



PROPOSED DEVELOPMENT:

LAND ADJACENT TO GELLIGAER ROAD, TRELEWIS

REPTILE SURVEY

OCTOBER 2021

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Proposed Development: Land Adjacent to Gelligaer Road

Reptile Survey

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1 INTRODUCTION

1.1 SUMMARY

No reptiles were found throughout the site survey area.

1.2 SITE DESCRIPTION

Please see Wildwood Ecology Ltd letter dated January 2021 for details of the site. .

1.3 REPTILE ECOLOGY

Reptiles are cold blooded, meaning they have to rely on external heat sources to warm their blood sufficiently to allow foraging and other activity. During the winter they are in brumation (similar to hibernation), emerging in April (or when the temperatures are consistently warm enough). Males tend to emerge before females, to enable them to prepare for mating. Females emerge a few weeks later and mating takes place. Female reptiles in the UK generally breed every other year to allow them to build up sufficient energy reserves. Grass snakes are the UK's only egg-laying reptile, eggs are laid in summer in warm piles of decomposing vegetation (or similar) and left to develop and hatch on their own. Young reptiles are born/hatch in late summer/early autumn. Brumation (hibernation) starts again as temperatures fall in the autumn.

The four more commonly occurring species of reptile in the UK (adder (*Vipera berus*), grass snake (*Natrix natrix*) slow worm (*Anguis fragilis*) and common lizard (*Lacerta vivipara*) have different preferences for habitat and diet. Adders generally prey on small mammals in drier habitats, grass snakes primarily hunt amphibians in wetter areas and aquatic habitats, slow worms take small, slow-moving invertebrates and inhabit drier areas and common lizards prey on small, faster-moving invertebrates and tolerate both wet and dry habitats.

1.4 LEGISLATION

The four more common reptile species mentioned above are protected by the Wildlife and Countryside Act 1981 (as amended) against killing, injury and sale.

Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are not found in this area, having very specific geographical distribution within Britain, and so will not be referred to in this report despite the higher legislative protection afforded to them.

2 METHODOLOGY

2.1 HABITAT ASSESSMENT

The habitat assessment looked for features that would be attractive to reptiles such as:

- South facing banks;
- Varied profile ground form;
- Basking areas;
- Vegetation cover;
- Structurally diverse vegetation;
- Potential brumation (hibernation) sites;
- Evidence of suitable prey sources;
- Connectivity to other potentially suitable reptile habitat; and
- Levels of disturbance/land management.

2.2 FIELD SURVEY

Target areas of potential reptile habitat were identified, and squares of approximately 0.5m² roofing felt ('tins') were laid down at a rate of approximately 1 every 15 - 20m in areas of suitable habitat. This was carried out when the ground vegetation was dry, in order to prevent plant matter under the tins from rotting due to wet conditions, as this would deter reptiles from seeking refuge under them.

25 mats were deployed in summer 2021 in suitable target areas of habitat across the site and allowed to 'bed in' for at least one week. This time period generally will allow any reptiles in the area to discover and begin to use them as a regular basking site. Experienced ecologists from BE Ecological Ltd undertook checks. All tins were checked seven times under suitable weather conditions and temperatures in order to determine the presence, or otherwise, of reptiles in the area.

The tins were checked on the following dates:

- 13/09/21
- 16/09/21
- 20/09/21
- 22/09/21
- 24/09/21
- 27/09/21
- 05/10/21

Where reptiles were found, the location, species, number of animals and sex were noted. These locations were then plotted.

2.3 CONSTRAINTS

N/A

3 RESULTS

3.1 HABITAT ASSESSMENT

There is suitable habitat for all common species of reptiles within the grassland. Despite this, the site is relatively isolated.

3.2 REFUGIA SURVEY

No reptiles were recorded within the grassland.

Table 2 - Results of Reptile Survey

Visit no.	Date	Temp (°C)	Weather conditions	Species (and no. found)	Life stage (M/F)	Location (hedge no.)
1	13/09/21	Start: 14°C End: 14°C	Sunny, no wind	N/A	N/A	N/A
				N/A	N/A	N/A
				N/A	N/A	N/A
2	16/09/21	Start: 13°C End: 13°C	Sunny, cloudy spells, light wind	N/A	N/A	N/A
3	20/09/21	Start: 16°C End: 16°C	Overcast, moderate wind, some drizzle	N/A	N/A	N/A
				N/A	N/A	N/A
				N/A	N/A	N/A
4	22/09/21	Start: 14°C End: 14°C	Sunny, cloudy spells, light wind	N/A	N/A	N/A
				N/A	N/A	N/A
				N/A	N/A	N/A
5	24/09/21	Start: 16°C End: 16°C	Overcast, some sunny spells	N/A	N/A	N/A
				N/A	N/A	N/A
				N/A	N/A	N/A
6	27/09/21	Start: 12°C End: 13°C	Sunny	N/A	N/A	N/A
				N/A	N/A	N/A
7	05/10/21	Start: 14°C End: 14°C	Cloudy, some sunny spells	N/A	N/A	N/A
				N/A	N/A	N/A

4 REPTILES – EVALUATION, IMPACT CHARACTERISATION AND ASSESSMENT

4.1 REPTILES - EVALUATION

Reptiles are protected by UK legislation and therefore they are of **medium to high national** ecological importance.

Overall the site appears to be a combination of **medium-low** value to reptiles due to the surrounding agricultural use and road networks. The exceptions within 'low' areas are the boundary features and less managed habitats such as rough grassland and areas of scrub, which are of **medium local** value for reptiles.

Despite this, no reptiles were found in (or immediately adjacent to) these areas.

4.2 REPTILES - IMPACT CHARACTERISATION

Despite no reptiles being found during the survey, there are a number of areas across the site of the site which provide suitable reptile habitat. However, given the fact that no reptiles were detected during the survey, the site is unlikely to support large populations. Clearance of site will possibly lose areas of refuge and potentially hibernation for reptiles (and amphibians), foraging grounds and connecting habitats should these habitats and features be removed. It may be that due to the sites isolation and disturbance that no reptiles are present.

4.3 REPTILES – IMPACT ASSESSMENT WITHOUT MITIGATION

It is considered that there will be an **unlikely moderate short term local adverse** impact on reptiles as a result of site clearance.

4.4 REPTILES - MITIGATION MEASURES

It is considered that reptile populations across the site will be relatively low (if there are any present). The following precautionary measures will be adopted:

- Clearance will be conducted in accordance with a Method Statement (**Appendix F**) to ensure that should reptiles be found in the course of site clearance or any other development activity, they will not be harmed and can be adequately cared for;
- Clearance will only be undertaken during the reptile active season (April-October, inclusive);
- Clearance outwith this period is possible, but depends on weather and temperatures being suitable to ensure that reptiles are likely to be active;
- There will be no clearance of hibernation habitat outwith the active season or within the correct temperatures;
- Reptiles will be excluded from entering or re-entering the site during clearance/operational phase of works by ensuring that the site is kept as bare ground i.e. clear of any vegetation or other shelter; and with the use of fencing

4.5 REPTILES – IMPACT ASSESSMENT WITH MITIGATION

It is considered that there will be an **unlikely short term adverse** impact on reptiles during the construction phase and a **probable neutral** impact on reptiles during the operational phase of the development.

4.6 REPTILES – SIGNIFICANCE OF THE IMPACT

Without mitigation:

It is anticipated that the significance of the impact is **moderate**.

With mitigation:

It is anticipated that the significance of the impact is **neutral-low**.

APPENDIX A - SITE CLEARANCE METHOD STATEMENT (REPTILES)

1. All clearance will be supervised by a suitably experienced ecologist until such time as the ecologist states that direct supervision is not necessary.
2. The ecologist will be on call for the duration of clearance works.
3. Vegetation will be cleared from directly affected areas only and the area minimised wherever possible.
4. All above ground vegetation removal will preferentially be undertaken during the winter months i.e. between November and February inclusive.
5. If this is not possible, all areas to be cleared must be subject of a finger-tip search by an ecologist immediately prior to and during any clearance work; the ecologist should also be present while all post hole excavation (or other ground breaking should it be required) is being undertaken.
6. Should evidence of breeding birds, in particularly nests, be recorded, no clearance may be undertaken within 5m of any nest site until such time as the nest is vacated naturally.
7. No spraying of vegetation to be carried out. Vegetation will be maintained close to ground using repeated cutting only. 1x Hibernaculum will be added to an area of the garden remaining unaffected by the development. Materials already onsite (e.g., brash, logs) will be used.
8. Woody vegetation will be cleared (ONLY IF NECESSARY) to ground level using a chainsaw with all arisings stacked in unaffected areas NOT on areas of tall vegetation (over 300mm). Where necessary, stumps and roots will only be removed by machine (under ecological supervision) once the clearance is complete.
9. All woody vegetation will be checked by the ecologist prior to cutting for the presence of bird nests.
10. Vegetation will be cut in three phases. The first phase will reduce the vegetation height to 150mm; the second will reduce it to ≈50mm; the third phase will reduce the height to as close to ground level as possible. All cuts will have a period of 24 hours between each cut.
11. All vegetation cutting will be directional. This ensures that any animals present will be pushed from the site into adjacent retained habitats.
12. After clearance, if the vegetation is allowed to regrow above 150mm high, it will be cut and raked as described above.
- 13. Where necessary, potential hibernacula (brash, log piles, stumps, roots etc) and ground breaking will only be cleared during the active season (March-October) while day time temperatures are consistently over 12°C for a period of at least seven days prior as otherwise reptiles may be killed or injured as a result of inconsistent (low) temperatures (during the day and night) and/or low prey availability. Potential hibernacula will only be dismantled by hand unless the supervising ecologist gives the approval for machine dismantling.**
14. If a bird's nest is observed on the site, the ecologist will assess it to determine whether or not it is active, the species concerned, the lifecycle state of any occupants and provide advice on next steps.
15. If reptiles are observed within the clearance area during the works, a decision on how to deal with them will be made on site in light of the conditions on site at the time and the state of the animals themselves. There are three options for dealing with them:
 - It may be possible to leave the animals alone to find their own way into cover, depending on where they are seen, what they are doing and their apparent activity levels; or

- Capture, remove from site and take into temporary captivity until such time as they can be released adjacent to the cleared area (a vivarium has been prepared in case it is required); or
- Should conditions allow, capture and translocate the animals to a safe area immediately adjacent to the site.

16. Habitat and the unlikely presence for other species (e.g. dormice, otter, great crested newts & other amphibians etc.) can be identified and avoided by following this method statement.

17. In the event that a European Protected Species such as great crested newt or dormouse is observed during the clearance,, all work will stop, and the ecologist consulted. It will be necessary to consult with Natural Resources Wales; further surveys and a development licence may be required before work can recommence.

If large numbers of reptiles are discovered, an offsite receptor area should be suggested to be agreed by the County Ecologist.

In Summary the works will proceed as follows:

1. Vegetation reduced to 150mm	Any time of year (following an inspection for breeding birds if undertaken during active season)
2. Vegetation reduced to 50mm	24 hours after first cut
3. Vegetation cut to ground level	25 hours after second cut
4. Removal of potential hibernacula (stumps, rubble piles, ground breaking etc)	Preferably March to October or when temperatures have been above 12 degrees for a period of seven days or more
The site will be kept as close to bare ground as possible via repeated cutting to ensure that reptiles do not re-colonise the site.	

Figure 5: Orientation of cutting



(Google Earth, 2021)