

**Blaenau Gwent County Borough Council**

**Land at Badminton Grove,  
Ebbw Vale**

**Reptile mitigation plan**



**January 2020**

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Cover photographs: Left: tussocky grassland near western boundary: Right: sunny slope with tussocky grass and ant hills near southern boundary.

This document has been produced for Blaenau Gwent County Borough Council by:

**Sturgess Ecology**  
12 Lon Ysgubor, Rhiwbina, Cardiff, CF14 6SG  
e-mail: peter@sturgess-ecology.co.uk  
Web: www.sturgess-ecology.co.uk

## Executive summary

Blaenau Gwent County Borough Council are proposing to build a new school on land at Badminton Grove, Ebbw Vale. The study area comprises the site of the former Glyncoed Comprehensive School (recently demolished). A study in November 2019 considered that the site has potential to support reptiles but was unable to confirm this due to the time of year. The council ecologist has therefore requested a plan be prepared to clarify whether or not reptiles are present, and if they are, to provide appropriate mitigation for them.

This document sets out a survey method and a flexible approach to reptile mitigation that would be proportionate to the numbers of animals present. The part of the site with greatest potential value for reptiles would be unaffected by construction and would be retained as a receptor area for any animals that are found and rescued from the other parts of the site.

The approach set out is judged to be proportionate to the likely scenario that there are either no reptiles, or only a small reptile population present. However, provision is made to increase the level of survey and mitigation if there are more reptiles than expected.

## 1. Introduction

Blaenau Gwent County Borough Council (BCCBC) are planning to construct a new school on brownfield land at Badminton Grove, Ebbw Vale (grid reference SO164112). A Preliminary Ecological Appraisal (PEA) carried out during 2019 (Sturgess Ecology, 2019) considered that some parts of the proposed development site have potential to support reptiles.

All native British reptiles are protected under parts of the Wildlife and Countryside Act 1981, making it unlawful to kill, injure or trade in the animals. Where a project is likely to cause an impact on reptiles, reasonable measures need to be taken to minimise the risk of killing or injuring them.

The BGCBC ecologist has asked for a reptile mitigation strategy to be produced, to set out the measures to be taken to safeguard any reptiles that might be present.

This document presents a plan for safeguarding reptiles that is judged to be appropriate to the size and nature of the site. It combines a reptile survey with rescue and relocation of animals, and sets out the approach to be taken depending on the size of any reptile population that might be found.

## 2. Site description and suitability for reptiles

The PEA survey report sets out a general description of habitats within the site. The parts of greatest potential relevance to reptiles are mainly located at the site perimeter. Of particular significance are the sloping banks beside the sports pitches, which support tussocky grassland. The sunny aspect, coarse vegetation and well drained soil provide good potential cover for reptiles, and the presence of ant-hills indicates that the slopes have remained largely undisturbed for several years. The areas of former amenity grassland in more level ground are less suitable for reptiles because they mostly appear to be on damper, more heavily compacted ground. However, the presence of reptiles cannot be completely discounted because of the tussocky vegetation that has developed in these areas.

Another habitat of potential value for reptiles is sparse vegetation developing on rubble. This could potentially support reptiles, but if present they would not be expected to occur in large numbers because this habitat is of very recent origin (since the demolition of the buildings in approximately 2015/16) and much of it is still heavily compacted with little vegetation. If the site is left undisturbed for a few years this could become good quality reptile habitat.

A summary assessment of the potential habitat suitability for reptiles across the site is presented in Figure 1.

The site is isolated from areas of very high quality reptile habitat by roads and other urban features. However, reptiles can persist in relatively small pockets of suitable habitat, even within urban areas. The most likely reptile species to occur on this site would be Common Lizard or Slow Worm. A South-East Wales Biodiversity Records Centre (SEWBReC) data search found no records of any reptiles within 500m of the site. There are several records of Common Lizards within Ebbw Vale, the nearest record being from Beaufort Hill LNR approximately 800m away. The closest Slow Worm record is 1033m away, found on a pavement at New Church Road, Ebbw Vale, in 2016. It is feasible that there are other reptiles nearby that have not been reported to SEWBReC.



### 3. Mitigation plan

The reptile mitigation strategy is made up of the following elements.

- The habitat beside the sports pitches, with the highest potential value for reptiles, would be retained and managed for biodiversity (including reptiles) in the long term. In the short term this could also serve as a receptor area for any reptiles found and rescued from other parts of the site.
- A reptile survey using artificial refugia would be undertaken during spring 2020, which would be the earliest time of year for reliably detecting the presence of reptiles.
- Any reptiles found during the survey would be captured and safely transferred to the receptor area.
- If reptiles are confirmed, the survey would be continued through the spring and summer of 2020, with survey effort being proportional to the numbers of reptiles being found. Reptile capture efficiency would be increased if necessary, by using higher densities of refugia and localised vegetation strimming to remove other cover.
- In the event that a large population of reptiles is confirmed, a reptile barrier would be installed around the edge of the receptor area, to prevent rescued animals from moving back into the construction area.
- The final part of the mitigation plan would be a destructive search of any areas where the surveyor(s) considers that reptiles might have remained undetected.

Further detail on each element is set out below.

## 4. Reptile survey

The standard method for this type of reptile survey is to use artificial refugia (pieces of heat absorbent sheet material such as roofing felt or corrugated roofing board). These are laid out in suitable habitat and are attractive to reptiles, which readily adopt them as basking sites. The minimum density of refugia should typically be 5 to 10 per hectare for a general survey (Froglife, 1999), or 100 per hectare for mitigation projects (HGBl, 1998). In this case the area of potential suitable habitat within the site (as indicated in Figure 1) is approximately 1.35Ha.

A total of 50 refugia is proposed for the initial survey. This figure is well in excess of the minimum survey requirement and will provide reasonable coverage of all blocks of potentially suitable habitat. (If necessary, the density of refugia could be increased later to improve reptile capture efficiency.)

The refugia will be positioned during mid-April 2020 and left undisturbed for at least 2 weeks before checking them. Indicative locations for the refugia are shown in Figure 2. The precise locations would be determined by the surveyor on site, to maximise the potential for finding reptiles (e.g. at south-facing scrub margins), while keeping the refugia as hidden as possible from members of the public.



**Figure 1. Indicative locations for reptile refugia.**

The survey visits will be carried out at approximately 4-5 day intervals through May, subject to suitable weather. Each visit would be undertaken at a time of day and in weather conditions when reptiles are likely to be basking (e.g. intermittent sunshine with ambient temperature between 10 and 17°C). During each visit the surveyor would walk slowly and carefully through the habitat searching for animals basking in the open and underneath the refugia and any other suitable items of debris. If any reptiles are found, they would be captured for relocation, and the number, location, species (and if possible the age and sex) would be recorded.

## 5. Reptile capture and relocation

The area shown in Figure 1 as good quality reptile habitat at the south of the site (by orange shading) will be retained as a receptor site. This will remain undisturbed through the construction phase and managed as tussocky grassland with scattered scrub in the long term, so that any reptiles found in the other parts of the proposed development area can be relocated into it.

Any reptiles found during the study will be captured by hand and placed into a soft cloth bag or lidded bucket before removing them to the receptor area. The animals will be kept safe from risk of crushing and extremes of temperature and released at the receptor site within 1 hour of capture. (Attempts will also be made to rescue any other animals found under the refugia, such as amphibians or small mammals, by capturing them and transporting them in separate containers to the receptor site.)

The proposed receptor site already supports good quality reptile habitat with rough grassland and scrub so moving additional reptiles into this area has a theoretical potential for density related mortality. To minimise this risk, a number of small-scale habitat enhancement and mitigation measures would be carried out if more than 10 reptiles need to be relocated into the area. The measures would be in proportion to the number of reptiles found.

A summary of the proposed capture effort and the mitigation measures to be included in the receptor area are set out below in Table 1.

**Table 1. Summary of reptile capture and mitigation plan.**

| <b>Number of reptiles found</b> | <b>Survey effort</b>   | <b>Enhancement and mitigation measures in receptor area</b>  |
|---------------------------------|--|--|
| None                            | Survey concluded after 7 visits.   | No mitigation measures required.   |
| Up to 10                        | Survey concluded after 10 visits, if no reptiles found in final 2 visits. Or continued until no reptiles found in 2 consecutive visits.  | Reptiles placed under the survey refugia within the receptor area, as set out in Figure 2.   |
| 11 to 20                        | Increase number of refugia in construction area to 100.<br>Survey concluded after 15 visits, if no reptiles found in final 2 visits. Or continued until no reptiles found in 4 consecutive visits. | Reptile hibernaculum to be constructed at the scrub margin in the southern part of receptor area.  |
| 21 to 50                        | Survey concluded after 20 visits, if no reptiles found in final 4 visits. Or continued until no reptiles found in 4 consecutive visits.  | A second reptile hibernaculum would be constructed at the scrub margin in the western part of the area.<br><br>A reptile barrier would be installed along the northern edge of the receptor area to prevent animals from moving back to the construction site. |

The approach outlined above is based on an expectation that there are either no reptiles, or only a small number of them, because the habitat through most of the construction area is suboptimal. It is possible that the reptile relocation may not be straightforward, and unforeseen factors may necessitate revisions to the proposed approach (e.g. unusual weather, public interference, or presence of a large population of reptiles). The BGCBC County Ecologist would be regularly updated with the ongoing findings, and involved in discussions to confirm, revise or conclude the proposed mitigation as necessary.

If the survey visits confirm the presence of reptiles, the frequency of visits could be adjusted to enable more visits to be fitted into the available time. However, the time of day may need to be adjusted if visits have to be continued into the summer, to avoid very sunny conditions in the middle of the day when refugia would be too hot for reptiles.

If there are sufficient numbers of reptiles to warrant installation of a reptile barrier, the specification should be agreed with the BGCBC ecologist.

It is assumed that the sports pitch in the south of the site will continue to be maintained as short grass by regular mowing through the construction phase, and therefore unsuitable as habitat for reptiles.

Additional measures that could be considered to rescue and relocate reptiles could include the following.

- If reptiles prove difficult to capture due to tall vegetation, the grass in the construction area (not the receptor area) could be strimmed (to approximately 5cm) to make the animals more likely to shelter under the refugia.
- If reptiles are being found in the areas of sparsely vegetated, compacted rubble, additional refugia could also be laid out in these areas.
- If a large number of reptiles (i.e. any more than 50 in this case) require relocation, the captured animals should be released at an alternative area further from the site, to minimise risk of overcrowding the receptor area. Potential sites might include the Local Nature Reserves at Beaufort Hill or Sirhowy Hill.

## 6. Concluding the mitigation

The number of survey visits would be as set out in Table 2. However, the exact end point of the reptile rescue would be subject to discussion with the county ecologist and would be proportionate to the numbers of reptiles found and any complicating factors.

Once the final survey visit has been undertaken, the refugia would be removed and the site would be considered free of reptile constraints if no reptiles have been found.

If reptiles have been found, the refugia would be removed after the final visit, but the site would be subject to a targeted destructive search of any areas that might have been difficult to survey by refugia methods (e.g. piles of branches, rubble or refuse). This would involve supervised clearance of scrub, and systematic and careful dismantling of any potential cover that might contain reptiles. It would be carried out by a mechanical excavator with a skilled operator under the guidance of an ecologist. If any reptiles are found during the destructive search they would be captured and transferred to the receptor site as described above, and the site would then be deemed free from reptile constraints.



## 7. Reporting

The BGCBC Ecologist would be kept informed of progress by periodic updates and would be consulted if there are any unforeseen circumstances that require modification of the reptile mitigation strategy.

The date, time, weather conditions and number of reptiles captured and relocated during each visit would be recorded (as well as their approximate age and sex).

After the exercise has been completed, a brief report would be produced to summarise the reptile survey/ translocation, including date, time and weather conditions of the visits, details of the reptiles that were captured and where they were released, and a discussion of the effectiveness of the various methods used.

## 8. Long term management

If reptiles are confirmed on site, the south facing banks beside the sports pitch (shaded orange in Figure 1) would be managed for biodiversity in the long term. A management plan for the area will be produced as part of the landscaping management plan for the whole site as part of the BREEAM accreditation process. The plan for this area will prioritise maintenance of habitats favourable for reptiles and will include the following as a minimum:

- No tree planting that would shade out the grassland habitat.
- Annual cutting back of grass, tall herbs and scrub in early autumn.
- Vegetation management to be by strimming or hand-held mowers rather than use of vehicles.
- Maintaining at least 1 pile of brushwood and vegetation cuttings as a hibernation site for reptiles.

## 9. References

Froglife (1999). Reptile survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife advice sheet 10,

Gent, A. and Gibson, S. (1998). Herpetofauna Workers' Manual. Peterborough, UK. Joint Nature Conservation Committee.

HGBI (1998). Evaluating local mitigation/ translocation programmes: maintaining best practice and lawful standards. Herpetofauna Groups of Britain and Ireland.

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