



envirotech

**Ecological Consultants
Environmental and Rural Chartered Surveyors**

Preliminary Ecological Appraisal

Black Moss Farm



Tel: 015395 61894
Email: info@envtech.co.uk
Web: www.envtech.co.uk
Envirotech NW Ltd

The Stables, Back Lane, Hale, Milnthorpe, Cumbria. LA7 7BL
Directors: A. Gardner BSc (Hons), MSc, MRICS, Dip NDEA
H. Gardner BSc (Hons), MSc, CEnv, MRICS
Registered in England and Wales. Company Registration Number 5028111

ACCURACY OF REPORT

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, all of the protected species this survey covers are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and/or in their interaction with protected species. If protected species are found during a work programme, and continuing the work programme could result in their disturbance, injury or death, either directly or indirectly an offence may be committed.

If in doubt, stop work and seek further professional advice.

Quality and Environmental Assurance

This report has been printed on recycled paper as part of our commitment to achieving both the ISO 9001 Quality Assurance and ISO 14001 Environmental Assurance standards. Envirotech have been awarded the Gold standard by the Cumbria Business Environmental Network for its Environmental management systems.

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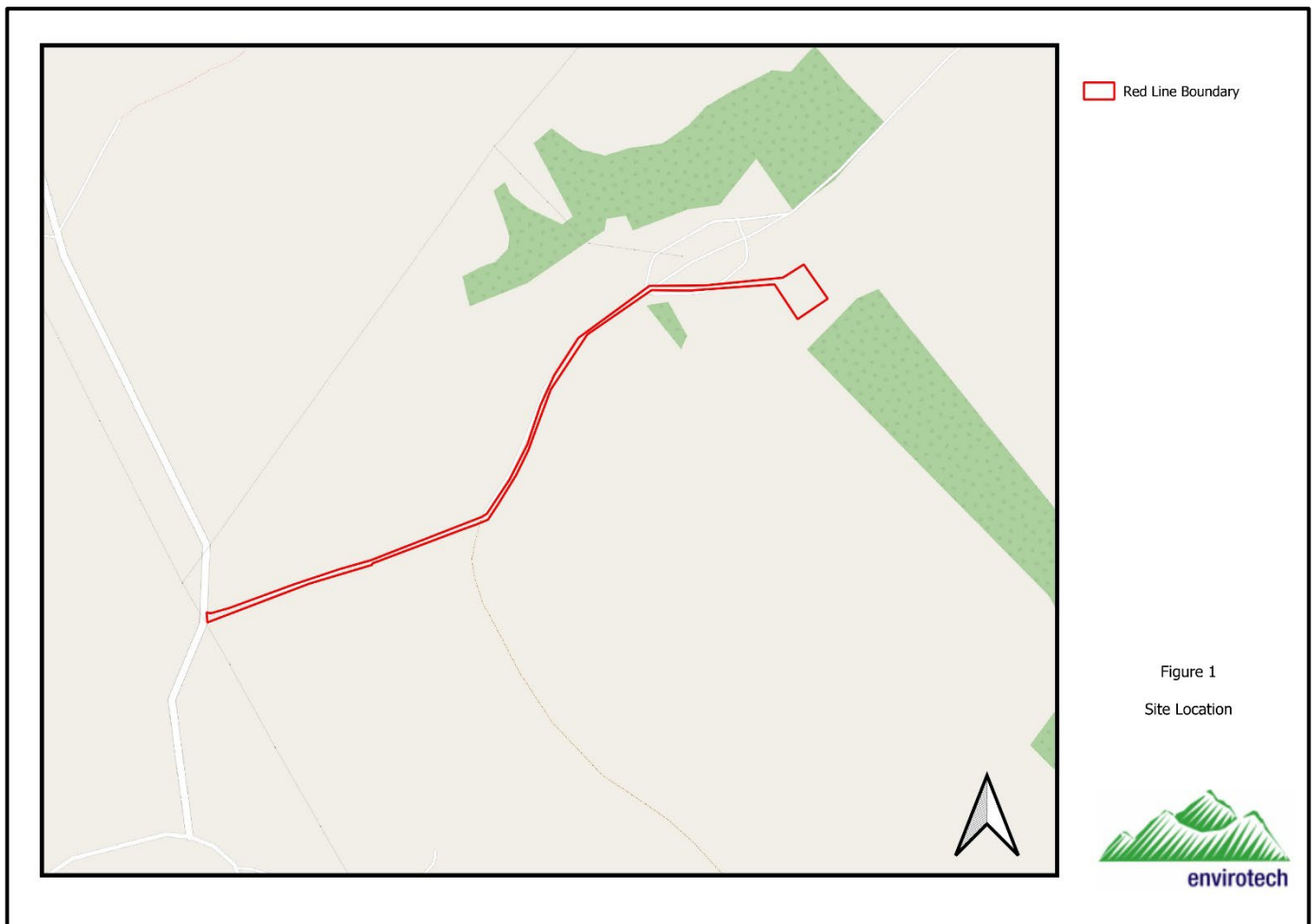
1. EXECUTIVE SUMMARY

- 1.1.1 Envirotech NW Ltd was commissioned to undertake a Preliminary Ecological Appraisal (PEA) of land at Black Moss Farm in connection with a retrospective application for the construction of new agricultural buildings. The survey comprised a UKHab Version 2 habitat survey, protected species assessment and review of ecological constraints associated with the proposed development. The site was surveyed on 21 May 2026.
- 1.1.2 The site comprises hardstanding and buildings.
- 1.1.3 A review of available ecological records identified no protected or notable species records for the site itself and no statutory or non-statutory designated sites within or adjoining the development area. The site is not located within Priority Habitat. Protected species records exist within the wider local area but no significant ecological constraints associated with these records were identified.
- 1.1.4 Two nearby ponds were assessed for great crested newt and subjected to eDNA testing in accordance with Natural England guidance. Both ponds returned negative results and no evidence of great crested newt was identified. The development area itself offers limited suitability for amphibians due to its exposed and intensively managed nature.
- 1.1.5 No badger setts, feeding signs or established runs were identified within the site or adjacent land likely to be affected by the proposals. The development is therefore unlikely to affect badgers or their setts.
- 1.1.6 The site provides poor quality habitat for bats. Trees within and adjacent to the site were assessed and all were categorised as Negligible Risk in accordance with Bat Conservation Trust guidance. No features with potential to support roosting bats were identified and no further bat surveys are considered necessary.
- 1.1.7 Overall, the site is considered to be of low ecological value and the proposed development is unlikely to result in significant ecological effects provided standard ecological safeguards are implemented. No protected species licences are anticipated to be required and no further protected species surveys are recommended.

2. INTRODUCTION

2.1 Background

- 2.1.1 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land at Black Moss Farm, central grid reference SD602404 (Figure 1). A site investigation was undertaken and a report compiled which includes recommendations for any future actions and or mitigation required.
- 2.1.2 The survey was requested in connection with a retrospective application for construction of new buildings.



2.2 Objectives

2.2.1 The main objectives of the study were:

- The completion of a UKHabs Version 2 (UKHab Ltd (2023)) survey including the preparation of a vegetation and habitat map of the site and the immediate surrounding area.
- The survey and assessment of all habitats for statutorily protected species.
- An evaluation of the ecological significance of the site.
- The identification of any potential development constraints and the specification of the scope of mitigation and enhancement required in accordance with wildlife legislation, planning policy and other relevant guidance, and;
- The identification of any further surveys or precautionary assessments that may be required prior to the commencement of any development activities.

3. METHODOLOGY AND SOURCES OF INFORMATION

3.1 Data Search

- 3.1.1 The Envirotech dataset, and the Multi-Agency Geographic Information for the Countryside (MAGIC) were searched to establish the presence of any records of statutorily protected, notable or rare species, and any designated sites of international, national, regional or local importance within a 2km radius of the site boundary.
- 3.1.2 The Envirotech dataset is compiled from extensive field surveys from the period 2004-present, as well as records obtained from third parties during this time.
- 3.1.3 Google Earth and Google Street View were consulted to establish the presence of any features of ecological importance within the local area.
- 3.1.4 Due to the scale of development, in accordance with CIEEM guidelines, a data search of the county records centre was not required. The likely presence and impact on protected species could be adequately determined from the level of data search undertaken.

3.2 Vegetation and Habitats

- 3.2.1 A vegetation and habitat map was produced for the site and the immediate surrounding area. The mapping is based on the UKHabs V2 survey and reporting methodology.
- 3.2.2 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act (1981) and indicators of important and uncommon plant communities. All plant nomenclature follows Stace (2019).
- 3.2.3 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the Wildlife and Countryside Act (1981), namely Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) on terrestrial habitat and aquatic species such as floating pennywort (*Hydrocotyle ranunculoides*), water hyacinth (*Eichhornia crassipes*) and New Zealand pygmyweed (*Crassula helmsii*).
- 3.2.4 The survey was also informed by questioning the landowner/site agent to ascertain the recent history of the site.
- 3.2.5 Habitats of Principal Importance (HPI) were cross referenced with Natural England's inventory against the site boundary and where found ground truthed.

3.3 Timing and Personnel

- 3.3.1 During the visit, weather conditions were suitable for the survey types undertaken being warm and dry in mid spring.

3.3.2 The site and surrounding land was visited on the 21st May 2026 by

- (AG) Mr Andrew Gardner BSc (Hons), MSc, MRICS
Natural England Bat Class Licence (Level 2)
Natural England Bat Low Impact Class Licence
Natural England Barn Owl Licence
Natural England Great Crested Newt Licence (Level 1)
Natural England Badger Class Licence
Natural England White Clawed Crayfish Licence

4. SPECIES SURVEY METHODOLOGY

4.1 Amphibian

- 4.1.1 Great crested newts (*Triturus cristatus*) are protected under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedule 5 of the Wildlife & Countryside Act (1981).
- 4.1.2 Water-bodies located within or adjacent to the study area were identified and where access was possible were assessed for their potential to support great crested newts.
- 4.1.3 The criteria used in the assessment are based on those contained in the Herpetofauna Workers Manual and Oldham et al, 2000, and in applying these criteria a precautionary approach was adopted. Following the criteria developed by Oldham et al (2000), the HSI tool developed for use with great crested newts and forming part of Natural England's Licensing process was used to determine the suitability of ponds for great crested newts.
- 4.1.4 The pond assessment was undertaken in order to determine which water-bodies, based on their potential to support great crested newts, should be subject to presence/absence surveys.
- 4.1.5 Two small ponds occurred near the site and these were subject to eDNA testing in accordance with Natural England guidelines. Testing was undertaken by Surescreen scientific.

4.2 Badger

- 4.2.1 Badgers (*Meles meles*) and their setts are protected under the Protection of Badgers Act (1992). This legislation arises from animal welfare issues (rather than on the basis of nature conservation grounds) and protects badgers from being killed, injured or disturbed whilst occupying a sett.
- 4.2.2 A disturbance to badgers in their setts may occur as a result of construction operations. Natural England recommends that the use of heavy machinery in proximity of a sett entrance should be avoided, with a 'disturbance free-zone' being established.
- 4.2.3 The degree of disturbance attributed to construction activity is a function of the background level of activity badgers are accustomed to and that which will be attributed to a proposed activity. The "disturbance free zone" is therefore site specific.
- 4.2.4 The survey for badgers comprised an assessment of all suitable habitat within and outside the study area boundary (where this was possible) to a distance of 30m for indications of use by badgers.
- 4.2.5 Signs of badgers which were searched for included:
 - Setts - 'D' shaped entrances at least 25cms wide and wider than they are high with large spoil mounds
 - Discarded bedding at sett entrances (this includes grass and leaves)

- Scratching posts on shrubs and trees close to a sett entrance
- The presence of badger hairs which are coarse, up to 100mm long with a long black section and a white tip
- Dung pit latrines and footprints
- Habitual runs through vegetation and beneath fences
- Hedgehog carcasses

4.3 Bats

4.3.1 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981), and are included on Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, as a Protected Species. Taken together, these pieces of legislation make it an offence to:

- Intentionally or recklessly kill, injure or capture bats;
- Deliberately or recklessly disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts.

4.3.2 The Bat Conservation Trust Collins, J. (ed) (2023) issued guidelines on bat survey methodology, a key feature of their recommendation is for the undertaking of a pre-survey assessment - an initial desk-study and a walkover assessment of the survey area and its surrounding area to identify the relative value of the habitats present for bats and likely commuting routes. This is to be followed by a survey program that is appropriate to the likely level of bat activity within the survey area to be determined by and based on the experience of the surveyor.

4.3.3 The potential value of the survey area for foraging bats was assessed through consideration of two main factors: professional knowledge of bat ecology and foraging behaviour in combination with the geographical location, topography and habitats present within the survey area and surrounds.

4.3.4 Trees and structures on and within the survey area boundary were assessed for their potential to support roosting or hibernating bats. This comprised a close inspection of all trees and buildings on the site to allow an assessment of their potential to be used by bats to be made by a licensed surveyor.

4.3.5 Trees were all assessed in accordance with Collins, J. (ed) (2023) and categorised as No potential, PRF-I or PRF-M. PRF I is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats. PRF M is suitable for multiple bats and may therefore be used by a maternity colony.

4.4 Birds

4.4.1 All breeding birds, other than pest species, are protected under the Wildlife and Countryside Act of 1981 when building a nest, rearing young or sitting on eggs. Some bird

species, such as barn owl (*Tyto alba*), are protected when near an active nest site. Several birds are listed as Species of Principal Importance (SPI).

- 4.4.2 Bird species and behaviour was noted during the other field surveys. All areas are covered equally, in order to avoid the subjective survey of better quality 'bird habitat'. All birds displaying breeding behaviour were recorded.

4.5 Otter

- 4.5.1 Otters (*Lutra lutra*) are given protection by the Wildlife and Countryside Act (1981) as amended and Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

This protection means that it is an offence to deliberately or recklessly:

- Kill or injure otters;
- Destroy, damage or obstruct their dens, and
- Disturb them whilst in the den.

- 4.5.2 Watercourses were assessed for their suitability and for the presence of otters within 10m of the banks. The banks and scrub vegetation were carefully searched for spraints, feeding remains, runs, prints and couches/holts.

4.6 Water Vole

- 4.6.1 Water voles (*Arvicola amphibious*) and their habitat are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981). This provides protection from killing or taking by certain prohibited methods and their breeding and resting places are fully protected from destruction or obstruction, it is also an offence to disturb them in these places.
- 4.6.2 There are streams and ditches as well as ponds on and around the boundary of the site. These were surveyed and assessed for evidence of the presence of water vole.
- 4.6.3 This involved intensive searches by wading upstream where possible, and observing from the banks where not; looking for burrows and other signs including footprints, droppings and chewed vegetation. This was undertaken up to 5m from the water course.

4.7 Survey limitations

- 4.7.1 Due to the habitats present on site there were no significant constraints in respect of identifying the botanical interest of the site.
- 4.7.2 The duration, extent and scope of the surveys were considered sufficient to plan appropriate mitigation and recommend additional precautionary survey work required prior to the commencement of work.
- 4.7.3 No significant survey limitations were encountered.

5. RESULTS

5.1 Data Search

- 5.1.1 Envirotech hold no records of protected or notable species for the site. There are however records of protected or notable species within 2km (Figure 2). These are discussed in the relevant sections below.
- 5.1.2 There are no non-statutory protected sites on or adjoining (Figure 3). The site is not within priority habitat. Elmridge Wood which is Ancient Woodland lies to the North-east.
- 5.1.3 There are no statutory protected sites within 2km (Figure 4).



 Red Line Boundary

Amphibians

-  *Bufo bufo*
-  *Lissotriton vulgaris*
-  *Rana temporaria*

Bats

-  Common Pipistrelle
-  Noctule Bat
-  Pipistrelle

NERC

-  *Bufo bufo*
-  *Lepus europaeus*
-  *Nyctalus noctula*

Mammals

-  *Lepus europaeus*
-  *Talpa europaea*

Figure 2

Protected and
Notable Species





-  Red Line Boundary
-  Deciduous woodland
-  Water course
-  Ancient Woodland

Figure 3

Mapped Habitats of
Principal Importance
and Non-statutory
Protected Sites





-  Red Line Boundary
-  Local Nature Reserves

Figure 4
Statutory Protected Sites



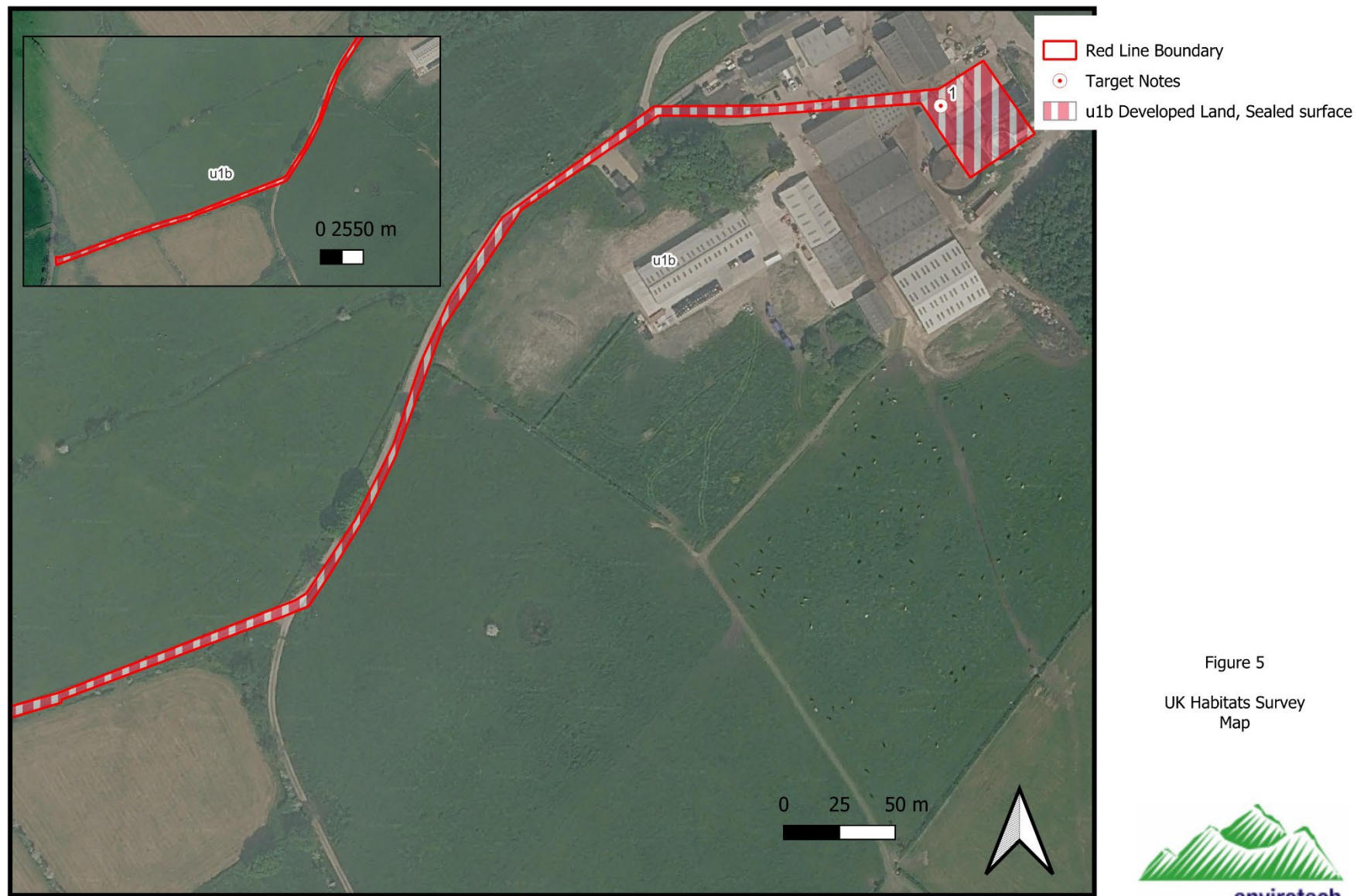
6. UKHabs V2 SURVEY RESULTS

6.1 *Habitat Results*

6.1.1 The site comprises hardstanding and buildings.

6.1.2 See Figure 5 for the UK Habs V2 Plan and Table 1 for the descriptive Target Notes.

Target Note	Description	Comment
TN1	Buildings/ Developed land sealed surface	Concrete yards, buildings and compacted gravel access tracks
Table 1 <i>Details of Target Notes.</i>		

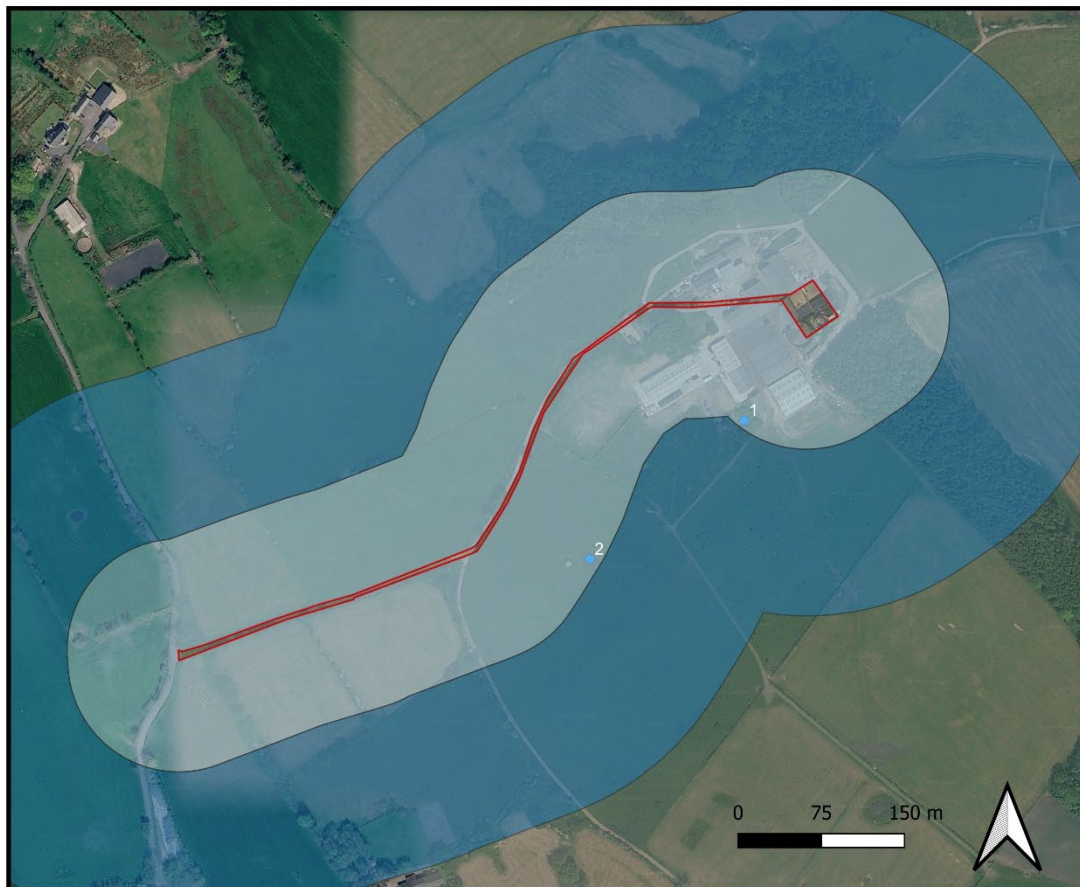


6.2 Vegetation

- 6.2.1 Details of the plant species found on site are included in the target notes. The entire site has no vegetation.
- 6.2.2 There is no evidence of Japanese knotweed, giant hogweed or Himalayan balsam on the site. No other invasive or notable weed species listed on Schedule 9 (Section 14) of the Wildlife and Countryside Act (1981) (as amended) was identified within the site or adjacent land.

6.3 Amphibian

- 6.3.1 There are records for amphibians within 2km of the site. There are no records of great crested newt in the local area.
- 6.3.2 The core development area has a low value to amphibians being open and exposed. The boundary hedgerows could be utilised as refuges and/or hibernacula and there are potential breeding ponds in proximity to the site.
- 6.3.3 EDNA testing of ponds 1 and 2 was undertaken in accordance with the methodology described by Biggs et al (2014). EDNA analysis was undertaken by Surescreen Scientifics. The results are appended show a NEGATIVE result.
- 6.3.4 No tadpoles or other signs of amphibians were noted.
- 6.3.5 Water quality in both ponds appears poor due to runoff from the adjacent field and yards.



- Red Line Boundary
- Pond

Figure 6
Site, 100m and 250m
Buffer and Ponds



Pond 1

	Pond 2
Table 3 Photographs	

6.4 *Badger*

- 6.4.1 Badger setts do not occur on site and a lack of feeding signs or runs across the site would suggest that they do not occur within 30m of site boundaries.
- 6.4.2 The proposed development will not impact on any existing badger runs or setts. The porosity of the surrounding fields to the passage of badgers will not be affected.

6.5 *Bats*

- 6.5.1 There are records of bats within 2km of the site.
- 6.5.2 The foraging habitat at the site is very poor for bat species being open and exposed. The yard and buildings have little potential for foraging.
- 6.5.3 Bats may be attracted to insects feeding on manures to the yard.
- 6.5.4 All trees around the site perimeter to areas of scrub and the roadside were also assessed in accordance with Collins, J. (ed) (2023) and assigned a risk category. All of the trees on site were Negligible Risk.
- 6.5.5 No indications of roosting or highly suitable roost sites were located within the trees. All of the trees could be adequately inspected using a ground based assessment and no additional aerial or emergence surveys were considered necessary to confirm risk.
- 6.5.6 We consider bat species are highly unlikely to rely on the site for feeding but may occur in the local area. Roosting by bats will not occur on the site.

6.6 Birds

- 6.6.1 There are records of birds within 2km of the site.
- 6.6.2 There were no rot holes or cracks in the trees on or near the site boundary which would support tree hole nesting species such as woodpeckers.
- 6.6.3 A risk assessment of the site in respect of its future potential for and value to nesting

6.7 Otter

- 6.7.1 No indication of the presence or past use of the site by otter was found. The ponds and ditches are considered unlikely to support fish or amphibians.
- 6.7.2 No indication of the presence or past use of the site by otters was found.

6.8 Water vole

- 6.8.1 No signs of water voles, such as droppings, feeding piles or footprints were present. We consider this species is likely to be absent from the site.

6.9 Statutory and Non-Statutory Sites

Direct Impacts:

- 6.9.1 There are no statutory or non-statutory sites which are connected to the site such that site development would directly affect the dispersal of species between them or directly impact upon their integrity.
- 6.9.2 The habitats on site do not represent or are linked to those found in any of the statutory or non-statutory sites locally.

Indirect Impacts:

- 6.9.3 There are no statutory or non-statutory sites which are connected to the site such that site development would indirectly affect the dispersal of species between them or indirectly impact upon their integrity.

7. MITIGATION/RECOMMENDATIONS

7.1 *Amphibians*

7.1.1 There is no requirement for specific mitigation for these species. There are currently no suitable breeding sites on or near the site. However, as a precautionary measure, in the unlikely event that any signs of any amphibian activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.1.2 In order to further minimise impacts on amphibians the following points should also be followed.

- All work must take place during daylight hours as amphibians are more likely to be commuting over night and this will ensure the risk to any amphibians commuting through the site will be minimised.
- During the development, measures should be put in place to discourage amphibians from using the development area, the creation of any piles of earth, materials and rubble which could form potential artificial hibernacula and refuge should be avoided at all times. It is recommended that any spoil or rubble will be removed immediately to skips, or on hard standing or short grass. This will ensure that no potential amphibian hibernation or resting sites are created.
- The storage of all loose materials must be palletised or similar so they are off the ground whenever possible.
- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure amphibians are not trapped during work.
- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

7.2 *Badger*

7.2.1 Badger setts are likely to occur within 2km of the site. These setts will be undisturbed by work but in order to minimise impacts on badgers passing over the site the following points should also be followed.

- All work must take place during daylight hours as badgers are more likely to be commuting over the site at night and this will ensure the risk to any badgers passing through the site will be minimised.
- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should

be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure badgers are not trapped during work.

- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

7.3 Bats

7.3.1 New roosting provision for crevice dwelling bats could be incorporated into the buildings on site.

7.4 Birds

7.4.1 Nesting by birds within the development area is considered unlikely to occur. Birds may nest within the hedge on the periphery of the site.

7.4.2 Any vegetation to be trimmed or cleared should be checked for nesting birds before it is removed. Ideally this should occur outside the bird nesting period March- September. If vegetation clearance is to occur in the March-September period a check for nesting birds should be conducted first by a suitably qualified individual.

7.4.3 Artificial bird nesting sites for House Sparrow (*Passer domesticus*) could be incorporated into the new buildings under the eaves in suitable locations.

7.4.4 If nesting birds are found at the site all site works shall cease and further ecological advice shall be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.5 Otter

7.5.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any otter activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.6 Water vole

7.6.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any Water vole activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

8. REFERENCES

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9. APPENDIX

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GCN Report

Technical Report

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:

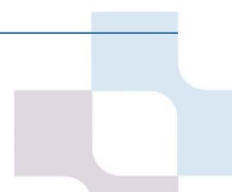
Presence of GCN eDNA (Positive/Negative/Inconclusive)

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.



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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 06476	Blackmoss - Field Pond	SD 6001 4020	Pass	Pass	Negative	0/12
GCN26 06478	Blackmoss - Farm Pond	SD 6015 4031	Pass	Pass	Negative	0/12

Matters affecting result: none

Reported by: Ruby Fielding

Approved by: Vanessa Hind

