

Reptile Survey Report



Project: Land at Springfield Rise, Treharris

Instructed by: Holbrook Homes

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1. Introduction

The applicant is seeking permission to develop a parcel of land to the north of Springfield Rise, Treharris. The proposed development site is centred at ST 09560 97306. The land within the proposed development boundary consists of scrub, semi-improved grassland, open mosaic habitat and bare earth.

A preliminary ecological appraisal (PEA) of the land within the proposed development boundary was completed on 18th September 2020 by Ecological Services Ltd. The potential for the habitats across the site to be used by reptiles throughout the year was highlighted during the site visit. As such a reptile survey has been carried out and this report gives the results of the survey work along with recommendations and appropriate mitigation.

1.1 Site Description

The proposed development site is triangular in shape and flat to the west but rises steeply to the east. It appears that a large amount of engineering work has been completed on site previously as footings have been dug into the ground towards the west of the site.

Springfield Rise is located to the south of the site and a small tarmac access track along the north west boundary. A field is present along the eastern boundary bounded by a stone wall with a lane to the west

The site is considered to be in a semi rural location on the northern outskirts of the town of Treharris. In the wider landscape areas of woodland lie to the north east and north west with fields and tree lines to the north.

1.2 Survey Constraints

The site visits were undertaken during April and May which is within the optimum timeframe for such surveys. Overnight temperatures during April and May were below average for the time of year. However the refugia checks were undertaken later in the days when the temperatures had risen to a suitable level for reptile surveys.

The area to the west of the site is very steep in places making access difficult.

A public footpath leads from the lane to the west of the site and runs across the site; this resulted in the minimum of refugia placed in this area. There is also evidence of rubbish being burned on the site and children playing on the site suggesting there may be some interference with the refugia from the local community.

1.3 Surveyor Experience

Vicky Hannaford completed the reptile survey of the site. Vicky is an ecologist with at least eight years experience. She has worked in larger consultancies previously completing a wide

range of flora and fauna surveys, completed professional training courses. Vicky is a licenced dormouse and great crested newt (GCN) worker.

2. Reptile Survey

A data search was undertaken via Aderyn to support the PEA report which found the nearest record for reptiles is approximately 640m away from the site and is a record for slow worm.

Reptiles prefer a mosaic of habitats. Habitats across the site comprise a mixture of grassland, scrub, bare earth and short perennial vegetation which provides diversification and structure to the habitat which has potential for use by reptiles. There is also a pile of large stones in the north east of the site which also have potential for use by reptiles for hibernation purposes.

2.1 Legislation

Reptile such as the slow worm, common lizard, adder and grass snake are protected under the Wildlife and Countryside Act 1981 (as amended). They are protected from killing, injuring and sale. In Wales sand lizard, smooth snake, adder, grass snake, slow worm and common lizard are listed in section 6 of The Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

2.2 Survey Methodology

A standard approach to presence/absence reptile surveys is to complete a minimum of seven site visits in suitable weather conditions and check artificial reptile refugia spread out across the survey site. Survey refugia for reptiles can be made from a variety of materials but the most common material used is roofing felt cut into squares measuring at least 0.75m by 0.5m.

Suitable weather conditions for reptile surveys are dry and cloudy or just after a period of rain. The temperature during these times must be between 9°C and 18°C which is optimal for reptiles to use the refugia as reptiles bask to gather heat from the sun and surrounding habitat or direct sun. Once animals are sufficiently warm they become very active and more difficult to observe during reptile surveys. Reptile surveys should ideally be completed in the early morning or late afternoon in Spring or Autumn.

30 reptile tins were laid out across the proposed development site on the 19th March 2021. The refugia were laid out across the site in areas thought suitable for use by reptiles such as the edge of different habitat types. The approximate location of the reptile mats can be found in Appendix 1.

The refugia were allowed to bed in for a minimum of 14 days, survey visits were completed at site during suitable times of day when it is expected that reptiles would be present and

also in favourable weather conditions. The survey started on the 20th April and finished on 1st June 2021.

2.3 Survey Results

Full details of each survey visit and results are provided within Appendix 2. The map provided within Appendix 1 shows the location of each refugia and where slow worm and common lizard were found.

Refugia check 4 found 1 slow worm present within the site and refugia check 6 found 2 common lizards (one adult, one juvenile) present within the site. No reptiles were found during visits 1-3, 5 and 7. A maximum of one slow and two common lizards were found during any one survey visit, with one lizard being a juvenile. When assessing the importance of a reptile population within a site Froglife Advice Sheet 10 provides some guidance, however this assessment is based on number of adult slow worm and lizard observed.

Froglife Advice Sheet 10 would assess the population as 'low' (numbers of <5). The presence of a juvenile lizard shows the presence of a breeding population within the locale. Mitigation and compensation measures suitable for the presence of low numbers of common reptile species within the development proposals will be required.

3. Recommendations and Mitigation

It is proposed to create a residential development within the site boundary. The development proposals are to create a block of flats and a small number of detached and semi-detached houses within the site. The topography and location of the development site make it difficult to develop. In order to make the site economically viable and meet the unit requirements of the housing association, the developer needs to provide the proposed number of units within the site boundary. The majority of habitats within the site boundary will be lost to allow the proposed development to be created. **A band of vegetation runs along the eastern edge of the site and a hedgerow runs along the western edge of site, these features will be retained throughout the development works.**

A maximum of one slow worm and two common lizards were found during any one survey visit including adults and a juvenile, the maximum number of adults being 2 (one slow worm, one common lizard). Mitigation and compensation measures for the presence of low numbers of common reptile species within the development proposals will be required as the development proposals will negatively impact on reptiles.

The site is surrounded on three sides by a road/lane with a stone wall separating the site from the adjacent property to the east. As such it is not feasible to push the reptiles towards adjacent suitable habitat using species deterrent measures. Therefore mitigation measures will require translocation of reptiles found within the site to another suitable location. This will entail carrying out a fence, trap and clear of the site with any reptiles caught transferred to a suitable site.

3.1 Translocation Receptor Site

A suitable receptor site has been identified approximately 70m away to the south/south east of the site. The proposed translocation receptor site is shown in blue on the site layout plan by Pentan Architects. The site is south facing which is ideal for use by reptiles and measures approximately 0.5ha (the proposed development site measures approximately 0.5ha) Habitats within the translocation receptor site include scrub (bramble and bracken), grassland with a sward of varying heights, scattered trees, some of which are grouped together forming small wooded areas. A public footpath also cuts across the western boundary of the site. When viewing aerial photos of the site it is possible to see adjacent habitat to the west of site which would allow reptiles to disperse into the local area.

The current habitats within the proposed translocation site are suitable for use by reptiles. However it is proposed to undertake some enhancement measures within the receptor site in order to improve the carrying capacity and allow additional reptiles to be translocated to

the site. The area of bramble/bracken scrub is dense and covers a large portion of the site therefore removal of some scrub to provide more open space suitable for reptile use would improve conditions within the site boundary. The provision of a reptile hibernacula within the receptor site would also be beneficial to local reptile populations.

Enhancements to the receptor site must be completed and habitats suitable for use by reptiles before capturing and translocation can take place.

Brack / Scrub Removal

- At least 50m² of the scrub habitat, at a location within the translocation site boundary agreed with the supervising ecologist will be cut to create more open habitats for reptile use. The bracken and scrub will be cut down to 150mm during the winter period of October - February inclusive to avoid issues with nesting bird use. The vegetation will be cut by contractors using hand tools only to minimise any ground disturbance which may affect hibernating reptiles. The brash will be used within the hibernacula.
- All cuttings must be collected and removed from site or to an agreed compost area within the site boundary. Composting vegetation can be highly attractive to reptiles such as slow worm and would be a welcome enhancement measure. A compost area must be agreed in writing with the supervising ecologist.
- The 50m² of cut scrub vegetation will be cut twice per year (once in March and once in October) to prevent scrub encroaching and create more open areas of tussocky grassland. It will be the landowners responsibility to ensure the vegetation is cut each year.

Reptile Hibernacula Creation

- A reptile hibernacula will be built within the bracken / scrub area of the translocation receptor site. The hibernacula will be built after the vegetation is cut down to 150mm and all arisings are collected. The hibernacula will be built between the months of March to October inclusive to prevent ground disturbance which may affect reptile use. It is between these months that temperatures are generally high enough for reptiles to still be reasonably active and move away from work areas after species deterrent measures have been implemented (i.e vegetation cutting)
- The reptile hibernacula will be created under the direct supervision of the supervising ecologist.
- The feature will measure 2m wide and 2m long and be dug into the ground at least 0.5m. Layers of rubble and brash will added until a mound is created. The layers will then be covered with soil or turf and sown with EM1 Basic General Purpose Meadow

Mixture. Rubble and logs will be placed around the edge of the hibernacula at ground level and extend into the layers to ensure access for reptiles and other small wildlife is maintained.

- A diagram of reptile hibernacula is provided within Appendix 3 as a guide to the construction.

3.2 Translocation Strategy

Once the receptor site has been subject to enhancement measures as detailed above in section 3.1, work to the development site can commence. A mitigation strategy is detailed below to help prevent any harm to reptiles using the development site.

Vegetation clearance - Grassland & Scrub

- **First Stage Cut** - The bracken and scrub within the centre of the site will be cut down to 150mm during the winter period of October - February inclusive to avoid issues with nesting bird use. The vegetation will be cut by contractors using hand tools only to minimise any ground disturbance which may affect hibernating reptiles.
- **First Stage Cut** - Grassland vegetation clearance work within the site will be undertaken between the 1st April and 30th September. This timing restrictions ensure that reptiles are active and likely to move away from the development site of their own accord.
- In the first instance the vegetation will be cut, using hand tools, to a height of between 100-150mm. The cut material will be raked and removed from the site boundary. Strimming will start at the west of the site and will proceed eastwards.
- Any reptiles present should naturally move away of their own accord due to the disturbance from cutting. However if any reptiles or other fauna are encountered during this operation they will be collected, placed in a secure high sided container and removed to the receptor site.
- **Second Stage Cut** - After 24 hours the grass and remaining scrub areas will be cut to ground level (a maximum height of 50mm) and the arisings raked and removed removed the site. Any reptiles or other fauna will be treated as above.

Vegetation clearance - Scattered Trees

- The trees within the site boundary will be removed in two stages.

- First stage, the trees to be removed will be cut down to a height of 50cm above ground level between the months of October to February inclusive to avoid nesting bird issues. The brash will be removed from the site.
- Second stage, the tree roots will be grubbed up using a toothed bucket of a JCB or an appropriate sized digger. The roots will be removed under ecological supervision and any reptiles found will be captured and moved to the retained habitat areas. The root systems will be removed slowly and gently to allow any reptiles present to escape. All roots will then be removed from the proposed development site.
- Tree root removal will only take place after the two stage grassland cut. Cutting the grass before removing the root systems and reptiles which might have been present, will naturally be encouraged to move from the site making them less likely to be using the tree roots.
- Once all vegetation has been cleared from within the site boundary, the construction site footprint must remain in a vegetation free state. This will help to reduce the likelihood of reptiles using the site while construction works are underway

Fence, Trap and Clear

Once all vegetation removal has been undertaken a fence trap and clear approach to clearing the site will be implemented.

- Reptile-proof fencing will be installed around the perimeter of the site. This must be erected in accordance with published specifications such as that contained in *DMRB (Volume 10(4)(7) HA116/05 Nature Conservation Advice in Relation to Reptiles and Roads (withdrawn)*. Superseded in 2020 by *DMRB 10.4.7 LD118 Biodiversity Design*. The fencing will be required to extend 250mm below ground level and be at least 600mm high. Installation of reptile fencing must be carried out by suitably qualified personnel in the presence of a suitably experienced ecologist.
- The reptile fencing will be installed vertically, forming a 'no pass' fence. It is essential that the integrity of the reptile-proof fencing be maintained at all times throughout the trapping period. Any breaks/tears will be repaired within 24 hours to prevent reptiles re-entering the trapping area from outside. As the site is prone to disturbance by locals it is recommended the site be secured with heras fencing to ensure that reptile-proof fencing remains intact throughout the trapping period.
- A high density of reptile refugia will be deployed within the site boundary 14 days prior to any reptile removal from site. The refugia will be deployed once all vegetation clearance and fencing work has been completed. At least 40 refugia will be deployed within the site and allowed to bed in for 14 days

- Following the 14 day bedding in period the refugia will be checked daily and any reptiles found, captured placed in a secure high sided container and removed to the receptor site. A note of the species and number of reptiles found will be made.
- Daily checking will be undertaken until no reptiles are caught for 5 consecutive days. Consecutive days will be when the temperature are above 9°C, dry or after a period of rainfall.
- Vegetation will be controlled and the fencing with remain in place and be maintained in a good condition until the proposed development at the site commences. This will be the responsibility of the client and their contractors. Removal of the fencing will only be undertaken once site clearance and construction works are complete.

Appendix 1 – Location of Reptile Mats

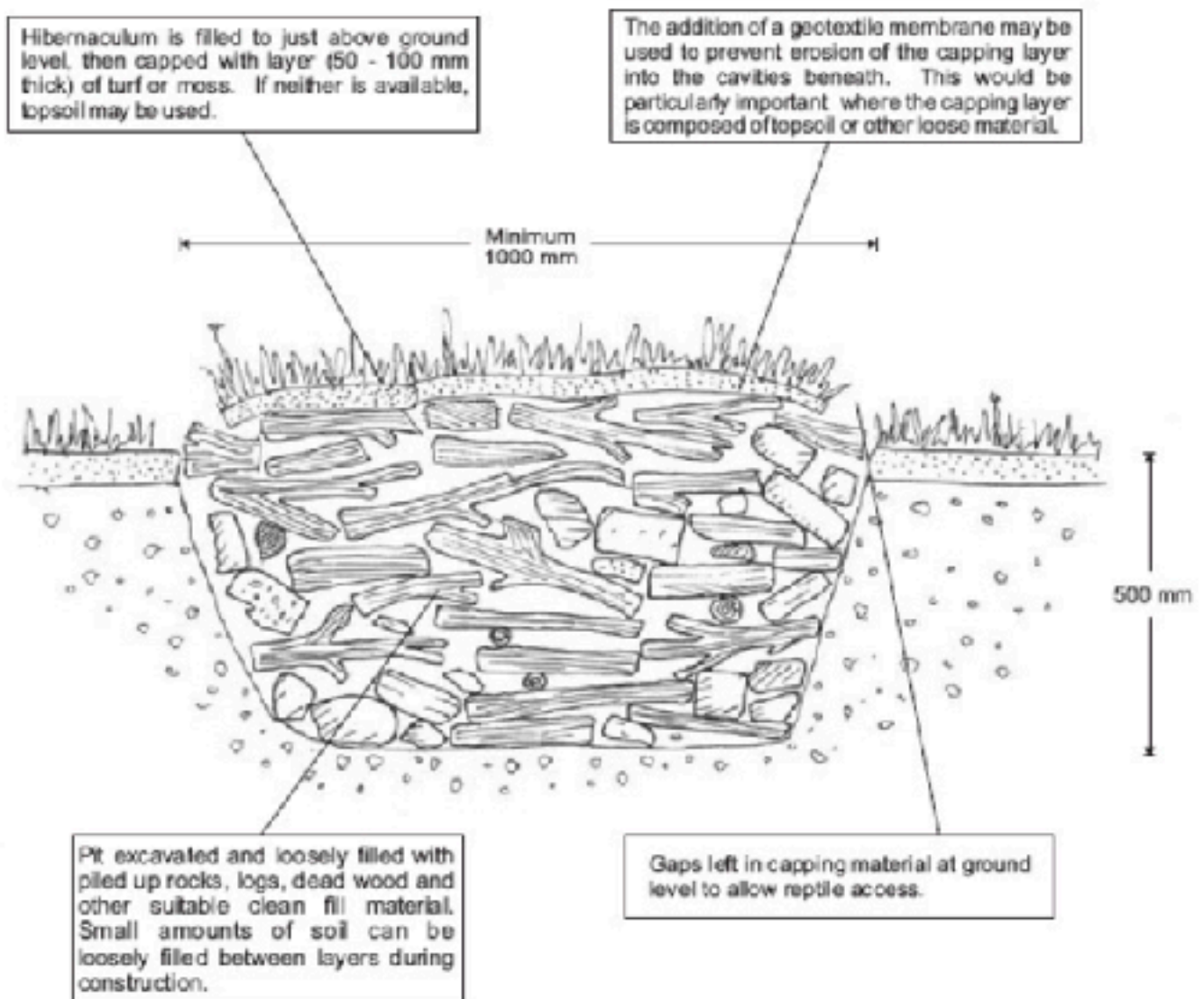


KEY	
	Site boundary
	Approximate Location of refugia
	Location of slow worm
	Location of common lizard

Appendix 2 – Reptile Survey Results

Visit	Date	Temp/Weather	Species	Comments
	19.03.2021			30 Refugia set out across site
1	20.04.2021	17°C, dry and sunny 11.20am	Nil	overnight temps 4°C
2	23.04.2021	18°C, dry sunny 16.30pm	Nil	overnight temps 5°C mats barely warm
3	12.05.2021	13°C, dry, some sun and cloud, 11.00am	Nil	rain previous night
4	14.05.2021	13°C, sunny, some cloud 12.00pm	One slow worm	rain previous day and night
5	19.05.2021	15°C, dry, some sun, 50% cloud. 10.30am	Nil	rain previous night
6	26.05.2021	13°C, dry, some sun, 75% cloud. 10.20 am	One adult lizard, one juvenile lizard	dry previous day and overnight
7	01.06.2021	15°C, dry, sunny, clear skies. 8.30am	Nil	Dry and warm overnight and previous day

Appendix 3 – Reptile Hibernacula Design



Source: Highways Agency (2005) *Design Manual for Roads and Bridges: Volume 10 Section 4 Part 7 – Nature Conservation Advice in Relation to Roads and Reptiles*