

Method statement for Amphibian exclusion with regard to the proposed conversion of a garage into a dwelling at The Hollows, Coalpit Heath

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1. Introduction

A detailed ecological assessment of this site was undertaken on 30th November 2020 by Phil Quinn MCIEEM. A subsequent report detailing findings and offering recommendations was produced: Garage at the Cottage, The Hollows, Coalpit Heath: Preliminary Ecological Appraisal and Bat Roost Survey. Phil Quinn (Ecology and Land use) (November 2020). That document should be referred to with regard to understanding the site's wider ecological value (which is minor).

The most notable habitat feature on the site identified during the Preliminary Ecological Appraisal was a pond situated immediately south of the garage proposed for conversion. This pond supported very little emergent, marginal or other aquatic vegetation at the time of survey but appeared to be suitable as a breeding site for amphibians. It is to be noted that an ecological data search from the Bristol Regional Environmental Records Centre, commissioned as part of the Preliminary Ecological Appraisal, identified no records of great crested newt *Triturus cristatus* from within a 1km data search area.

The proposed works to the garage will not impact the pond however a potential risk to amphibians was identified with regard to the habit of amphibians sheltering under items such as wood, debris, cut vegetation etc. There will thus be a risk of amphibians, which could utilise the adjacent pond, sheltering under material being stored as part of the works to the garage.

2. Legislation

Although the great crested newt is the only British species of amphibian to have specific legal protection it is considered good practice to avoid causing harm or death to other species of amphibian in works such as are proposed on this site.

Common toad *Bufo bufo* could potentially utilise the pond as a breeding site and consequently utilise terrestrial features close to the pond for shelter. Common toad is listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as a species of principle importance for the purpose of conserving biodiversity and thus should be protected from harm with regard to operations subject to local authority control.

3. Amphibian lifecycles and behaviour

Amphibians hibernate over the winter, under shelter such as debris piles, in gaps within stone walls, or in subterranean sites such as old mouse holes, but by late winter / early spring they emerge from hibernation to breed. Amphibian breeding sites are commonly ponds, but other waterbodies such as canal or ditches can be used where water flow is either very slow or static; waterbodies with low numbers (or a complete absence of) fish are preferred as fish are major predators of amphibians in all stages of their lifecycle.

Common toad and common frog *Rana temporaria* typically breed early (most mating and egg-laying is completed between March and early April) however the three species of newt native to the UK have a longer mating and egg-laying season (March through to early June).

Once adult amphibians have completed mating and egg laying the majority of them leave the waterbodies and adopt a terrestrial lifestyle. Amphibians in their terrestrial phase require damp sheltered locations (technically known as refugia) to avoid predation, to avoid over-heating, and to avoid their skin drying out. Typical refugia include fallen wood (including wood piles), loose heaps of stone (including dry stone walls), old rodent burrows, and heaps of organic debris. Amphibians will spend the day in these refugia and emerge at dusk to feed.

4. Considerations with regard to the proposed development

There are two principal considerations here: the danger of harming amphibians seeking shelter under refugia on the proposed work site; and the danger of construction material (particularly in liquid form) entering the pond.

5. Actions to remove risk of harm to amphibians

Erection of exclusion fence

The main action to remove risk of harm from amphibians here is to erect a reptile exclusion fence around the southern edge of the proposed work site. This exclusion fence will be of the same type as is commonly used to prevent reptiles and great crested newts from entering a construction area or used to enclose an area and allow the capture and translocation of reptiles and great crested newts from within it.

These exclusion fences comprise a thick plastic membrane erected vertically with the lower side of the membrane buried at least 150mm (6 inches) into the soil and with an 80mm (4 inch) edge of the membrane laid horizontally below soil level with the disturbed soil then replaced on top of the buried lip. The burying of part of the membrane is to prevent amphibians from burrowing underneath the membrane.

The membrane need be no more than 1m above ground height and is held upright by wooden stakes positioned at intervals sufficient to keep the membrane taught and preventing it from collapsing. This exclusion fence will be kept in situ and maintained until all works to the garage and the removal of all construction material have been completed. Any gaps which develop in the exclusion fence through animal damage or from materials or equipment accidentally damaging it must be repaired immediately. After works have finished on this site the exclusion fence materials must be either recycled or disposed of appropriately.

The exclusion fence will be placed in the location shown in the Appendix.

Removal of potential refugia

To avoid harm to amphibians it is also proposed to remove all potential refugia from the construction area prior to works commencing. This will mean the removal of the wood pile currently situated against the southern elevation of the garage and the placement of the wood at least 30m away from the outer edge of the construction area.

Correct storage of materials

In addition no construction materials are to be stored on the ground: they must be stored on elevated material such as pallets which will prevent amphibians from seeking refuge under the stored material and risking injury and death when that material is moved or has more material placed upon it.

To prevent the run-off of construction materials (or demolition products) into the pond it is recommended that precautions are taken to avoid spillages of liquids and powders. Furthermore, stored demolition materials should be placed in a skip rather than left on the ground to subsequently provide refugia for amphibians or get accidentally pushed into the pond.

It is anticipated that the amphibian exclusion fence will remove most of the risk of materials entering the pond however the precautions listed above must still be followed.

Amphibian ladders

Should any trenches or other excavations be required to facilitate the proposed conversion of the garage these will present a potential hazard to amphibians (as well as to hedgehogs *Erinaceus europaeus* and badgers *Meles meles*) which could become trapped in these excavations.

To avoid this situation it is strongly recommended that a feature such as a clean plank or broad piece of grooved plastic is placed at a gentle angle into the excavation at the end of each working day, with one end of the plank / grooved plastic in the base of the excavation and the other end at ground level. Such a feature will allow wildlife which has fallen into the excavation an opportunity to escape during the night and avoid predation, unnecessary stress, or dehydration /desiccation.

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Appendix: location of proposed amphibian exclusion fence

