

Date: 28/08/2026

Our reference: 6136-7

Richard Garfield
Royal Botanical Gardens Kew

Dear Richard

Re: Response to NatureSpace and Ecology Consultees

Site address: Royal Botanic Gardens Kew. Wakehurst, Ardingly, Haywards Heath, Sussex RH17 6TN

We understand you have submitted a planning application for the “Installation of new structures and accessibility improvements to create a new Wild Play facility and associated works” (reference DM/26/1792).

As part of this, NatureSpace consultation response (dated 19/08/2026) refers to a lack of survey to confirm presence or likely absence of great crested newt.

As part of a planning application undertaken within the landownership boundary but outside the application boundary, an eDNA survey was undertaken of P1. This was done by Sam Wilson of Delta Simmons (survey licence number 2018-37690-CLS-CLS). The survey was undertaken on 21st April 2022 in suitable weather conditions. Appendix 1 presents an extract of the report, demonstrating the survey methodology and results, confirming the survey outcomes.

In line with Natural England standing advice “*Survey data provided by the developer should be no older than 4 survey seasons.*” On this basis, we understand the data provided in Appendix 1 is sufficient to confirm likely absence of great crested newt from the waterbody situated 15m from the site. On this basis, the risk to great crested newt from the Wild Play project is considered to be low and sufficient information has been submitted to determine the application with respect to queries regarding great crested newt.

We also note questions were received from the Ecology Consultee (dated 25/08/2026). Responses to their queries are detailed below.

- Clarification regarding T2: we can confirm no potential roosting features were recorded for T2. The reference to “FAR” was incorrect.
- Further survey of B3:
 - A further survey of B3 was undertaken by including the survey location as part of the surveys undertaken of the neighbouring building for the Haverlock Refurbishment project given the close proximity of the buildings. One surveyor included a camera positioned on the single feature recorded on B3. The survey was undertaken on 30th September 2024 during suitable weather conditions. Although the guidance states that surveys should occur between May and August for low suitability buildings, B3 does not have maternity suitability and as such undertaking surveys during the active bat season, in good weather conditions, following good practice guidance is considered appropriate. At the time of the survey a single bat was recorded emerging from the neighbouring building, and bats in B3 were confirmed as likely absent. It is advised a pre-construction check with an endoscope is undertaken as a precautionary approach. Considering the nature of the feature, a small gap within a ridge tile,

this level of survey effort is considered appropriate. Works to B3 must also be avoided between November and February to avoid impacts during the hibernation period.

Kind regards,

Gabrielle Graham BSc (Hons) MSc MCIEEM CEcol – Managing Director

Appendix 1: Extract of EclA for Haverlock Farm (adjacent to Wild Play)

Ecological Impact Assessment

Royal Botanic Gardens, Wakehurst

Presented
to: **Perfect Circle**

Issued: November 2022

Delta-Simons Project No: 21-1903.02

Report Details

Client	Perfect Circle
Report Title	Ecological Impact Assessment
Site Address	Royal Botanic Gardens, Wakehurst
Project No.	21-1903.02
Delta-Simons Contact	Beck Harrington-Harding (b.harringtonharding@deltasimons.com)

Quality Assurance

Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
1	Final	30 th November 2022		 Beck Harrington-Harding Senior Ecologist	 Jonathan Spencer Associate Ecologist	 Jonathan Spencer Associate Ecologist

About us

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As part of Lucion Services, our combined team of 500 in the UK has a range of specialist skill sets in over 50 environmental consultancy specialisms including asbestos, hazardous materials, ecology, air and water services, geo-environmental and sustainability amongst others.

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external visual assessment of any trees/buildings on the Site for potential bat roost features and any evidence of bat activity, and an assessment of the Site's suitability to support commuting and foraging bats (Appendix B), in line with Collins (2016); and

- If Habitats of Principal Importance (HPIs) under the NERC Act 2006 were found to be present these were recorded.

3.6 Habitat Suitability

Where access allowed, a GCN Habitat Suitability Index (HSI) assessment was carried out on the 21st April 2022 to evaluate the suitability of the waterbodies and their adjoining habitats for GCNs (Oldham *et al.*, 2000). The calculated HSI score for a pond is between 0 and 1 and is derived from an assessment of ten habitat variables known to influence the presence of newts. The HSI is categorised such that the closer to a score of 1 it is then the more suitable a pond is to support GCNs. The HSI is calculated on an individual pond basis but takes into account surrounding terrestrial habitat and local pond density. Table 1, below, illustrates the categorisation of HSI scores.

Table 1 - Categorisation of HSI Scores

HSI Score	Pond Suitability for GCN
< 0.5	Poor
0.5 - 0.59	Below average
0.6 - 0.69	Average
0.7 - 0.79	Good
>0.8	Excellent

3.7 eDNA Survey

An environmental DNA (eDNA) survey was undertaken of Pond 1 on the 21st April 2022.

For each pond 20 water samples were collected from various points, which were then combined before being decanted into alcohol-filled tubes and sent directly to the laboratory for analysis. The water test detects pond occupancy by GCN by identifying traces of eDNA shed into the pond. The sample tubes were boxed and sent via courier to SureScreen Scientifics for analysis in the laboratory.

The surveys were carried out by a suitably qualified Delta-Simons ecologists, Sam Wilson BSc (Hons ACIEEM and Alex Jackson BSc (Hons) MZool, who have over 6 and 4 years' experience, respectively, in ecological consultancy and who hold level 1 survey licences for GCN (licence ref: 2018-37690-CLS-CLS and 2021-10064-CL08-GCN, respectively).

3.8 GCN Presence/Absence Survey

A single survey visit was undertaken to the on-Site waterbody to ensure that should a full suite of surveys be required they could all be completed within the optimal survey window. The methodologies used and timing of the survey followed the GCN Mitigation Guidelines (English Nature, 2001). To demonstrate presence or likely absence of GCNs, a minimum of three of the following techniques was required to be used: egg searching; bottle trapping; torch survey; and netting. Twelve bottle traps were deployed between 20:00 and 21:30 on 21st April 2022 and collected in between 08:00 and 09:00 on 22nd April. The survey was carried out by Sam Wilson (licence reference 2018-37690-CLS-CLS) and Alex Jackson (licence reference 2021-10064-CL08-GCN) in suitable weather conditions, the details of which are provided in Table 2.

Table 2 - Timings, Weather Conditions and Pond Details for GCN Presence/Absence Survey

Date and Time	Temperature	Cloud cover (Oktas)	Wind (Beaufort)	Vegetation Cover	Turbidity
21/04/2022 20:00-21:30	9° C	3	1	3	4
22/04/2022 08:00-09:00	10° C	8	2	3	4

Egg Searches

Marginal and submerged vegetation was checked for newt eggs, and the presence of folds that may conceal newt eggs.

Bottle Trapping

Bottle traps (comprising 2 litre plastic bottles supported by bamboo canes) were inserted into the waterbody approximately 1 m from the bank, with each bottle being positioned approximately 2 m from the neighbouring bottle, where conditions allowed. The traps were set early evening and left in position overnight. They were then removed from the pond early the next morning and checked for the presence of amphibians. Any amphibians or other fauna caught were released back into the pond they were captured from.

Torch Survey

The torch count involved shining a million candle-power torch into the waterbodies, after dark and identifying and recording all amphibians present, paying particular attention to the margin of the waterbody.

3.9 Hazel Dormouse Survey

Suitable habitats for hazel dormouse *Muscardinus avellanarius* on-Site were identified and assessed and, subsequent to the PEA, a dormouse survey was carried out in accordance with the Dormouse Conservation Handbook (Bright *et al.* 2006).

On 29th March 2022, 50 dormouse nest tubes were installed within the woodland and scrub on the Site, which offers suitable habitat for this species. The nest tubes were installed at approximately 15 m intervals, underneath vertical branches, in accordance with survey methods detailed in Bright *et al.*, (2006). The location of the nest tubes is shown on Figure 3. The nest tubes were subsequently checked every other month (May, July and September 2022) in line with Natural England Interim Guidance. At each visit, every tube and box was inspected for animals and/ or nests or signs of nest-building, and notes were taken of any species / evidence of species recorded, and the numbers of individuals, if present. On the last visit, any tubes not used by dormice were removed. The surveys were undertaken by Hannah Maben MCIEEM and Hannah Willis ACIEEM, both experienced ecologists registered to use Natural England's Class Licence WML-10(a) (dormouse survey Level 1)

The survey guidance provides an index score to assess the likelihood of a survey detecting dormice where a score is assigned for each month which nest tubes are on a site (see Table 3) and recommends that a minimum survey effort index score of 20 is required to assume absence. With 50 survey tubes set out in late March 2022 and checked monthly April through until September 2022 a survey effort score of 21 was achieved.

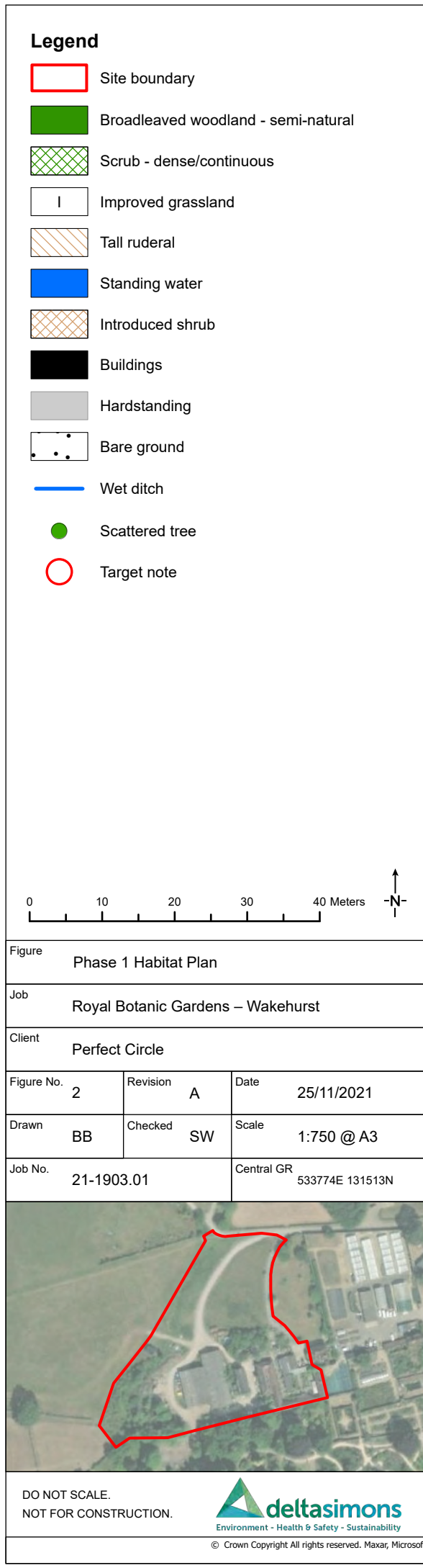


Figure	Phase 1 Habitat Plan		
Job	Royal Botanic Gardens – Wakehurst		
Client	Perfect Circle		
Figure No.	2	Revision	A
Date	25/11/2021		
Drawn	BB	Checked	SW
Scale	1:750 @ A3		
Job No.	21-1903.01		Central GR 533774E 131513N



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Report No: 1
Purchase Order: CC012402
Client: DELTASIMONS
Contact: Alex Jackson

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (TRITURUS CRISTATUS)

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 analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 25/04/2022
Date Reported: 27/04/2022
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
1296	Pond 1 Royal Botanic Gardens		Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Chris Troth

Approved by: Esther Strafford



METHODOLOGY

The samples detailed above have been analysed 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 which then undergoes DNA extraction. The extracted sample is then analysed 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 scrupulous attention to detail to prevent 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 security.

SureScreen Scientifics Ltd is ISO9001 accredited and participate in Natural England's proficiency testing scheme for GCN eDNA testing. We also carry out regular inter-laboratory checks on accuracy of results as part of our quality control procedures.

INTERPRETATION OF RESULTS

SIC: **Sample Integrity Check** [Pass/Fail]

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.

DC: **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.

IC: **Inhibition Check** [Pass/Fail]

The presence of inhibitors within a sample are assessed using a DNA marker. If inhibition is detected, samples are purified and re-analysed. 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 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.

