



27th June 2023

Richard Gee
Roman Summer Associates Ltd.,
Haweswater House,
Waterfold Business Park,
Bury,
Lancashire
BL9 7BR.

Dear Richard,

Re. Kirkby Golf Course, Ingoe Lane, Field Lane Estate, Knowsley, L32 4SS (Planning application 21/00744/FUL), Ecology Reports

I have reviewed the proposed amendments to the above planning application with regards the submitted ecological survey reports. The proposed clubhouse has been reduced in scale, the driving range building and academy consolidated and reduced in size and the sports pitches, courts, bowling green and associated parking replaced with additional golf course. There will be more extensive soft works to the wider golf course but it is understood that these will be confined to the existing greens areas and not impact the out of play areas. One new lake is now proposed as opposed to two in the original scheme.

While the ecological reports submitted are based on the previously proposed scheme, the latest proposals are reduced in scale and generally pose a lesser impact on ecology. While there has been a reduction in open water creation, the one lake still provides a net gain in terms of potential habitat for water voles, otter and foraging bats.

It is understood that the lighting strategy for the proposed clubhouse, driving range and car parking remains as for the original proposed development. Overall, there will be a reduction in lighting compared with the previously proposed scheme due to the replacement of the sports pitches, courts, bowling green and associated parking with additional golf course. A detailed sensitive lighting scheme has been recommended to be designed and implemented in accordance with ILP (2018) to maintain the site as suitable for foraging and commuting bat species which are sensitive to light.

Overall, the revised proposal would result in a reduction of impacts on ecology compared with the scheme assessed within the submitted reports. With regards the summary of ecological mitigation and enhancements (Table 3 in the Ecological Appraisal report, p. 47), as requested by the Merseyside Environmental Advisory Service (MEAS) a Biodiversity Metric calculation has been prepared based on the revised scheme which will provide an update on Biodiversity Net Gain at the site. It is not, therefore, proposed to update the submitted ecology reports. A Habitat Condition Assessment was undertaken in August 2022 to inform the Biodiversity Metric calculation which found the habitats on site to be similar to as recorded during the Phase 1 Habitat Survey.

With regards MEAS consultation letter dated 7th April 2022 and their query regarding the number of trees to be planted on site (paragraph 7), the 550 trees referred to at para 5.14 are the additional trees being planted above those required to compensate those being lost (279 trees) i.e. total 829 trees being planted - 279 being lost = 550 additional trees being planted. This has, however, been superseded by the revised landscape plans and Biodiversity Metric 3.1 calculation. 283 of the trees will be in new woodland areas, the



remaining 546 trees being scattered tree planting. An additional 1,000 trees will also be planted to satisfy the trading rules within the Biodiversity Metric 3.1 and provide a measurable net gain. The Biodiversity Metric calculation has resulted in a net gain of 7.66% for area based habitats and 9.11% for hedgerows. An updated version of the Biodiversity Metric (v 4.0) has been published since we've been working on the Biodiversity Metric calculation for this scheme, however, Peter McKeon of MEAS confirmed by email on 6th June 2023 that the Biodiversity Metric 3.1 calculation will still be acceptable.

As identified by MEAS in its consultation response, some of the eDNA analysis results were omitted from our report, these are appended to this letter.

Kind regards

Louise Redgrave MA (Oxon) MSc CEcol CEnv MCIEEM
Principal Ecological Consultant



SureScreen Scientifics

Folio No: E9551
 Report No: 1
 Purchase Order: 21002
 Client: ECOLOGY SERVICES LTD
 Contact: Ben Meadows

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: 22/04/2021
 Date Reported: 25/04/2021
 Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
1979	POND 13 KIRKBY GC	SJ 39674 98082	Pass	Pass	Pass	Negative	0
1980	POND 16 KIRKBY GC	SJ 39519 98663	Pass	Pass	Pass	Negative	0
1981	POND 11 KIRKBY GC	SJ 39458 98485	Pass	Pass	Pass	Negative	0
1982	POND 18 KIRKBY GC	SJ 39218 98419	Pass	Pass	Pass	Negative	0
1982	POND 10 KIRKBY GC	SJ 39334 98398	Pass	Pass	Pass	Negative	0

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

Reported by: Chris Troth

Approved by: Chris Troth



Forensic Scientists and Consultant Engineers
 SureScreen Scientifics Ltd, Morley Retreat, Church Lane, Morley, Derbyshire, DE7 6DE
 UK Tel: +44 (0)1332 292003 Email: scientifics@surescreen.com
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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.



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Company Registration No. 08950940

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Folio No: E10032
 Report No: 1
 Purchase Order: 21066
 Client: ECOLOGY SERVICES LTD
 Contact: Charlotte Wood

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RESULTS

Date sample received at Laboratory: 06/05/2021
 Date Reported: 19/05/2021
 Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
4329	21, Kirkby	SJ 39367 98613	Pass	Pass	Pass	Negative	0
4330	22, Kirkby	SJ 39104 98337	Pass	Pass	Pass	Negative	0
4331	23, Kirkby	SJ 39157 98132	Pass	Pass	Pass	Negative	0
4332	24, Kirkby	SJ 39197 98138	Pass	Pass	Pass	Negative	0
4333	20, Kirkby	SJ 39264 97815	Pass	Pass	Pass	Negative	0

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

Reported by: Chris Troth

Approved by: Chris Troth



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