		Pass	Pass	Negative	0/12
GCN25 6671	Monk Fryston - P8		Pass	Pass	Negative	0/12
GCN25 6674	Monk Fryston - P7		Pass	Pass	Negative	0/12
GCN25 6677	Monk Fryston - P5		Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: [redacted] Approved by: [redacted]

Folio No:	2205-2025
Purchase Order:	16807 / PT-086014
Contact:	Tyler Grange
ssue Date:	20.06.2025
Received Date:	06.06.2025

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.

Folio No:	2087-2026
Purchase Order:	PT-086014
Contact:	Tyler Grange
Issue Date:	12.06.2026
Received Date:	29.05.2026

GCN Report

Technical Report

SureScreen Scientifics

Folio No: 2087-2026
Purchase Order: PT-086014
Contact: Tyler Grange
ssue Date: 12.06.2026
Received Date: 29.05.2026

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 02914	Monk Fryston P6.8	SE 51846 30827	Pass	Pass	Negative	0/12
GCN26 05153	Monk Fryston P4.7	SE 53465 26897	Pass	Pass	Negative	0/12
GCN26 05155	Monk Fryston P6.7	SE 50406 30716	Pass	Pass	Negative	0/12
GCN26 05157	Monk Fryston P6.10	SE 50357 30554	Pass	Pass	Negative	0/12
GCN26 05159	Monk Fryston P4.8	SE 53434 26916	Pass	Pass	Negative	0/12
GCN26 05162	Monk Fryston P6.11	SE 51901 30886	Pass	Pass	Negative	0/12
GCN26 05164	Monk Fryston P6.9	SE 51910 30846	Pass	Pass	Negative	0/12
GCN26 06430	Monk Fryston P2.1	SE 53226 30457	Pass	Pass	Negative	0/12
GCN26 06435	Monk Fryston P2.4	SE 53133 30710	Pass	Pass	Negative	0/12
GCN26 06436	Monk Fryston P2.2	SE 53144 30764	Pass	Pass	Negative	0/12

Folio No:	2087-2026
Purchase Order:	PT-086014
Contact:	Tyler Grange
ssue Date:	12.06.2026
Received Date:	29.05.2026

Matters affecting result: none

Reported by: [redacted]

Approved by: [redacted]

Folio No:	2087-2026
Purchase Order:	PT-086014
Contact:	Tyler Grange
ssue Date:	12.06.2026
Received Date:	29.05.2026

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.

References

Ref 1 CIEEM, Code of Professional Conduct," 2022. CIEEM, Winchester

Ref 2 Cresswell, W. & Whitworth, R., "An assessment of the efficiency of capture techniques and the value off different habitats for the great crested newt Triturus cristatus: English Nature Research Report 576," 2004. Peterborough: English Nature.

Ref 3 Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. "Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)," 2000. Herpetological Journal 10(4), 143-155.

Ref 4 ARG UK, "ARG UK Advice Note 5, Great Crested Newt Habitat Suitability," 2010. Available at: https://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/file [Accessed 01 October 2025]

Ref 5 Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F. "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", 2014. Freshwater Habitats Trust, Oxford.

Ref 6 Surescreen Scientifics. Available at: https://www.surescreenscientifics.com/forensic-ecology/great-crested-newt/ [Accessed 01 October 2025]

Ref 7 UK Government, "The Conservation of Habitats and Species Regulations 2017 (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019)," 2017. [Online]. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents [Accessed 01 October 2025]

Ref 8 UK Government, "Wildlife and Countryside Act 1981 (as amended)," 1981. [Online]. Available at: https://www.legislation.gov.uk/ukpga/1981/69/contents[Accessed 01 October 2025]

Ref 9 Selby District Council, "Selby Biodiversity Action Plan," 2004. [Online]. Available at: https://www.selby.gov.uk/sites/default/files/Documents/Biodiversity_Action_Plan_2004.pdf [Accessed 01 October 2025]

Ref 10 UK Government, "Natural Environment and Rural Communities Act 2006 (as amended)," 2006. [Online]. Available at: https://www.legislation.gov.uk/ukpga/2006/16/contents [Accessed 01 October 2025]

Light Valley
Solar

W: Lightvalleysolar.co.uk
E: info@lightvalleysolar.co.uk