David Leach Ecology Ltd.

Ecological Consultants

Dairy Farm Building

East Grimstead

Wiltshire

Construction & Ecological Management Plan.

Date: May 2023

Report compiled by David Leach MCIEEM

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1.0 Background.

- Planning permission has been granted for the redevelopment of a redundant farm building and construction of a dwelling.
- Phase 1 and 2 surveys carried out in 2019 found the building holds a bat roost and a European Protected Species licence will be applied for prior to any work starting on the building.
- Due to the proximity of a large pond (adjacent to the east perimeter of the site), the pond was sampled for great crested newt (gcn) eDNA in 2019 which returned a result of negative for the presence of gcn. However, a repeat eDNA sample collected from the pond in April 2023 came back as positive for gcn eDNA. Details of the required mitigation to protect the pond and gcn in the area are given below.
- This CEMP aims to protect wildlife and habitats during the construction phase of the development.

2.0 Mitigation

2.1 The Pond

Run off into the pond

1. Contractors will be made aware of the sensitivity of the site.
2. Any chemicals or fuel that are to be stored on site will be in a locked compound.
3. A bund will be created around the chemical/fuel compound to avoid accidental spillages into the stream. This will be a row of straw bales and a herras fence between the construction zone and the pond (minimum of 5m from the pond) see figure 1.
4. All construction materials will be stored in lifting sacks to prevent accidental spillage or run-off into the pond.
5. Suitable spill kits will be available at all times.
6. Concrete will be mixed off site and poured in a controlled manner.
7. Materials will not be left lying loose anywhere on site.
8. No off-loaded or pumping of any potential pollutant will be undertaken, at any time.
9. Washing or cleaning of equipment will occur in a controlled manner to prevent run off into the pond.
10. All waste materials on site will be put immediately into a skip, or vehicle, for removal from the site.

2.2 Great crested newts

- Due to the presence of gcn in the pond the following reasonable avoidance measures will be carried out.

- A reptile fence will be erected at the perimeter of the site on the north, east and south perimeters between the pond and suitable terrestrial habitat, and the construction zone. This will be done in the presence of an ecologist who will check the area for newts before fencing works starts.
- Removal of piles of rubble, logs etc. and any other area which could be used as shelter by newts and which has potential for hibernation, will take place under the supervision of an ecologist between May and October inclusive.
- The ecologist will check all suitable areas within the construction zone for newts and other wildlife prior to works starting. Any susceptible wildlife will be carefully moved by the ecologist to a safe area of suitable habitat away from the construction zone.
- Artificial refugia mats will be placed around the site in habitat suitable for reptiles and amphibians and left for at least 7 days. An experienced ecologist will check the mats during suitable weather conditions for sheltering reptiles and amphibians. Any found will be moved to a safe location off site but nearby. The checking of the mats will continue until there have been five consecutive clear visits. Once the checks have been completed, it can be concluded that the majority, if not all, the reptiles and amphibians within the construction zone have been moved and construction works can commence.
- A toolbox talk, providing information on identifying GCN and what to do if a GCN is discovered or a requirement for an Ecological Clerk of Works.
- Sensitive and phased clearance of vegetation to make habitats less suitable for newts within areas which are to be cleared/soil stripped; first cut any scrub and other tall vegetation to a height of c.250mm with all arisings removed; 48hrs later cut remaining vegetation to a height of c.150mm. The second phase should be undertaken in a directional manner, moving towards suitable areas of retained habitat, with arisings removed. It is advisable to maintain the area as bare earth to minimise the likelihood of newts re-colonising. In order to be effective vegetation clearance should be undertaken during the active season for newts, typically February to October inclusive when temperatures are >5 degrees centigrade and should avoid prolonged periods of hot dry weather when newt activity is reduced.
- The storage of materials/waste which is best undertaken on areas of hard standing or bare ground such as areas which have been cleared as above. Waste is best stored in skips or removed off site as soon as possible and away from suitable retained or off-site habitat to avoid creating refuges which could be colonised by newts. Mounds of soil can be compacted around the base to

avoid creating refuges which newts could occupy.

- Basic precautions around open trenches, including providing ramps (less than 45 degrees), back filling after checking for newts as soon as possible and avoiding creating temporary waterbodies which may be attractive to newts.
- A hibernaculum will be constructed close to the pond.

2.3 Reptiles.

- Reptiles are all protected by the Wildlife and Countryside Act 1981 (as amended) from intentional killing, injury and selling. Actions which could predictably kill or injure reptiles may result in an offence.
- The measures below are designed to avoid harm to any reptiles which may be present.
    - The vegetation within the construction zone must be cut down carefully in stages, initially to 30cm and then to 50mm a week later. This must be done during the period March to October when reptiles are active. All cuttings must be removed to prevent reptiles using them as shelter. **During the second cut, an ecologist must be present who will check for reptiles and move any found to a safe area to the south of the site which has suitable reptile habitat.**
    - Vegetation on site must be maintained below 50mm to render it sub-optimal habitat for reptiles throughout the duration of works.
    - A ‘buffer’ area of a minimum of 2m between boundary hedgerows and scrub and the construction zone must be maintained at all times.
    - All construction and building materials must be stored on areas of hard standing or on raised pallets or sealed-based containers at least 5m away from suitable reptile habitat to prevent reptile colonisation during works.
    - Any footings must be excavated and back-filled overnight; if this isn't possible then earth ramps must be left in the trench to allow reptiles to easily climb out. Alternatively, any foundation excavations left open at the end of a day will be covered over with plywood and the edges sealed with sand or soil.
    - The site manager must check the footings at the start of each day to look for reptiles (and other wildlife) which could not get out of the footings. If any are found the ECoW must be informed and they will advise on how to proceed.

2.4 Bats

- Bat activity surveys are ongoing and once completed a separate mitigation plan will

be produced. Based on the findings so far the mitigation will be in line with that proposed in the May 2019 bat report. A summary of that mitigation is below.

A. Bat Mitigation plan for Dairy Farm.

A1.1 No work to the remove cladding, tiles from the roof or work to the areas which will affect the bat roosts or access points can be carried out until a protected species licence has been issued and then only in the presence of the licenced ecologist.

A1.2 One Woodcrete Bat Box and two Vincent Pro bat boxes will be erected on a building or mature trees around the site to provide temporary roost areas until the works are completed and to have a safe location to relocate any bats found. These will remain in place for a minimum of five years and not be moved unless checked by a licence bat worker beforehand.

A1.3 As compensation for the loss of the roosts under roof tiles of the existing roof six bat access tiles and two pairs of ridge access tiles will be fitted on the roofs of the new buildings. Type 1F bitumen under felt or sarking boards must be used under the roof tiles in these roof areas. Breathable membrane will not be used as it has been shown to be unsuitable for areas where bat are likely to roost.

A1.4 Two Kent bat boxes will be installed in each of the car port areas to provide roosting opportunities for long eared bats that are currently roosting in the building.

A1.5 Two 50mm x 20mm gaps will be created in the cladding of the new dwelling as compensation for the loss of the roost behind the cladding of building 1. Type 1F bitumen under felt must be used wall behind the cladding. Breathable membrane must not be used as it has been shown to be unsuitable for area where bats are likely to roost.

A1.6 On the day of deconstruction of the roof the consultant (David Leach) will check the building for bats. If a bat is found it will be moved to the bat box installed on the site.

A1.7 The soft stripping of the tiles in the areas with known roosts or potential rooting areas will be undertaken in dry, mild weather conditions under the supervision of the David Leach or a named accredited agent.

A1.8 Prior to soft deconstruction works on the roof of the building commencing, a demonstration will be given to all site operatives and contractors to explain bat biology, their responsibilities and the required work methods. The site operatives will be informed that they

need to be continually aware of potential bat presence during the work. In addition, all contractors on site will be made aware of their responsibilities under the Wildlife and Countryside Act 1981 (as amended) and will be required to adhere to advice given this method statement.

In accordance with Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the built environment series, Bat Conservation Trust (London) & Institution of Lighting Professionals (Rugby) (2018) a suitable lighting schemes and regimes will be implemented which will include:

- *Extra care will be taken to ensure that external lights are kept to a minimum and will not illuminate bat access points or flight paths around buildings or hedges and trees and the pond which could be used by foraging or commuting bats.*
- *Any lights will be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible.*
- *A shield or hood will be used to control or restrict the area to be lit and limit "light spillage" on the site.*
- *Security lights will be on motion sensors and on for a maximum of 1 minute.*
- *Lighting units will be of low intensity - up to 15 watts, and red, amber or warm light with a maximum lighting colour temperature of 2700 K.*
- *White, blue and green light sources including metal halide, mercury and CDO / CPO Ceramic Outdoor Lamps bulbs have a significant effect on bats and will not be used.*

2.5 Nesting birds

- Birds' nests, when occupied or being built, receive legal protection under the Wildlife and Countryside Act 1981 (as amended). It is highly advisable to undertake clearance of potential bird nesting habitat (such as hedges, scrub, trees, suitable outbuildings etc.) outside of the bird nesting season, which is generally seen as extending from March to the end of August, although may extend longer depending on local conditions.
- Any trees and shrubs to be removed will be cut down by hand between September and the end of February to around 1m to remove potential nesting habitat.
- If there is absolutely no alternative to doing the work in during the nesting period then a thorough, careful and quiet examination of the affected area must be conducted by a qualified ecologist before clearance starts. If occupied nests are present then work

must stop in that area, a suitable (approximately 5m) stand-off maintained, and clearance can only recommence once the nest becomes unoccupied of its own accord.

2.6 Hedgehogs

- As a precautionary measure the following measures will be conducted.
    - Dense vegetation around the site will be checked for hedgehogs by an ecologist immediately prior to, and during vegetation clearance which must be done using hand tools, not machinery such as a motorized flail or Allen scythe.
    - The ruderals must be cleared between April and October to avoid disturbing hibernating hedgehogs.

2.7 Hedges and trees

- Heras fencing must be erected at least 2m away from the inner base of the hedges and trees around the site to protect the hedge and roots from damage and compaction by construction vehicles.
- Building materials must be stored away from hedges and trees to avoid root compaction.
- Heras fencing must be erected to create a tree root protection zone around the trees to be retained. The distance of the root protection zone must be determined following British Standard 5837: Trees in relation to design, demolition and construction – recommendations.

2.8 Good practice precautions.

- Any deep holes or footings must be back-filled overnight or if this isn't possible then earth ramps must be left in the trench to allow wildlife such as reptiles and hedgehogs to easily climb out. Alternatively any foundation excavations left open at the end of a day will be covered over with plywood and the edges sealed with sand or soil.
- The site manager must check the footings at the start of each day to look for reptiles (and other wildlife) which could not get out of the footings. If any are found the ECoW must be informed and they will advise on how to proceed.

3.0 Appendices

A. eDNA result

SureScreen Scientifics

Folio No: E16765
Report No: 1
Purchase Order: 2023-01 Dairy Farm
Client: DAVID LEACH ECOLOGY LTD
Contact: David Leach

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

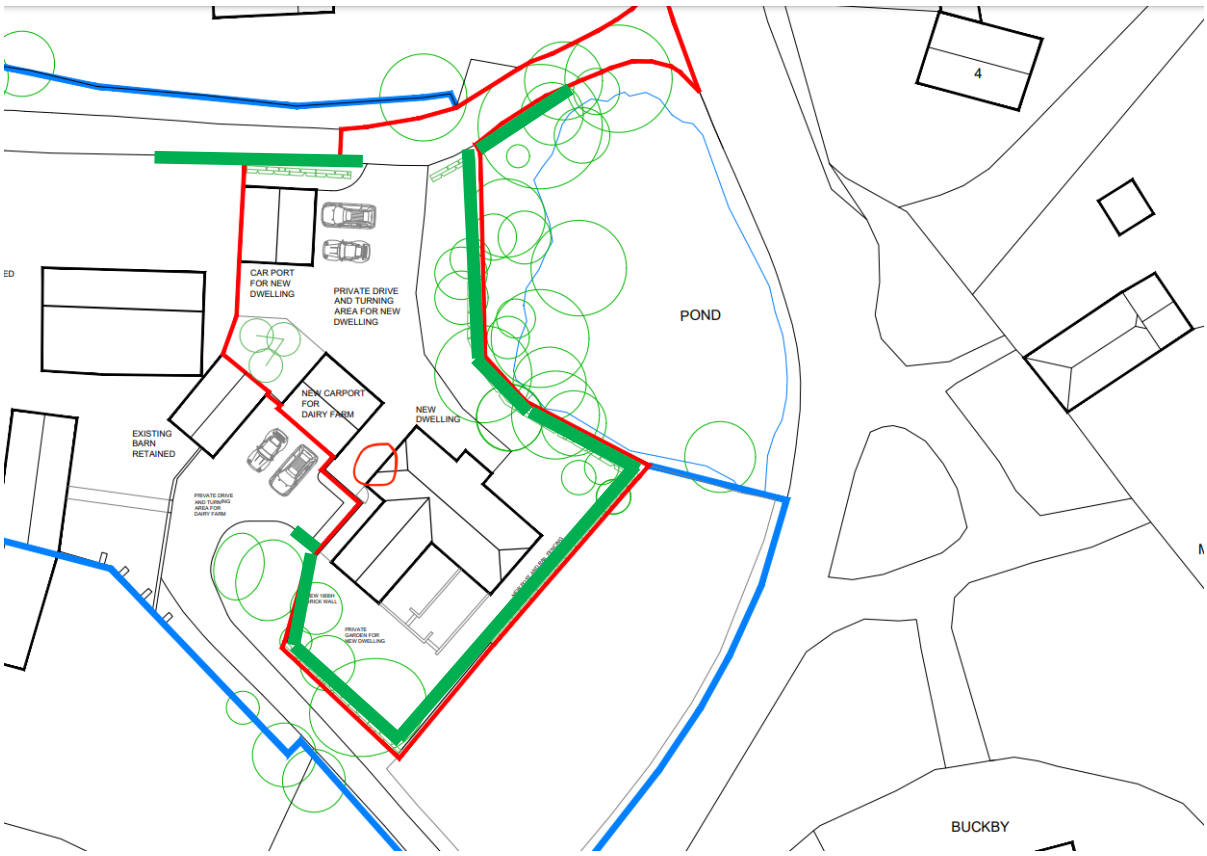
Date sample received at Laboratory: 24/04/2023
Date Reported: 08/05/2023
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
2423	Dairy Farm	SU 22619 27864	Pass	Pass	Pass	Positive	1

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

Reported by: Gabriela Danickova **Approved by:** Chris Troth

B. Reptile fencing



Location of reptile fencing

David Leach BSc (Hons) CBiol. MSB MCIEEM. David is a professional ecologist with over forty years' research and fieldwork experience in many aspects of ecology and for the past fourteen years in environmental consultancy work.

David is an experienced bat surveyor with competency in activity surveys, bat roost assessments, daytime surveys for bat field signs, assessments of trees as potential bat roosts and the production of reports providing advice on best practice, mitigation and compensation works relating to bats as may be required.

David also has experience in surveying for birds, reptiles, amphibians, barn owls and badgers and also carries out extended Phase 1 habitat surveys, BREEAM and Code for Sustainable Homes assessments.

David holds a Natural England licence to disturb bats for the purposes of science and education or conservation and is a **Registered Consultant for the Bat Low Impact Class Licence**. David and has been involved in over 150 Protected Species Licenses to permit development works affecting bats and also closing down badger setts.



David Leach BSc. (Hons), C.Biol., M.S.B., M.C.I.E.E.M.

Disclaimer.
All reasonable effort has been made to provide accurate information at the time of the survey. However, weather conditions and the timing of surveys can affect the results. Some species or signs of that species will only be visible at certain times of the year e.g. the nesting season for birds is usually between March and September. The absence of certain species or signs of use at the time of a survey does not mean that they are not present at other times of the year and does not imply that a species might not use the site at some time in the future.

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