Site:	Barnsley West
Client:	Strata Sterling Barnsley West Ltd
Job Number:	784-A107940-3
Survey Type:	Great crested newt *Triturus cristatus* (GCN) eDNA Survey
Date of Issue:	8th January 2021
File Location:	N:\Projects\Projects A107000\A107940-3 Barnsley West 2020\REPORTS\eDNA

Introduction

WYG was commissioned by Strata Sterling Barnsley West Ltd in May 2020 to undertake an environmental DNA (eDNA) survey for GCN of ponds identified either on, or within 500 m, of the site known as 'Barnsley West' (hereafter referred to as the 'site') – see Figure 1 for Site Location.

Six ponds were identified; Pond 1 is located within Craven Wood (north of Hermit Lane) and at the time of the survey it measured approximately 25m^2. Following a review of online Ordnance Survey maps one pond was identified in a residential garden at a property off Redbrook Road (Pond 2). A detailed review of aerial imagery of the residential gardens located directly adjacent to site identified a further four ponds (located in residential gardens off Barugh Green Road; St John's Avenue and another at the same property as Pond 2). All six pond locations are shown in Figure 2.

This report has been prepared by WYG Project Ecologist Jonathan Siberry ACIEEM and the conditions pertinent to it are detailed within Appendix A.

Site Location

The site is located 2 km west of Barnsley town centre, on farmland between the communities of Gawber, Higham, Pogmoor, Redbrook and Barugh Green and immediately north-east of Junction 37 of the M1 motorway. The centre of the site has an approximate Ordnance Survey Grid Reference of SE 31778 07075.

The site has previously been subject to open-cast mining, after which it was re-filled. The site measures approximately 120 hectares and generally comprises open pastoral and arable fields, with associated boundary hedgerows, trees and ditches, and areas of semi-natural plantation woodland.

Development Proposal

The proposed development comprises a mixed-use development to provide up to 1,900 new homes and 172,000 sq.m of employment land. In addition, the proposals will provide:

- Part of the Link Road between M1, Junction 37 and the A635, Barugh Green Road;
- A new primary school;
- Small local shops and community facilities; and
- Strategic areas of greenspace and wildlife corridors.

Remodelling of the site (via a 'cut and fill') will also be required at the outset, to enable to the formation of development platforms.

Background

During a previous Preliminary Ecological Assessment of the site undertaken in 2017 (AECOM, 2017), two ponds were identified on and within 500 m of the site. One on-site pond (Pond 1) was assessed against the Habitat Suitability Index (HSI) and the HSI score indicated that the pond was of 'Average' suitability for GCN. The second pond was located off site (Pond 2) but a HSI assessment was not undertaken at Pond 2 due to access restrictions; however, the pond was recommended for further assessment.

In 2018, following a review of the Preliminary Ecological Appraisal (AECOM, 2017) and a desk-based assessment, WYG recommended eDNA sampling of both ponds in 2018 to determine presence / likely absence of GCN at the site. Pond 1 was accessible for sampling and analysis of the collected water samples returned a '**Negative**' eDNA result, indicating likely absence of GCN in the pond. Pond 2 was not surveyed due to access restrictions; however, as Pond 1 and Pond 2 are hydrologically linked via a stream (i.e. Pond 1 flows into Pond 2), it was considered that the Negative eDNA result from Pond 1 could also suggest a likely absence of GCN within Pond 2.

In 2020, an update Ecological Appraisal of the site was undertaken by WYG (WYG, 2020). This assessment highlighted the continued presence of the two ponds detailed above (i.e. Pond 1 and Pond 2) as well as four ponds located in residential gardens, directly adjacent to the site. An update HSI assessment of Pond 1 was undertaken and the HSI score indicated that the pond was of 'Below Average' suitability to support GCN (HSI score – 0.57). In addition, a HSI assessment of Pond 4 (noted as a large ornamental pond, supporting several hundred fish) was undertaken, which indicated that the pond was of 'Poor' suitability to support GCN (HSI score – 0.38). No access was provided by the private homeowners for Pond 2, Pond 3, Pond 5 or Pond 6[1]; therefore, these ponds were not subject to HSI assessments.

[1] Please note, Pond 6 was a pond was noted to be a 'potential' pond, due to the small size of 'pond' and the resolution of the online aerial imagery / photographs.

Methodology

Desk Study

Information was requested from the Barnsley Biological Records Centre (BBRC) in June 2020 for any records of GCN within 2 km of the site, or any designated sites within 2 km which cite GCN as a feature. For the purposes of this assessment, only recent records (i.e. within last 10 years) have been considered relevant.

A search for relevant information was also made in July 2020, on the MAGIC website (www.magic.gov.uk), DEFRA's interactive, web-based database, for information on any European Protected Species Mitigation Licence (EPSML) applications that have been granted in the local area.

Field Survey

For ponds located within private residential gardens. Two written access request letters were sent to each respective residence in 2020; one in late April and a second in early June. These access request letters were sent via tracked delivery, to obtain proof of postage. Where no response was received from a resident to either access request letter, it was assumed that access was denied at that particular residence. Evidence of proof of postage has been provided directly to the Local Planning Authority (sent by WYG Project Ecologist Jonathan Siberry (via email) to Barnsley Metropolitan Borough Council Biodiversity Officer Trevor Mayne, on 23rd July 2020).

eDNA surveys of Pond 1 and Pond 4 were undertaken by WYG Senior Ecologist Luke Verrall MCIEEM (Natural England Class 1 GCN survey licence number 2015-18803-CLS-CLS) and WYG Project Ecologist Jonathan Siberry ACIEEM (Natural England Class 1 GCN survey licence number 2018-38304-CLS-CLS) on 25th & 26th June 2020. Luke and Jonathan both hold Natural England Class 1 survey licences for GCN and have nine and five years survey experience with GCN, respectively.

Samples were successfully taken from Pond 1 and Pond 4, in accordance with the Natural England approved technical note (Biggs *et al.*, 2014), under suitable conditions. The eDNA testing was carried out by SureScreen Scientifics, following their approved analysis methodology, and in accordance with the Natural England approved technical note (Biggs *et al.*, 2014).

Limitations

No access was provided by the private homeowners for Ponds 2, 3, 5 or 6; therefore, these ponds were not subject to either HSI assessment or eDNA sampling. Due to the following reasons, this is not considered to be a significant limitation upon this assessment:

1) Pond 2 is connected to Pond 1 by a shallow stream, with a slow to moderate flow at the time of the survey (approx. 300 m between the two ponds). Additionally, this stream is surrounded by broad-leaved woodland with a good leaf litter. Due to the suitability and connectivity of habitats for GCN between these two ponds, it is considered that the results from Pond 1 are likely to be reflective of the presence/likely absence of GCN within Pond 2;
2) Pond 3 is located approximately 50 m from Pond 2 and comprises an ornamental pond with vertical stone and mortar sides (based on freely available online imagery / photographs). Given the ornamental nature of the pond, combined with Ponds 1 and 2 (as detailed above)

being the nearest ponds, it is considered that the results from Pond 1 are likely to be reflective of the presence/likely absence of GCN within Pond 3 (as for Pond 2 above).

3) Pond 5 and Pond 6 are located in residential gardens and appear to be ornamental in nature, with hardstanding, ornamental shrub planting and amenity style grass surrounding the ponds (based on review of aerial imagery). As such, these ponds could also be used to keep fish (as per Pond 4). In addition, connectivity to these ponds (Ponds 5 and 6) from the other ponds on, or within 500 m of, the site or areas of suitable GCN habitat is poor, with one pond located in a fenced garden, and the other only connected to two hedgerows on site. Both ponds are surrounded by improved grassland and arable fields which are considered to be sub-optimal GCN habitat. Pond 4 (which was subject to eDNA testing and returned a negative result) is located closest to Pond 5 and Pond 6 (approx. 300 m by connective habitat features) and is considered likely to be of a similar nature to Pond 5 and Pond 6 (although noting the smaller size of the latter two). As such Pond 4 is considered to likely be reflective of the presence/likely absence of GCN within Ponds 5 and 6.

However, the lack of eDNA results from Ponds 2 3, 5 and 6 should be considered within any relevant mitigation measures.

Due to the resolution of available online aerial imagery / photographs, it is possible that very small garden ponds may not have been visible during the review of online aerial imagery / photographs. However, a pre-cautionary approach was adopted when undertaking the review (i.e. where uncertain, 'potential' ponds were noted – such as Pond 6). Therefore, it is considered that reasonable measures have been undertaken to highlight ponds within 500m.

The details of this report will remain valid for a period of **18 months** from the date of the survey (i.e. December 2021, after which the validity of this assessment should be reviewed to determine whether further updates are necessary.

Results

Desk Study

GCN were not cited within any of the designated sites with 2 km of the site (i.e. Hugset Wood LWS, Redbrook Pastures LWS, Daking Brook LWS, Silkstone Fall Wood LWS, Falthwaite and Lowe Wood LWS or Barnsley Canal at Wilthorpe LWS). However, Barnsley Canal at Wilthorpe LWS was noted to offer suitable habitat for GCN, on the LWS information sheet.

BBRC returned 19 records of GCN with 2 km of the site, from the last 10 years. Of these recent records, 15 were from Barnsley Canal at Wilthorpe LWS, located between 0.9 – 1.8 km north-east of the site and with the most recent records dated 2016. The remaining four recent records were returned from a residential development site located to the north of Barugh Green, approximately 950 m north of the site and dated between 2012 and 2014. In addition, six historical records (over 10 years old) were returned, dated between 1983 and 1995.

A search of MAGIC identified two granted EPSMLs for GCN on a single site located 775 m north of the site. These EPSMLs allow for the damage and destruction of a GCN resting place(s). The site is not connected to habitats associated with these GCN records or EPSMLs but rather separated from these habitats by residential and industrial areas and associated roads/infrastructure, considered to form an effective barrier to the movement of GCN.

Field Survey

SureScreen Scientifics analysed the samples from Pond 1 and Pond 4 and returned an eDNA result of '**Negative'** for the presence of GCN DNA within both ponds. A negative result indicates that GCN DNA was not detected within the pond samples taken. The full eDNA analysis report can be found within Appendix B.

Relevant Planning Policy and Legislation

Relevant Planning Policy is detailed in Appendix C, whilst relevant legislation is detailed below.

Habitats Regulations and W&CA

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

The GCN is also listed on Schedule 5 of the W&CA 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;
- Posses 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 EPSML is likely to be required from Natural England (NE) to allow the development to proceed.

NERC Act

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.

Local Biodiversity Action Plan

Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although they are no-longer managed at a national level many are still reviewed and updated at a local level.

The Barnsley Biodiversity Action Plan (Barnsley Biodiversity Trust, 2009) is the relevant document for this site and it contains a Species Action Plan for GCN. This action plan states the following Actions:

Proposed Local Action	BMBC Planning Policy Actions
• Survey and monitor all known sites and survey potential new locations. • Ensure that Great Crested Newt is included in the management plan for Wilthorpe Marsh under HAP7. • Prepare a costed plan and implement works at Keepers Pond, Wentworth Castle. • In partnership with Wentworth Castle Trust, assess the restoration plans for the Serpentine to benefit Great Crested Newt conservation. • Prepare costed plans and support works at Wentworth Castle Serpentine, Cudworth Common and Wilthorpe Marsh. • Produce management plans for all Great Crested newt sites. • Ensure that the best sites, including Cudworth Common, are on the Natural Heritage Sites (NHS) Register. The site boundaries should contain appropriate terrestrial habitat requirements	• Ensure that all developments near known sites take full account of Great Crested Newt requirements. • Include habitat and species protection policies in development plans and-or supplementary guidance. • Identify all Great Crested Newt occupied ponds in Local Development Framework (LDF). • Seek to ensure that Great Crested Newt sites are protected from development. Where adverse impacts are unavoidable, seek adequate mitigation through the planning process. • Designate all Great Crested Newt sites as Natural Heritage Sites (NHS). • Ensure that the Council is aware of all sites holding this species.
BMBC Land Ownership and Management Actions	**BMBC Development Control Actions**
• Advise owners and tenants of the location of, and their responsibility towards, Great Crested Newt sites on their property. • Have regard to Great Crested Newt legislation when altering Barnsley MBC managed ponds and work with SY Ponds Project to develop new habitat opportunities on some sites.	• On land owned by public or conservation bodies, ensure that management maintains and, where possible, enhances Great Crested Newt breeding and feeding habitats. • Consider the impact on Great Crested Newt breeding-feeding sites when assessing planning applications.

Summary

- Six ponds were identified either on or within 500 m of the sites, including within residential gardens located directly adjacent to the site.
- Pond 1 and Pond 4 were accessible during the eDNA survey. Ponds 2, 3, 5 and 6 were not accessible during the eDNA survey.
- SureScreen Scientifics returned an eDNA result of '**Negative'** for the presence of GCN within Pond 1 and Pond 4.
- GCN are considered to be likely absent from Pond 1 and Pond 4, and it is considered unlikely that GCN would be present within Ponds 2, 3, 5 or 6.

Please note: This is a factual report only with detailed discussion and any recommendations for further survey, mitigation and compensation being included within the commissioned Ecology Chapter of the Environmental Statement for the site.

Quality Control		
Version 1	January 2021	FINAL
Prepared by:		Jonathan Siberry ACIEEM **Project Ecologist**
Checked By:		Luke Verrall MCIEEM **Senior Ecologist**
Verified By:		Barry Clarkson CEnv MCIEEM **Principal Ecologist**

Version:	Date:	Updated by:	Verified by:	Description of changes:

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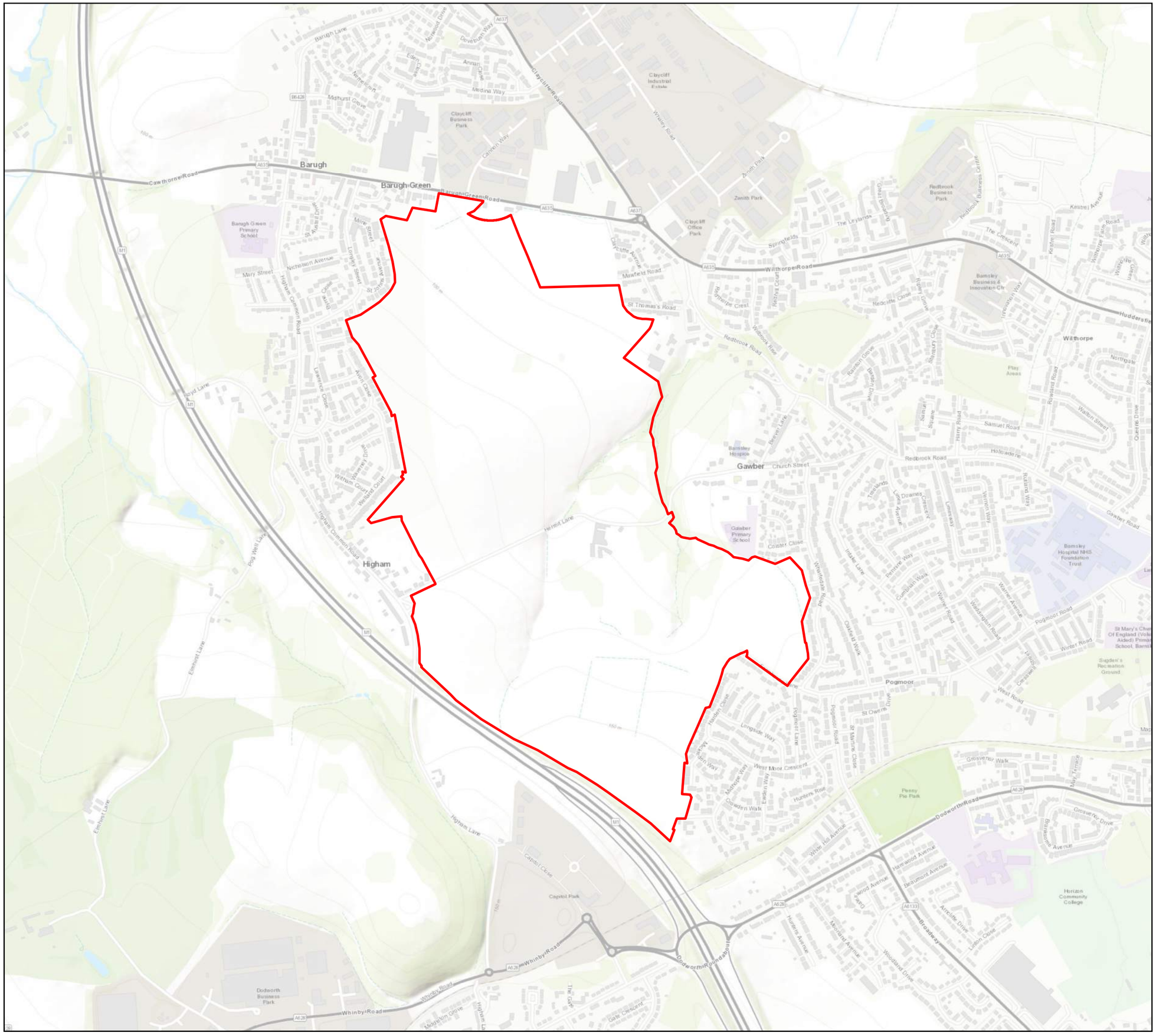
References

- AECOM. (2017). *Barnsley West Preliminary Ecological Assessment*. Issued June 2017.
- Barnsley Biodiversity Trust. (2009). *Barnsley Biodiversity Action Plan*. [online] Available at http://www.barnsleybiodiversity.org.uk/biodiversityplan.html, Accessed December 2020.
- Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F (2014). *Analytical and methodological development for improved surveillance of the Great Crested Newt*. Defra Project WC1067. Freshwater Habitats Trust: Oxford.
- WYG. (2020). *Barnsley West: Factual Ecological Appraisal*. January 2021.

Figures

Appendices



Rev	Date	Notes
A	07/12/20	Initial map production

Legend

Site boundary

0 50 100 200 Metres

Site Location Plan

Barnsley West
Strata Sterling Barnsley West

Scale at A3:	Project No:	Drawing No:	Revision:
1:10,000	A107940-3	Figure 1	A

Drawn by:	Drawn date:	Approved by:
Ben Blowers	07/12/2020	Jonathan Siberry

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Rev	Date	Notes
A	16/12/20	Initial map production

Legend

- Site boundary
- Ponds

0 50 100 200 Meters

N

Pond Location Plan

Barnsley West
Strata Sterling Barnsley West Ltd

Scale at A3:	Project No:	Drawing No:	Revision:
1:500	784-A107940-3	Figure 2	A

Drawn by:	Drawn date:	Approved by:
Ben Blowers	16/12/2020	Jonathan Siberry

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Appendix A – Report Conditions

This Report has been prepared using reasonable skill and care for the sole benefit of [Strata Sterling Barnsley West Ltd] ("the Client") for the proposed uses stated in the report by [WYG Environment Planning Transport Limited] ("WYG"). WYG 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.

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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. WYG accept no liability for issues with performance arising from such factors.

Appendix B – eDNA Analysis Report

SureScreen Scientifics

Folio No: E8145
Report No: 1
Purchase Order: 4594/20-456
Client: WYG
Contact: Jonathan Siberry

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: 30/06/2020
Date Reported: 10/07/2020
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
2256	Pond 3, Barnsley West	SE 31568 07919	Pass	Pass	Pass	Negative	0
2266	Pond 1, Barnsley West	SE 31952 07273	Pass	Pass	Pass	Negative	0

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

Reported by: Sarah Evans **Approved by:** Jennifer Higginbottom

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.

Appendix C – Relevant Planning Policy

C1 Revised National Planning Policy Framework

A revised NPPF was issued on 19th February 2019 (Ministry of Housing Communities and Local Government, 2019) and currently supplements government Circular *06/2005, Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System* (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 170 of the NPPF also states that:

`*Planning policies and decisions should contribute to and enhance the natural environment by:*

a) *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*
b) *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland*
c) *maintaining the character of the undeveloped coast, while improving public access to it where appropriate*
d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*
e) *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
f) *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

Paragraph 175 then goes on to confirm that:

When determining planning applications, local planning authorities should apply the following principles:

a) *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
b) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the*

features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*

d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

Regarding EcIA's and HRA's – any sites identified, or required, as compensatory measures for adverse effects on any Natura 2000/habitats site should also be given the same level as protection as the pSPA's and cSAC's themselves. In addition, when an application is being determined, Paragraph 177 clarifies that:

"*The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.*"

Paragraph 180 is also relevant as;

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:…

c) *limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

C2 Local Plan

The Barnsley Local Plan (Barnsley Metropolitan Borough Council, 2019[2]) was formally adopted on 3rd January 2019 and sets out the key elements of Barnsley's planning framework up to the year 2033. The relevant policies from the Local Plan are detailed below:

Policy BIO1 Biodiversity and Geodiversity

Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:

- *Protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national and local significance, ancient woodland and species and habitats of principal importance identified via Section 41 of the Natural Environment & Rural Communities Act*

[2] Barnsley Metropolitan Brough Council. (2019) Barnsley's Local Plan. [online] Available at https://www.barnsley.gov.uk/services/planning-and-buildings/local-planning-and-development/our-local-plan/barnsleys-local-plan/, Accessed December 2020.

2006 (for list of the species and habitats of principal importance) and in the Barnsley Biodiversity Action Plan.

- *Maximising biodiversity and geodiversity opportunities in and around new developments.*
- *Conserving and enhancing the form, local character and distinctiveness of the boroughs natural assets such as the river corridors of the Don, the Dearne and Dove as natural floodplains and important strategic wildlife corridors.*
- *Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest.*
- *Protecting ancient and veteran trees where identified.*
- *Encouraging provision of biodiversity enhancements.*

Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.

Development which adversely effects a European Site will not be permitted unless there is no alternative option and there are imperative reasons of overriding public interest (IROPI).

Local Plan Objective 5 is also relevant and is to "*achieve net gains in biodiversity".* The Indicator / Target for this object is referenced as the "*number of Local Wildlife Sites and Rigs sites in positive conservation management"* and the Aim of this objective is *"to conserve and enhance the Borough's biodiversity and geological features"*.

Site MU1 Land south of Barugh Green Road

The site is proposed for mixed use predominantly for housing and employment. The indicative number of dwellings proposed on this site is 1700. These are included in the housing numbers for Urban Barnsley in the housing chapter.

43 ha of employment land is proposed on the site and is included in the employment land figures in the Urban Barnsley section of the Economy chapter.

The development will be subject to the production and approval of a Masterplan Framework covering the entire site which seeks to ensure that the employment land is developed within the plan period, that community facilities come forward before completion of the housing and that development is brought forward in a comprehensive manner.

The development will be expected to:

- *Provide a primary school on the site;*
- *Ensure that ground stability and contamination investigations are undertaken prior to development commencing and necessary remedial works completed in accordance with the phasing plan;*
- *Provide on and off site highway infrastructure works, including a link road (Claycliffe Link) and improvements at Junction 37 as necessary;*
- *Provide small scale convenience retail and community facilities in compliance with Local Plan policy TC5 Small Local Shops;*

- *Retain, buffer and manage the watercourse, grassland and woodland north-east of Hermit Lane;*
- *Retain, buffer and manage the species-rich hedgerows and boundary features. Where this is not possible transplant hedgerows including root balls and associated soils. A method statement for this should be provided and agreed prior to works commencing;*
- *Create/retain wildlife corridors through/across the site;*
- *Provide accessible public open space;*
- *Ensure that any sustainable drainage system incorporating above-ground habitats is designed from the outset to serve the whole site;*
- *Give consideration to the drain/culvert that runs through the site; and*
- *Include measures for the protection and retention of the listed milepost on Barugh Green Road 500m west of the junction with Claycliffe Road and its immediate setting; and*
- *Protect the routes of the Public Rights of Way that cross the site, and make provision for these as part of any proposal.*

Archaeological remains may be present on this site therefore proposals must be accompanied by an appropriate archaeological assessment (including a field evaluation if necessary) that must include the following:

- *Information identifying the likely location and extent of the remains, and the nature of the remains;*
- *An assessment of the significance of the remains; and*
- *Consideration of how the remains would be affected by the proposed development.*