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## **Reptile Mitigation Statement**

**Land at 71 Oak Tree Road, Tilehurst**

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**27<sup>th</sup> April 2023**

**Project No: P4750**

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## **Report Summary**

1. The Ecology Co-op was commissioned by Mr Ryan Willmott to undertake a reptile survey and outline necessary mitigation for reptiles with regards to a proposed development on land at 71 Oak Tree Road, Tilehurst. It was determined that the site supports a 'low' population of slow worm *Anguis fragilis*. This report provides the full results of this survey and a suitable mitigation strategy to prevent harm to this species.
2. The site is located south of the 71 Oak Tree Road property in the suburb of Tilehurst, Reading. A Phase 1 Habitat assessment and Preliminary Ecological Appraisal of the site was undertaken in September 2017 by Derek Finnie Associates. No further surveys were recommended, though it was noted that tall ruderal habitat suitable for reptiles was forming. A repeat walkover survey undertaken on the 10<sup>th</sup> August 2022 by The Ecology Co-op found the site to support dense ruderal and scrub vegetation with some shorter grassland at the north-eastern corner entrance. A reptile presence/absence survey was therefore undertaken between August and September 2022 which revealed a 'low' population of slow worms on the site.
3. Pre-construction work includes creation of a small on-site receptor area to be enhanced for reptiles with tussocky grassland and a hibernaculum prior to any works commencing on site. In addition, a translocation of reptiles found will be carried out by taking some captured individuals to the Calcot Park Golf Club, situated approximately 2.1km to the south. The site will be subject to careful clearance of the tall scrub habitat using reasonable avoidance measures.
4. Once the site is considered clear of reptiles, a destructive search of any suitable habitat, including a topsoil strip should be carried out under supervision of a suitably qualified ecologist to render the site completely unsuitable for slow worms prior to commencement of construction.
5. Site staff must be briefed prior to the commencement of construction on the legal protection afforded to reptiles and how to correctly identify slow worms.
6. Post-construction management such as maintenance of the receptor site and monitoring surveys are detailed in section 4 of this report.



## DOCUMENT CONTROL

| Issue No. | Author | Reviewer | Issue Date | Additions/Alterations              | Notes |
|-----------|--------|----------|------------|------------------------------------|-------|
| ORIGINAL  | EB     | PW       | 03/10/2022 |                                    | -     |
| REV01     | EB     |          | 17/10/2022 | Updated plans                      |       |
| REV05     | JH     |          | 26/04/2023 | Updated as per ecological comments |       |

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*This report is confidential to the client, and we accept no responsibility, of whatsoever nature, to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.*

*This report only becomes the property of the client once payment has been received in full.*



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## 1 INTRODUCTION

### 1.1 Purpose of the Report

This document has been produced to demonstrate how a residential development upon land at 71 Oak Tree Road, Tilehurst will minimise its impact upon reptiles, specifically slow worms *Anguis fragilis*. It details all mitigation and compensation measures that are designed to ensure that habitats valuable to reptiles are either protected, replaced or enhanced and how reptiles will be protected through the development process. Full results of the reptile survey are also summarised.

All of the prescribed mitigation measures described within this document will be issued to relevant works contractors to ensure that they are carried out in full. Implementation of this will be overseen by a suitable ecological consultancy, and the works contractor will be given contact details for an ecologist so that any issues can be resolved promptly.

It is important that no habitat clearance or other site preparation work should be undertaken until planning permission has been granted and this mitigation strategy approved by the local planning authority.

This report was commissioned and produced at the request of Mr Ryan Willmott to provide a Reptile Mitigation Statement (MS) with regards to a proposed development at 71 Oak Tree Road, Tilehurst. It will be submitted to Reading Borough Council in order to discharge condition 5 (as below) of the approved planning application (ref: 220221).

#### Condition 5.

*\*No development shall take place until a precautionary reptile mitigation strategy has been submitted to and approved in writing by the council. Such details shall include timings and methods of activities and precautionary measures, and shall be implemented in full accordance with the approved details unless otherwise approved in writing by the council. Date: 22 July 2022 SDV Assistant Director of Planning, Transport and Public Protection Services Reason: To ensure that reptiles, a protected and priority species, are not adversely affected by the proposals. In accordance with Policy EN12 of the Reading Borough Local Plan 2019.*

### 1.2 Background

The Ecology Co-op has been commissioned to outline mitigation for reptiles with regards to a proposed development on land at 71 Oak Tree Road, Tilehurst, Reading, Berkshire RG31 6LA. The central grid reference for the site is SU 67004 74846. The location of the site is shown in Figure 1.

The site is located to the south of the 71 Oak Tree property and forms the original garden space. In 2017, the site was found to comprise a detached bungalow with converted garage, set in domestic gardens subject to clearance in the months previous. The site was dominated by a tall ruderal community developing on the recently cleared rear garden, as well as hardstanding and the buildings. The southern and eastern boundary of the site supported a mature, outgrown hedge with several standard trees.



The repeat walkover by The Ecology Co-op on the 10<sup>th</sup> August 2022 identified that the vegetation at the site had grown up significantly and included dense ruderal and scrub habitat with some shorter grassland around the north-eastern corner of the site, where a path provides access (see Photograph 1).

The Ecology Co-op therefore undertook a reptile presence/likely absence survey on the site between August and September 2022, which identified a 'low' population of slow worms at the site, largely concentrated to the north of the site.

The proposed development includes demolition of the existing dwelling at 71 Oak Tree Road, followed by the construction of three replacement dwellings, together with associated hard and soft landscaping works (see Figure 2).



**Figure 1.** An aerial image showing the location of the application site. The approximate boundary of the proposed construction zone is outlined in red. Image produced courtesy of Google maps (Map data ©2022 Google).



**Figure 2.** Approved proposed plans for the development at 71 Oak Tree Road. Provided courtesy of The Keen Partnership (dwg 8748-201 REV A), 06/02/2023.



**Photograph 1.** Dense vegetation across the site (right) and shorter vegetation at the entrance (north-east corner) where reptile mats have been deployed (left).

### 1.3 Legislation and Policy

Slow worms and are protected against intentional killing or injuring and trade under part of subsection 9 (1) and all of subsection 9 (5) of the Wildlife and Countryside Act 1981. Destruction of known habitats whilst reptiles are present may therefore lead to an offence.



## 2 REPTILE SURVEY

### 2.1 Methodology

The common lizard *Zootoca vivipara*, slow-worm, grass snake *Natrix helvetica* and adder *Vipera berus* are widespread species that can be found in many semi-natural habitats, such as rough grassland, scrub, heathland and open woodland where there is good vegetation cover, an abundance of invertebrate, amphibian or small mammal prey and areas of open ground for basking.

Standard reptile presence/likely absence surveys involve setting out artificial refugia (reptile 'mats' or 'tins') in potentially suitable habitat. Reptile mats are pieces of roofing bitumen felt and reptile tins are pieces of corrugated metal sheet approximately 1m x 0.5m in size, which absorb heat from the sun more rapidly than the surrounding vegetation and provide cover and basking places attractive to reptiles. These are then checked for presence of animals under suitable weather conditions. They are placed in areas of potentially suitable habitat at an approximate density of 20 per ha, or 20m apart along linear features. There are no up-to-date best practice guidelines for reptile surveys, but a minimum of seven survey visits under suitable weather conditions is generally considered to be adequate when determining their presence/likely absence, whilst under good conditions, this survey can also be used to determine a likely population class from the 'peak' count.

A total of 10 roofing felt mats were used in this survey (see Figure 3). The mats were left *in situ* for a minimum of one week to 'bed in' and allow reptiles to locate them before the first check. The mats were checked at least seven times over the period 29<sup>th</sup> August to 29<sup>th</sup> September 2022, and all observations of reptiles were recorded, together with the weather conditions, temperature and time of day (Table 1).

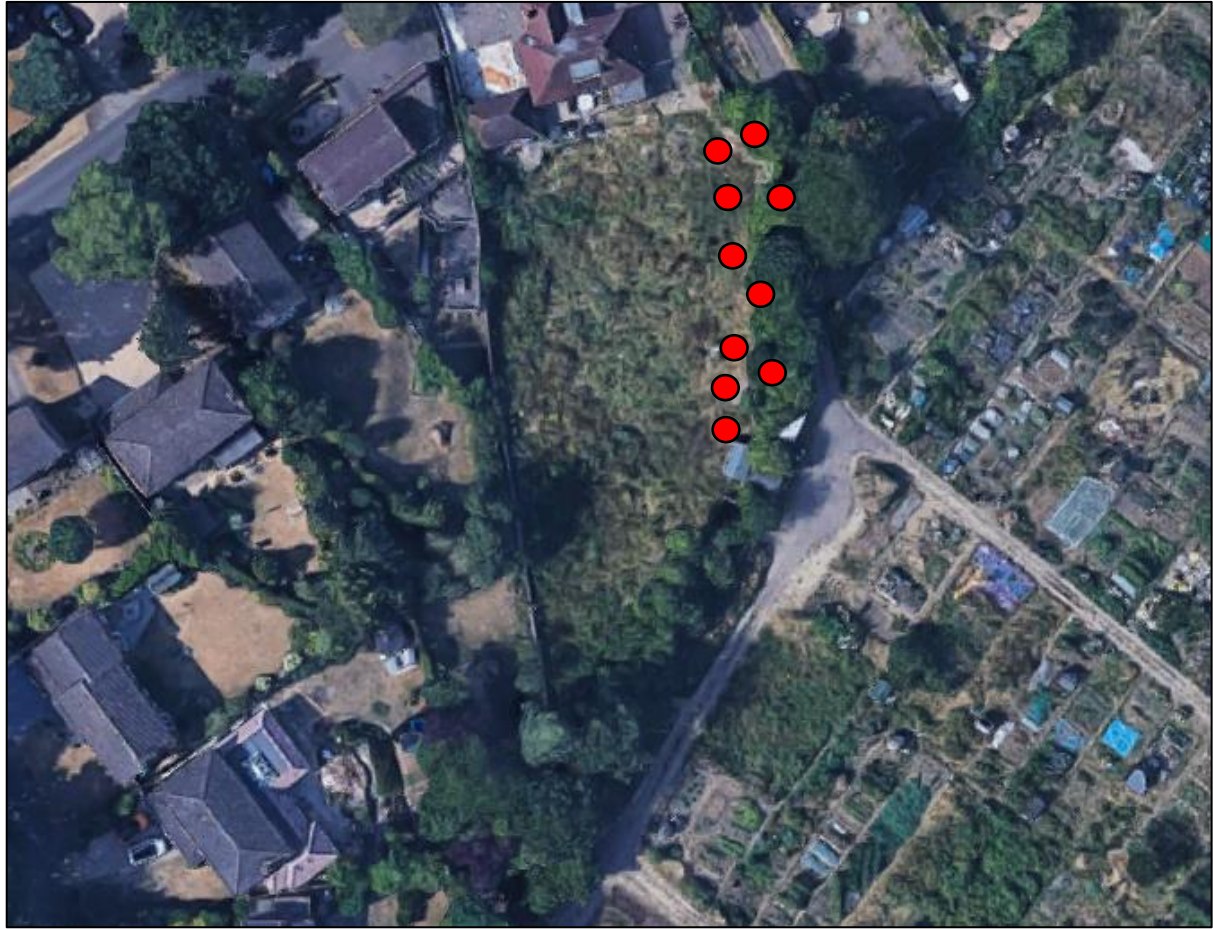


**Figure 3.** Reptile refugia sheet locations across land at 71 Oak Tree Road, Tilehurst. Image produced courtesy of Google maps (map data ©2022 Google).

## 2.2 Results

A peak count of two slow worms was found on the site indicating that the site supports a 'low' population of this species. Juveniles were identified on site, indicating it is a breeding population, but these are not included within the peak count. No other reptiles or wildlife was identified on site. The full survey findings, dates and conditions are presented in Table 1 and Figure 4 below.

**Table 1.** Reptile survey results for Land at 71 Oak Tree Road, Reading. Abbreviations: M – male, F – Female, SA - Sub Adult, Juv - Juvenile, SW - Slow Worm. BF = Beaufort scale, cc = cloud cover.

| Date       | Start time | Air temp. °C | Weather conditions                             | Results                        |
|------------|------------|--------------|------------------------------------------------|--------------------------------|
| 29/08/2022 | 10:00      | 18°C         | 50% cc, light air (BF1) and dry                | None found                     |
| 02/09/2022 | 16:00      | 23°C         | 100% cc, BF1 and light drizzle                 | 1 x FSW (mat 4)                |
| 10/09/2022 | 16:00      | 19°C         | 70% cc, BF1 and sunny spells with some drizzle | 2 x FSW (mat 7)                |
| 14/09/2022 | 10:00      | 16°C         | 40% cc, BF1 and bright following some rain.    | 1 x SW (mat 9)<br>1JSW (mat 7) |
| 18/09/2022 | 10:30      | 14°C         | 20%, BF1-2 and dry with sunny spells           | 1 x SW (mat 8)                 |
| 25/09/2022 | 11:00      | 15°C         | 30%, BF3, dry and bright sun                   | None found                     |



| Date       | Start time | Air temp. °C | Weather conditions                        | Results            |
|------------|------------|--------------|-------------------------------------------|--------------------|
| 29/09/2022 | 16:00      | 14°C         | 50%, BF1 and dry but ground slightly damp | 2 x Juv SW (mat 7) |



**Figure 4.** Reptile refugia sheet locations where reptiles were recorded across the presence/likely absence survey. (Yellow – slow worms recorded). Image produced courtesy of Google maps (map data ©2022 Google).



**Photograph 2.** Slow worms found on the site at 71 Oak Tree Road, Tilehurst.



## **2.3 Survey Limitations**

Given much of the site was covered in dense inaccessible vegetation at the time of the site walkover and throughout the presence/absence survey, sheets could only be placed along the north-eastern aspect of the site where the vegetation was shorter, though slow worms may also be present within the scrub across the entirety of the site and this has therefore been assumed as part of the mitigation strategy.

## **3 PRE-CONSTRUCTION MITIGATION MEASURES**

### **3.1 Roles and responsibilities**

All mitigation measures, future monitoring and habitat management commitments are defined within this document. Specific roles and responsibilities are set out as follows:

#### **1. The Ecologists – The Ecology Co-op/**

The Ecologists will be responsible for providing ecological support as 'Clerk of Works' for all habitat clearance/removal where risks are posed to reptiles or nesting birds. Further the ecologists will be responsible for guiding and advising the Developer in adhering to all advice set out within this document and any future ecological matters, should they arise.

The ecologists will be responsible for implementing the translocation strategy, creation of enhancement feature and undertaking monitoring as set out in the sections below.

#### **2. The Developer – Ryan Wilmott**

The developer must ensure they have read and understood this document, communicating with the ecologist if there are any matters that are not fully understood. The developer must ensure that on-site receptor area maintenance is carried out as described in this document in perpetuity. Further, the developer must ensure that this document and the commitments to future receptor area management are passed on with any particulars of sale in the future and that any future purchaser has confirmed that this document has been received and read in full.

#### **3. Reading Borough Council Parks management**

Reptiles to be translocated to a site called Calcot Park Golf Club (Figure 7) shall be checked to ensure that the refugia created by the Ecologists remain in situ and their location is agreed as set out in Section 3.3 below. The current use shall allow taller swards suitable for reptile usage around the hibernacula placed, and management shall agree to only cut these areas to no lower than 40mm and only between November-February to ensure reptiles are within the hibernacula and shall not be harmed as a result of the cuts whilst managing the land.

### **3.2 Reptile Translocation Strategy**

Translocation of reptile populations normally involves a period of trapping out using artificial cover objects or 'reptile mats' and a series of checks over 60 separate site visits to capture animals as they bask on or beneath them. However, given the 'low' population of slow worms identified on the site and accessibility issues due to tall scrub vegetation across much of the site, this would make a typical translocation strategy extremely challenging. As such, a method to install reptile fencing around the site



is not considered appropriate or practical in this case.

It is therefore proposed that the southern corner of the site will be retained as an on-site receptor (for a low slow worm population) site (see Figure 6) as this provides connectivity to the allotments to the east and to further gardens to the south-west. As the reduction of habitat availability is high, should any more than 10 reptiles require translocation, then they shall be capture and translocation to Calcot Park Golf Course located 2.1km south of the site. Details of the receptor site and areas of habitat to be enhanced are described in paragraph 3.5 and Figure 7 below.

### ***3.3 On-site Receptor Area***

The tall scrub vegetation at the site will be removed using reasonable avoidance measures such as habitat manipulation under supervision from a suitably qualified Ecological Clerk of Works (ECoW), with this habitat cut and removed to a height of no less than 15cm. Following the completion of this first pass, arisings will be removed, and 50 reptile translocation sheets will be placed across the proposed construction zone and left for a period of at least 1 week to 'bed-in'. Reptile capture visits will then be undertaken during suitable weather conditions until the project lead ecologist is satisfied that capture rates are sufficiently low or checks produce a minimum of five consecutive negative results during optimal conditions (>10°C between 08:00 and 18:00<sup>1</sup>) in order that remaining reasonable avoidance habitat clearance can take place posing a suitably low risk.

The second stage habitat clearance would be completed after the capture period, with cut vegetation down in two passes – first to around 5cm, slowly and methodically using a strimmer, to clear half of the remaining cover and then down to below 5cm as close to the ground as possible.

Following this a small digger with a toothed bucket (Figure 5) can be used to remove the first 10cm of soil from the site. The digger is to be used methodically, working in lines the width of the bucket, removed soil is to be piled onto areas of already assessed land to not compact soil where slow worms may be fossorial. The digger is not to travel unnecessarily, and an optimum route shall be determined by the operator and Suitably Qualified Ecologist (SQE) on site prior to works to ensure minimal impacts to soil or animals.

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<sup>1</sup> Edgar, P., Foster, J. and Baker, J. (2010). *Reptile Habitat Management Handbook. Amphibian and Reptile Conservation*, Bournemouth

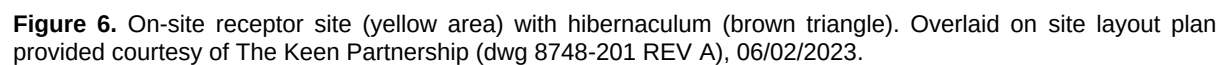


**Figure 5.** View of destructive search undertaken with a toothed bucket digger. Image produced Courtesy of GreenWays Countryside Management Ltd 2023.

### 3.4 Recording

All animals translocated will be recorded in combination with metadata. Data should include a minimum of, air temperature, time, date, wind speed, cloud cover, time since last rain, species, sex, and age class.

Records are to be collated and submitted to the local planning authority and local biodiversity records centre with records of those translocated to Reading Golf course submitted to their management team.



The Calcot Park Golf Course has been identified as a suitable receptor site for slow worms. The golf course is situated approximately 2.1km south of the site. Golf courses are historically known for their value to reptiles, due to existing management plans and variation in courses<sup>1</sup>. Prior to translocation works the golf course shall be subject to specific reptile management and enhancement to increase the sites value and reduce the likelihood of home range dispersal.

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**Figure 7.** Calcot Park Golf Club with potential release and hibernacula sites identified (Red stars). Image produced courtesy of Google maps (map data ©2023 Google).

### 3.6 On-site Receptor Area

#### 3.6.1 Reasonable Avoidance Measures: Habitat Manipulation

A suitably qualified ECoW will firstly provide a toolbox talk to any workers on site, detailing the legal protection afforded to slow worms and how to identify them.

Given access into the proposed on site receptor area is currently challenging given the dense vegetation across the site, a pathway into this area and this receptor area itself will be cleared first. This will be carried out through a two-phased strim of the vegetation overseen by the ecologist.

The vegetation will first be strimmed to a height of 15cm, so that the ECoW can hand search the vegetation for any slow worms present. Any found will be moved to a location that will remain undisturbed. The vegetation can then be strimmed to below a height of 5cm rendering it temporarily unsuitable for reptiles while enhancement measures are undertaken.

#### 3.6.2 Enhancements

The on and off-site receptor areas must be prepared prior to clearance of the remaining vegetation at the site.

The areas can be sown with a tussock forming grass sward to include wildflowers should be created in this area. An example of a suitable mix is the Emorsgate Tussock Mixture EM10 (<https://wildseed.co.uk/product/mixtures/complete-mixtures/meadow-mixtures-for-specific-soils/tussock-mixture/>). Please note there are other commercial seed mixes available, but it should include a native mixture of both grasses and wildflowers in similar ratios. This habitat can be established through scarification of the cleared area ground to expose at least 50% of the soil, before sowing with this mixture. This should be undertaken between late August and the end of September during mild and wet weather or during mid-March to mid-May, when the ground has sufficient moisture and there is very



little risk of frosts, to ensure the best conditions for seedling establishment. Scarification should only follow the reasonable avoidance measures described in section 3.2.1.

Hibernaculum will also be constructed within the areas as indicated in Figure 6 and Figure 7. This can be built using logs and branches, piled on top of each other, with grass cuttings, earth and turf laid over the top to provide insulation (see Figure 8 and Figure 9). These hibernacula would also provide benefits for other species including amphibians, solitary bees, wasps and other insects.

This entire area should then be fenced off using temporary reptile/amphibian fencing (see Figure 10) to prevent slow worms moving back onto the development site. This fencing will need to remain in place throughout the entirety of the construction phase.

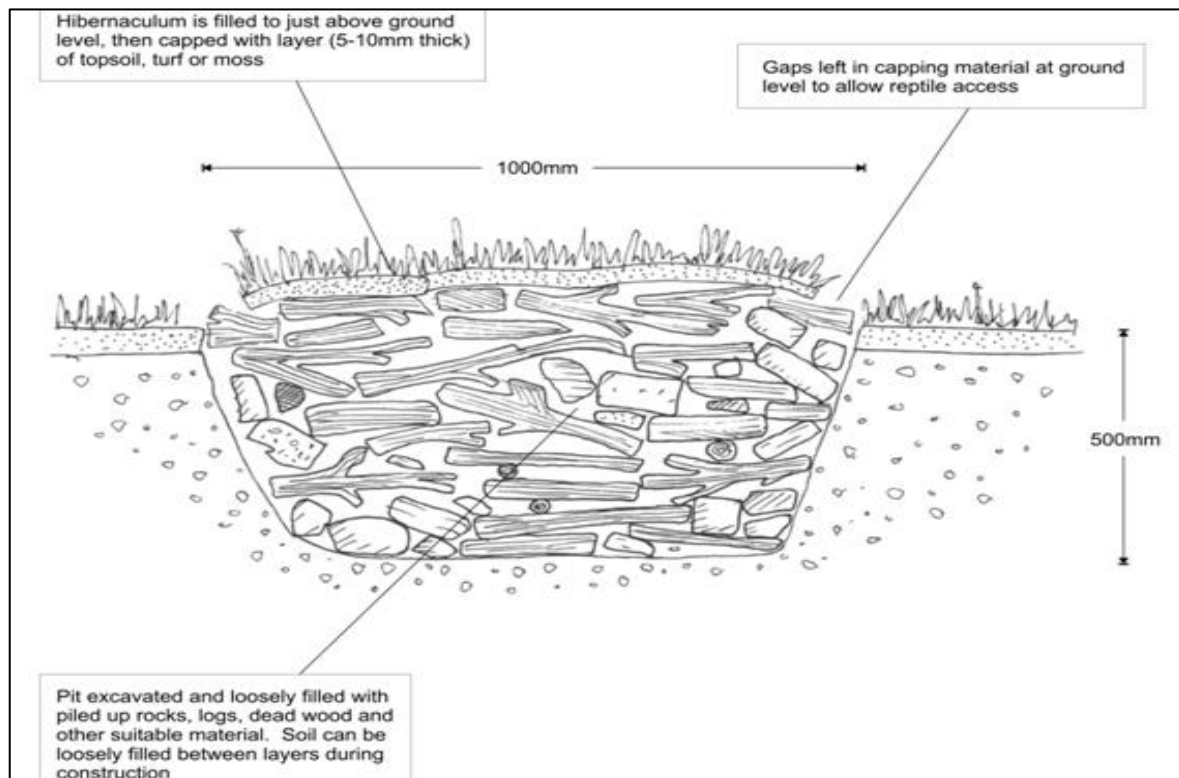


**Figure 8.** Illustration on how to build a reptile hibernaculum. Image taken from the 'Reptile Habitat Management Guidelines' by Herefordshire Amphibian and Reptile Team and the Herefordshire Nature Trust.

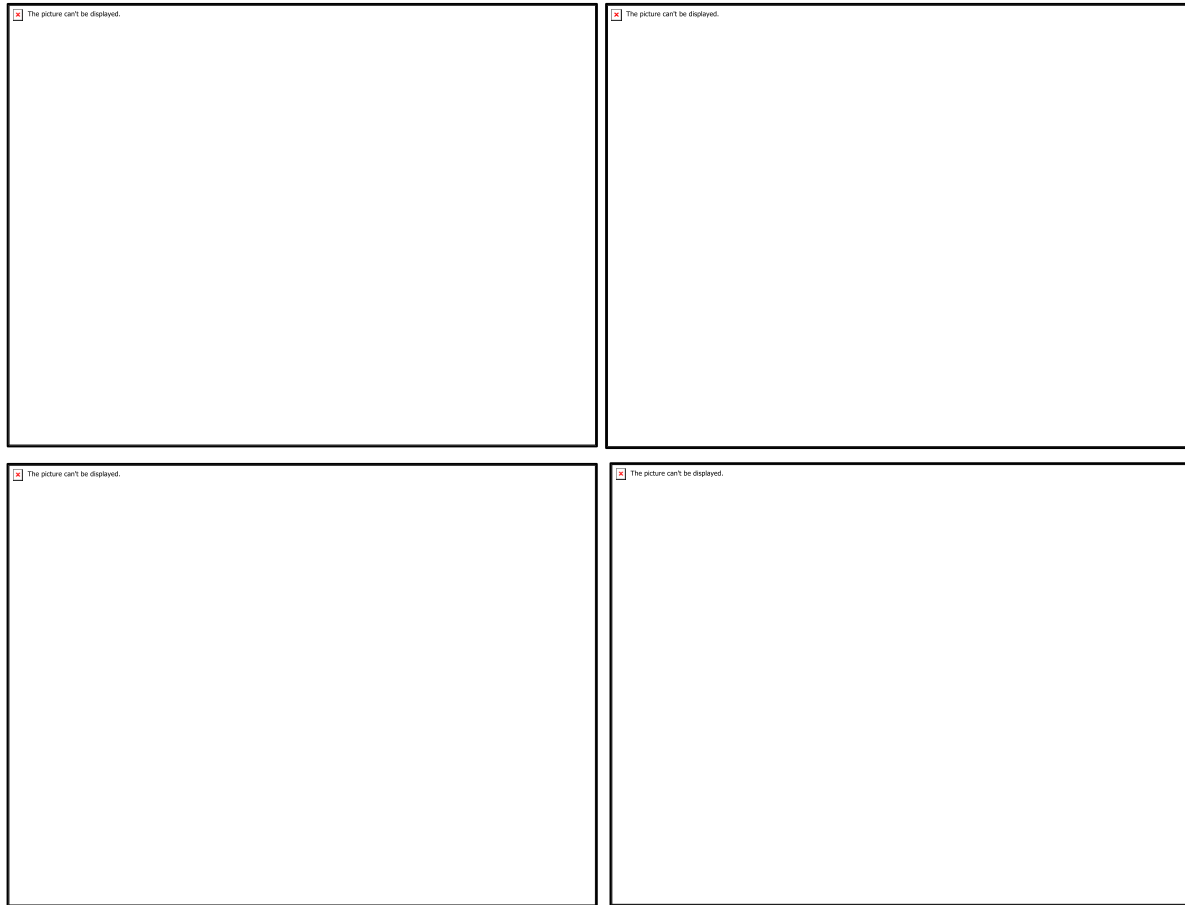


**Figure 9.** Example of construction of a reptile hibernaculum. Clockwise from top-left; step 1, excavate a shallow trench, fill with clean rubble. Step 2, add logs (untreated timber free from nails or impurities). Step 3 and 4 add a geotextile layer and cover with soil, making sure there are gaps at the sides for reptiles to access the crevice spaces.



**Figure 10.** An example of the temporary fencing material that will be used.



### ***3.7 Clearance of Remaining Vegetation***

Following the methods outlined above in section 3.1, the remainder of vegetation at the site can be cleared cautiously under supervision. Any individual reptiles found will be placed carefully into the on-site receptor site.

Following this, the top-soil must be mechanically excavated to a maximum depth of 10cm which must be overseen by a suitably qualified ecologist. This is to further prevent the construction zone from becoming suitable for reptiles, and to uncover any subterranean slow worms which can then be relocated to the receptor site. The digger must use a toothed bucket to minimise the risk of harm to any slow worms present within the soil layer.

## ***4 POST CONSTRUCTION MANAGEMENT***

### ***4.1 On-site Receptor Site Maintenance***

A low chestnut fence should replace the temporary reptile/amphibian fencing to protect this area in perpetuity from mowing and disturbance.

The receptor site habitats, once established, will require minimal management to maintain them as suitable habitat to support the translocated reptiles in perpetuity. During the establishment phase, some interventions may be necessary to control weeds such as creeping thistle and ragwort.

In the longer term, these areas must be left undisturbed and unmown during the summer months between April and August (inclusive). They can be cut in alternate years on rotation in late autumn if desired, but it is better to leave them to develop and monitor the habitat condition over time, with periodic cutting back of encroaching scrub and bramble every 5-10 years. When this habitat is cut, it must not be to a height below 150mm where possible to avoid direct ground disturbance and risk of harm to reptiles.

The responsibility of site maintenance will rest with the Developer and an appropriate covenant will be required (as considered appropriate by Reading Borough Council) to ensure that this land is appropriately managed.

### ***4.2 Post-construction Monitoring***

It is important to establish the success of the mitigation measures outlined within this report and if necessary to be able to prescribe further enhancements if it becomes evident that there is a decrease in the reptile population present. As such, one post-construction reptile survey is proposed at the receptor site, approximately one year following the translocation and incorporating the standard methodology described by Gent and Gibson (1998). A simple seven survey visit presence/absence survey carried out under best practice guidance one year after the completion of the translocation would be sufficient.

This monitoring survey will be the responsibility of the developer, with the survey to be undertaken by a suitably qualified ecologist only. The results of this survey must be provided to the planning authority at their request.



### *4.3 Closing out report*

Following completion of the development a closing out report for reptiles translocated offsite shall be submitted to the planning authority. The report shall include details such as; number, age, sex and, species of reptiles moved, metadata and locations moved too.

**Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.**